

Recently Closed Transactions

Energy

- Nam Ngum 2 Power:** THB 6BN (\$180MM eq.) in senior secured notes to refinance the construction of the 615MW Nam Ngum 2 hydropower plant in Laos. The issuance is split in three tranches with maturities ranging from 3 to 10 years.
- New Energy Solar:** \$62.5MM 24-year senior secured notes issued in the US Private Placement market to back operating solar assets in Kern County, California.
- Azure Sun:** £20MM in senior secured notes to refinance a 29.4MW solar portfolio. The notes are split between a fixed rate tranche at 3.145% and an RPI-linked tranche at 0.427%.
- SER Wind:** €190MM in 8-year senior secured notes at 2.010% to refinance the 245MW SER wind portfolio in Italy.
- Tesla 2017-1:** \$340MM in asset backed secured notes to refinance a portfolio of residential solar leases and PPAs. The senior tranche is rated A- by Kroll and priced at T+200bps with a 9.8-year average life. Final coupons are 4.330% and 7.740% for the senior and junior tranches respectively.
- Abu Dhabi Crude Oil Pipeline:** \$3.1BN in senior secured notes to finance the Abu Dhabi Crude Oil Pipeline. The issuance is split between an \$869MM 12-year bullet tranche at 3.650% and a \$2.2BN 30-year amortizing tranche at 4.600%. The transaction is rated -- / AA / AA.

Infrastructure

- Windsor Essex Parkway:** CAD 208MM (\$166MM eq.) in senior secured notes issued in the US Private Placement market to refinance the Windsor Essex Parkway PPP project in Ontario, Canada. The 22-year bonds are rated A2 / -- / --.
- Coatzacoalcos-Villahermosa Highway:** MXN 1.95BN (\$104MM eq.) in senior secured notes to rehabilitate the Coatzacoalcos-Villahermosa Highway in Mexico. The issuance priced at 8.900%.
- A19 Highway:** €400MM of 30-year privately placed debt provided by four institutional investors to refinance the A19 toll road near Paris.

Transaction Spotlight: Abu Dhabi Crude Oil Pipeline

- The Project:** The Abu Dhabi Crude Oil Pipeline (ADCOP) runs for 405 kilometers from Abshian in Abu Dhabi to the port of Fujairah. It has a capacity for 1.5 billion barrels per day, currently running at around 650,000 barrels per day. The ADCOP project company is indirectly wholly-owned by Abu Dhabi National Oil Company.
- The Transaction:** \$3.1BN in senior secured notes to finance the ADCOP. The issuance is split between an \$869MM 12-year bullet tranche at 3.650% and a \$2.2BN 30-year amortizing tranche at 4.600%. The transaction is rated -- / AA / AA.
- Execution Highlight:** The issuance met strong investor demand as orders peaked to \$11BN. Pricing tightened as the books grew and the bonds priced inside guidance of 3.700% and 4.650%. Local investor demand concentrated on the shorter tranche whereas the longer tranche attracted demand from international insurers and pension funds.

Project Bond Issuances August 2017 to November 2017

Issuer	Geography	Currency	Size (MM)	Date	Tenor	WAL	Pricing	Spread at Issuance	Ratings (Moody's / S&P / Fitch)
ENERGY									
Abu Dhabi Crude Oil	EMEA	USD	869	Oct-17	12.0	Bullet	3.650%	T+121bps	-- / AA / AA
		USD	2,200		30.0	Amortizing	4.600%	T+165bps	
		USD	265		10.5		4.330%	T+200bps	A- (Kroll)
Tesla 2017-1	NAM	USD	75	Oct-17	10.5	6.5	7.740%	--	Not Rated
SER Wind	EMEA	EUR	190	Oct-17	8.0	--	2.010%	--	Private
Azure Sun	EMEA	GBP	10	Oct-17	18.5	--	3.145%	--	Private
		GBP	10		18.5	--	0.427%	--	
New Energy Solar	NAM	USD	63	Oct-17	24.0	13.2	--	--	Private
		THB	1,000		3.0	Bullet	2.590%	--	
Nam Ngum 2 Power	Asia-Pac	THB	1,400	Oct-17	7.0	Bullet	3.480%	--	A- (Tris Rating)
		THB	3,600		10.0	Bullet	3.690%	--	
Latin America Power	LatAm	USD	412	Oct-17	15.5	11.0	5.350%	T+300bps	-- / BBB- / --
Kent Hills	NAM	USD	260	Oct-17	16.0	--	4.454%	--	Private
X-Elio	EMEA	EUR	93	Sep-17	23.0	--	3.840%	--	Private
Sonnedit	EMEA	EUR	74	Sep-17	19.5	--	3.429%	--	Private
Suralaya	Asia-Pac	IDR	4,000,000	Sep-17	--	--	--	--	Private
GP Wind	Asia-Pac	INR	3,000	Sep-17	15.0	--	9.250%	--	Private
Renewable Japan	Asia-Pac	JPY	4,670	Aug-17	23.0	--	--	--	Private
CSolar West	NAM	USD	401	Aug-17	23.0	12.2	3.850%	T+160bps	Private
Magacela Solar 1 SL	EMEA	EUR	42	Aug-17	20.0	--	3.769%	--	Private
Paifton Energy	Asia-Pac	USD	1,200	Aug-17	13.0	10.0	4.625%	--	Baa3 / -- / BBB-
		USD	800		20.0	17.0	5.625%	--	
Sleaford Biomass	EMEA	GBP	150	Aug-17	--	--	--	--	Private
Greenfield SPV 1	LatAm	USD	125	Aug-17	15.0	12.0	5.500%	--	Private
Campo Palomas	LatAm	USD	136	Aug-17	19.5	12.0	5.200%	T+300bps	Baa3 / -- / --
INFRASTRUCTURE									
A19 Highway	EMEA	EUR	400	Oct-17	30.0	--	--	--	Private
Coatzacoalcos-Villahermosa Highway	LatAm	MXN	1,950	Oct-17	8.0	--	8.900%	--	-- / mxAAA / AAA(mex)
Windsor Essex Parkway	NAM	CAD	208	Oct-17	22.0	--	--	--	A2 / -- / --
Gatwick Airport	EMEA	GBP	350	Sep-17	22.0	Bullet	--	--	-- / BBB+ / BBB+
		USD	125		7.0	Bullet	3.540%	T+140bps	
		USD	325		10.0	Bullet	3.760%	T+145bps	
ITR Concession	NAM	USD	150	Sep-17	12.0	Bullet	3.860%	T+155bps	-- / BBB / BBB
		USD	250		15.0	Bullet	4.010%	T+170bps	
		CAD	147		14.7	Bullet	3.340%	--	
Alberta Powerline Partnership	NAM	CAD	147	Sep-17	14.9	Bullet	3.340%	--	A2 / -- / --
		CAD	534		36.2	Bullet	4.065%	GOC+155bps	
		CAD	534		36.4	Bullet	4.065%	GOC+155bps	
Mexico City Airport	LatAm	USD	1,000	Sep-17	10.0	--	3.878%	T+175bps	Baa1 / BBB+ / BBB+
		USD	3,000		30.0	--	5.500%	T+275bps	
Panama Metro Line 2	LatAm	USD	619	Aug-17	5.3	Bullet	3.875%	T+234bps	-- / BBB / BBB
Luton Airport	EMEA	GBP	210	Aug-17	12.0	--	--	G+175-180bps	Private
Thames Tunnel Tideway	EMEA	GBP	300	Aug-17	15.0	--	2.860%	--	Private

Q3 2017 Project Bond League Tables - PFI

League Table by Volume #	Institution Name	(\$MM)
1	Citigroup	2,752
2	HSBC	2,726
3	JP Morgan	2,574
4	Mitsubishi UFJ Financial Group	2,550
5	Royal Bank of Canada	1,901
6	Santander	1,443
7	Credit Agricole	1,201
8	Goldman Sachs	1,144
9	Mizuho	1,140
10	BBVA	1,091

Q3 2017 Project Bond League Tables - IJGlobal

League Table by Volume #	Institution Name	(\$MM)
1	Mitsubishi UFJ Financial Group	3,059
2	HSBC	2,378
3	Citigroup	2,311
4	JP Morgan	2,118
5	Goldman Sachs	1,699
6	Sumitomo Mitsui Financial Group	1,603
7	Credit Agricole	1,140
8	Bank of America	1,080
9	Mizuho	765
10	Morgan Stanley	738

* Source: Crédit Agricole Corporate & Investment Bank, Bloomberg, PFI, IJGlobal, Private Placement Monitor, Private Placement Letter

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