



# 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.

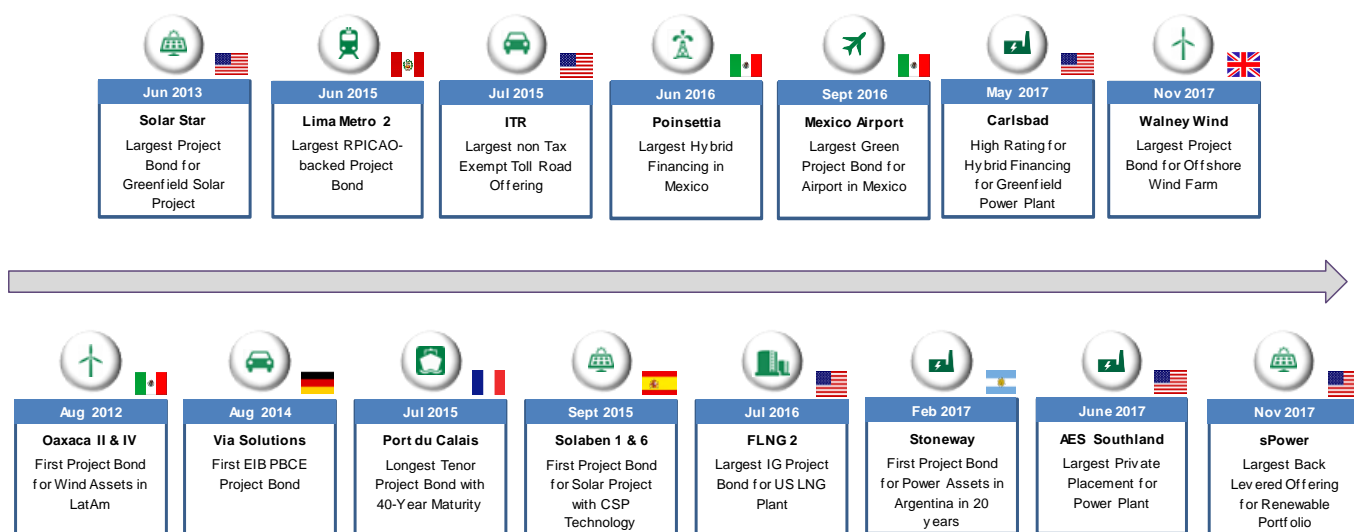
Throughout the years, the Project Bond market has advanced with the issuance of ground-breaking transactions. Issuances backing new asset classes, new geographies, and innovative structures have developed this market, allowing it to become a reliable source of

financing for issuers developing complex infrastructure and energy projects.

In 2016 and 2017 alone, Project Bonds were used to finance user-pay traffic risk toll roads and greenfield power plants in the US, offshore wind farms in Europe, airports, 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

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

### Transaction Highlights

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

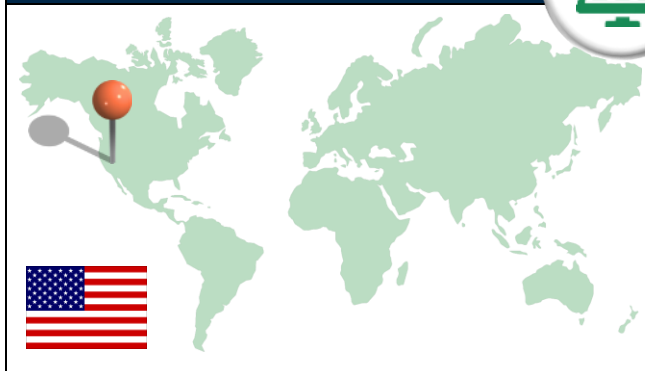
The Project Bond issuance backs the aggregate 579MW photovoltaic (PV) generating facilities in Kern and Los Angeles counties in California. The underlying project consists of two separate facilities, the 309MW Solar Star California XIX facility and the 270MW Solar Star California XX facility. The project 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

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

#### Transaction Highlights

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

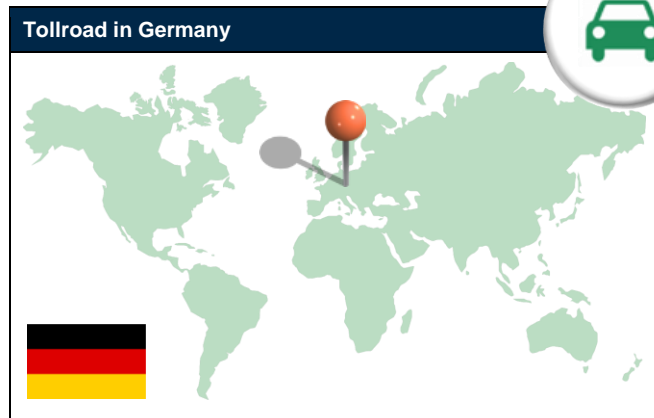
## Via Solutions Nord GmbH & Co.KG

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.



### Transaction Highlights

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

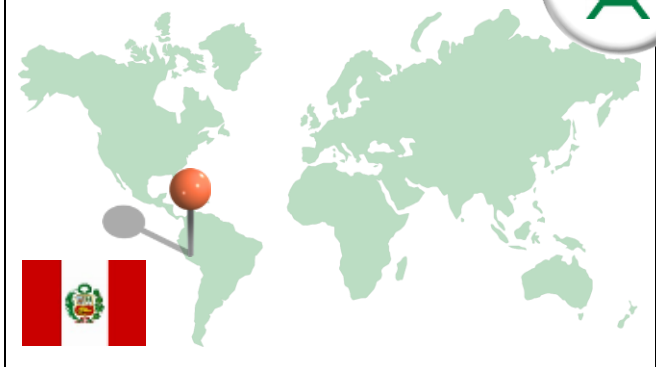
The bonds were issued to finance the construction of two routes of the subway system in the city of Lima, Peru, along with the related electromechanical equipment. The project involves the construction of 35 subway stations and approximately 35 kilometers of tunnels and courtyards.

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

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

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

## ITR Concession Company, LLC

ITR Concession Company LLC (ITRCC) is not only the largest non-tax exempt US toll-road Capital Markets financing to-date, but this transaction also ushered the introduction of infrastructure debt funds to the US Project Bond market.

The Indiana Toll Road, a roadway spanning 157 miles, connects the City of Chicago to the Midwest and the Eastern United States. The toll road serves a diverse base of commuters as well as a mix of heavy and light vehicle traffic. The Indiana Finance Authority and the Indiana Toll Road Concession Company entered into a concession agreement granting ITRCC a 75-year concession for the toll road. In 2014, the company and its parents filed for relief with the United States Bankruptcy Court under Chapter 11. As a result, the parent companies agreed to pursue a sale of ITRCC and its assets. IFM Investors, on behalf of IFM Global Infrastructure Fund, emerged as the successful bidder, acquiring ITRCC and its assets for approximately \$5.7BN in May 2015.

There are two Project Bonds related to this acquisition, both significant for different reasons. The first Project Bond was \$700MM in 4(a)(2) privately placed senior secured notes issued alongside a \$551MM bridge loan facility, \$329MM capex term loan facility, and a \$1.3BN term loan facility for the initial acquisition financing closed in May 2015. The \$700MM senior secured notes offering was placed entirely with one investor.

After the initial financing of the acquisition, in July 2015 ITRCC once again tapped into the Project Bond market, this time with \$1.05BN in 144A / Reg S senior secured notes. The notes were issued in three tranches: \$300MM in 10-year notes at 4.197%, \$500MM in 20-year notes at 5.183%, and \$250MM in 25-year notes at 5.283%. The Project Bonds and the bank facilities rank *pari passu* with each other. The notes were rated BBB by S&P and Fitch. The notes have a bullet repayment profile and the proceeds were used to partially refinance the facilities associated with the acquisition.

In 2017, ITR continued to tap the Project Bond market with \$850MM in 4(a)(2) / Reg D senior secured notes with maturities of up to 15 years.

### Toll Road in the United States



### Transaction Highlights

<b>Issuer:</b>	ITR Concession Company, LLC
<b>Date of Issuance:</b>	May 2015
<b>Issuance Amount:</b>	\$700MM
<b>Use of Proceeds:</b>	Finance a portion of the purchase price of the acquisition and cover transaction costs
<b>Credit Ratings:</b>	BBB (S&P); BBB (Fitch)
<b>Coupon Rate:</b>	Private
<b>Final Maturity:</b>	Private
<b>Country:</b>	United States
<b>Project Type:</b>	Transportation, Toll road
<b>Project Sponsor:</b>	IFM Investors
<b>Source of Payment:</b>	Toll revenues

### Transaction Highlights

<b>Issuer:</b>	ITR Concession Company, LLC
<b>Date of Issuance:</b>	July 2015
<b>Issuance Amount:</b>	\$1.05BN
<b>Use of Proceeds:</b>	Partially refinance bank facilities associated with the acquisition and cover transaction costs
<b>Credit Ratings:</b>	BBB (S&P); BBB (Fitch)
<b>Coupon Rate:</b>	4.197%; 5.183%; 5.283%
<b>Final Maturity:</b>	2025; 2035; 2040
<b>Country:</b>	United States
<b>Project Type:</b>	Transportation, Toll road
<b>Project Sponsor:</b>	IFM Investors
<b>Source of Payment:</b>	Toll revenues

### Why Significant?

ITRCC's Project Bond issuances are significant because they were the first non-tax exempt US toll-road bond financing in many years. In addition, the 4(a)(2) private placement offering marked one of the largest hybrid project financing approaches in the Project Bond market, with the bond tranche in the original acquisition financing placed entirely with one investor.

## Solaben Luxembourg S.A.

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

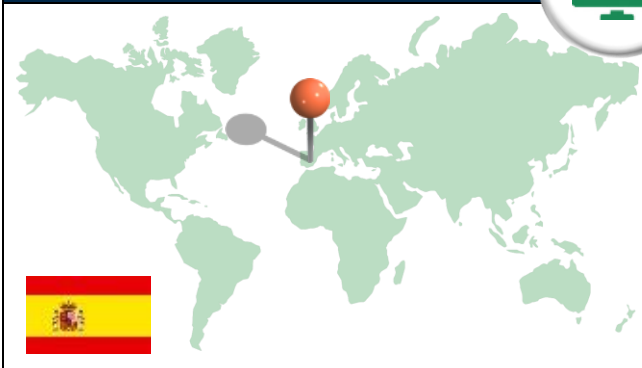
The Solaben 1 & 6 projects are two 50MW solar thermal plants located in the Extremadura region of Spain. The two concentrating solar power (CSP) plants use parabolic trough technology and began operations in the summer of 2013. A CSP project collects and concentrates heat from the sun using highly reflective 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

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



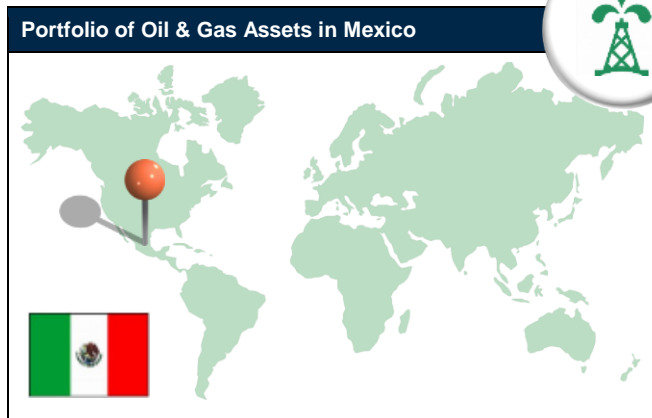
## Poinsettia Finance Limited

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 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.



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

In 2017, FLIQ2 continued to refinance its bank facility with 4(a)(2) / Reg D senior secured notes. In January, \$450MM were issued followed by a \$385MM issuance later during the year.

### LNG Facility in the United States



### Transaction Highlights

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

### Transaction Highlights

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

## Mexico City Airport Trust

The construction of the new international airport in Mexico City is partially financed by Project Bonds issued through an innovative structure backed by passenger charges.

The Mexico City Airport Trust is a special purpose vehicle created to receive passenger charges collected at Mexico City's existing Benito Juárez International Airport and the future passenger charges related to the currently-under-construction Mexico City New International Airport. Passenger charges are denominated in USD and paid as part of passengers' tickets based on their destination.

The new airport will have an initial capacity of 57MM annual passengers and will be operated under a 50-year concession granted to Grupo Aeroportuario de la Ciudad de México, S.A. de C.V., a state-owned company. The new airport is expected to be environmentally sustainable and replace the Benito Juárez International Airport.

In 2016, Mexico City Airport Trust issued \$2,000MM in 144A / Reg S senior secured notes. The issuance consisted of 10- and 30-year bullets. One year later, Mexico City Airport Trust issued a re-tap for \$4,000MM in 10- and 30-year bullets, bringing its total debt outstanding in the Capital Markets to \$6,000MM.

Both issuances were certified as Green Bond offerings, since the new airport is designed to be carbon-neutral and to run 100% on clean energy. The notes were also rated Baa1 / BBB+ / BBB+ from Moody's, S&P and Fitch respectively.

The two offerings attracted a large number of local investors, including Afores (Mexican pension funds), as well as international investors. Of note, Asian investors participated with significant tickets in both offerings. The second offering was able to achieve pricing inside the inaugural transaction, demonstrating the increased comfort of investors for Mexican assets.

### Why Significant?

Mexico City Airport Trust's inaugural \$2,000MM offering in 2016 was the first green bond issued in the airport sector and the largest Green Bond then in Latin America. The follow-on issuance in 2017 was twice the size, confirming investor appetite from both local and international financial institutions.



### Airport in Mexico



### Transaction Highlights

<b>Issuer:</b>	Mexico City Airport Trust
<b>Date of Issuance:</b>	September 2016
<b>Issuance Amount:</b>	\$1,000MM due 2026
	\$1,000MM due 2046
<b>Use of Proceeds:</b>	Finance construction of new airport; fees & expenses
<b>Credit Ratings:</b>	Baa1 (Moody's); BBB+ (S&P); BBB+ (Fitch)
<b>Coupon Rate:</b>	4.250%; 5.500%
<b>Final Maturity:</b>	2026; 2046
<b>Country:</b>	Mexico
<b>Project Type:</b>	Airport
<b>Project Sponsor:</b>	Grupo Aeroportuario de la Ciudad de Mexico S.A de C.V. ("GACM"); a state-owned company
<b>Source of Payment:</b>	Collections of certain tariffs charged to passengers for the use of the currently-operating airport and, once it is completed, the new airport.

### Transaction Highlights

<b>Issuer:</b>	Mexico City Airport Trust
<b>Date of Issuance:</b>	September 2017
<b>Issuance Amount:</b>	\$1,000MM due 2028
	\$3,000MM due 2047
<b>Use of Proceeds:</b>	Finance construction of new airport; fees & expenses
<b>Credit Ratings:</b>	Baa1 (Moody's); BBB+ (S&P); BBB+ (Fitch)
<b>Coupon Rate:</b>	3.875%; 5.500%
<b>Final Maturity:</b>	2028; 2047
<b>Country:</b>	Mexico
<b>Project Type:</b>	Airport
<b>Project Sponsor:</b>	Grupo Aeroportuario de la Ciudad de Mexico S.A de C.V. ("GACM"); a state-owned company
<b>Source of Payment:</b>	Collections of certain tariffs charged to passengers for the use of the currently-operating airport and, once it is completed, the new airport.

## Stoneway Capital Corp

The Stoneway offerings issued to finance the construction of a portfolio of power plants in Argentina are 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 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 pass-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 two decades. 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 structured during the projects’ construction period to mitigate completion risk.

### Power Plants in Argentina



### Transaction Highlights

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

### Transaction Highlights

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

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

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

## Walney Extension Offshore Wind

The Project Bond issued to finance the partial acquisition of the Walney Extension Offshore Wind Project represents the largest transaction for a greenfield offshore wind farm to-date.

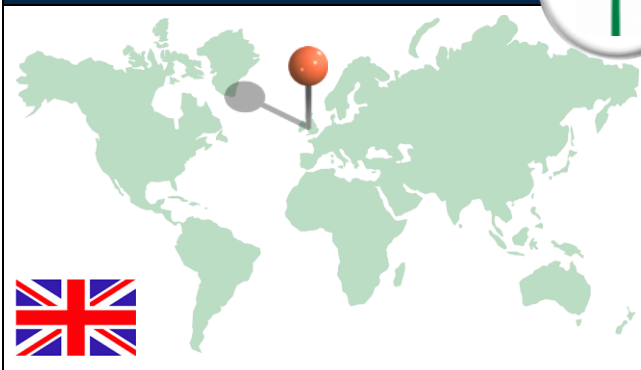
In 2017, Danish pension funds PKA and PFA acquired a 50% interest in the project from Ørsted (formerly DONG Energy), the original developer. The Project Bond finances the reported acquisition price of £2.0BN.

The Walney Extension Offshore Wind project is the third phase of the 660MW Walney offshore wind farm in the Irish Sea. It covers an area of up to 149 KM<sup>2</sup> and consists of more than 80 wind turbines; inter array cables, offshore and onshore export cables and offshore and onshore substations which will connect to the national grid. Vestas and Siemens are providing the turbines. The project entered into a fully-wrapped EPC contract and an O&M agreement with Ørsted for the construction and operation of the extension. The project sells electricity to the grid under UK's Contract for Difference (CfD) regime effectively guarantying selling prices for 15 years.

The Project Bond consists of £1,289MM in fully-amortizing senior secured notes with a 15-year maturity and 9-year average life. The transaction is split between fixed-rate and index-linked tranches. The £430MM fixed-rate tranche priced at 3.263% and the coupon of the £859MM index-linked tranche is based on local CPI index. Debt proceeds were available in four draws until June 2018 to finance capex until completion. The notes are rated Baa2 by Moody's.

The privately placed Project Bond attracted a range of institutional investors.

### Offshore Wind Farm in the United Kingdom



### Transaction Highlights

<b>Issuer:</b>	Walney Extension Offshore Wind
<b>Date of Issuance:</b>	November 2017
<b>Issuance Amount:</b>	£1,289MM
<b>Use of Proceeds:</b>	Finance construction; costs & fees & expenses
<b>Credit Ratings:</b>	Baa2 (Moody's)
<b>Coupon Rate:</b>	3.263% (fixed-rate tranche)
<b>Final Maturity:</b>	2032
<b>Country:</b>	United Kingdom
<b>Project Type:</b>	Wind
<b>Project Sponsor:</b>	Ørsted, PKA, PFA
<b>Source of Payment:</b>	Contract for Difference for 15 years

### Why Significant?

The Walney 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 with an experience contractor such as Ørsted.

## sPower Finance I, LLC

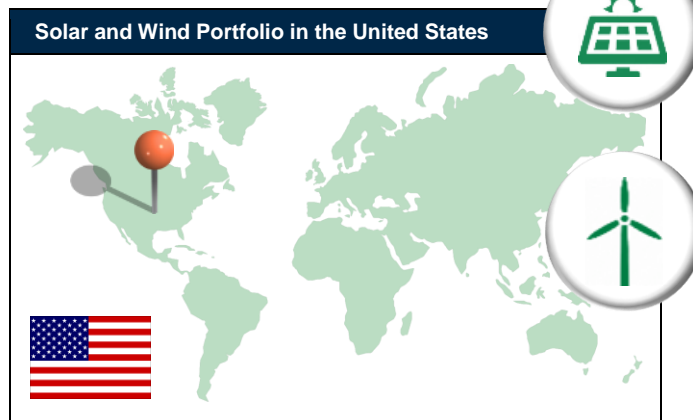
sPower tapped the Project Bond market to refinance a portfolio of utility-scale solar and wind projects in one of the largest renewable portfolio financing in recent years.

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.



Transaction Highlights	
<b>Issuer:</b>	sPower Finance I, LLC
<b>Date of Issuance:</b>	November 2017
<b>Issuance Amount:</b>	\$421MM
<b>Use of Proceeds:</b>	Refinance existing debt; pay swap breakage costs & fees & expenses
<b>Credit Ratings:</b>	Investment grade
<b>Coupon Rate:</b>	4.550%
<b>Final Maturity:</b>	2036
<b>Country:</b>	United States
<b>Project Type:</b>	Solar; Wind
<b>Project Sponsor:</b>	sPower
<b>Source of Payment:</b>	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.



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15 Project Bonds to Change Your Preconceptions

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