Future Asia Offshore Wind Capital Financing Solutions

September 2018 / Strictly Private and Confidential

CANTOR Fitzgerald

Speaker's Contact Details & Personal Background

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Personal Background

- Head of Cantor Fitzgerald Power, Energy and Infrastructure / Investment Banking in APAC
- Based between Hong Kong and Singapore
- Over $80 billion executed deals in M&A, Debt Capital Markets and Equity Capital Markets
- 16 Year of Investment Banking Experience with a focus on Power, Renewables and Infrastructure
- Worked and lived in the US, Europe, Middle East and has been in Asia for 10 years
- Before joining Cantor Michiel headed the APAC Power, Renewables and Infrastructure teams at Jefferies
- Master's degree in Economics, Business Administration and Quantitative Economics from Maastricht University
- Chartered Financial Analyst

Today's discussion points

I. Cantor Fitzgerald and the Power, Energy and Infrastructure Team

II. European Offshore Wind Bonds as Precedent for Asia

III. Case Study: WindMW

IV. Offshore Wind in APAC Growth and Resulting Financing Requirements

V. Key Advantages of Utilizing Project Bonds

VI. Where Can Bonds Be Applied Most Effectively?

VII. How Can Cantor Help?

Cantor Fitzgerald and the Power, Energy and Infrastructure Team

Cantor Fitzgerald at glance

Cantor Fitzgerald Group

1945 founded	11,000 employees	60 offices
20 countries	7,000+ institutional clients	$200t transactions p.a.

Cantor Fitzgerald Investment Banking

Cantor Fitzgerald is growing their global Investment Banking division

Cantor has recently hired a Global industry leading **Investment Banking Power, Energy and Infrastructure team**

In Asia key Investment Banking offices are HK, Singapore and Tokyo

The PEI Team has a Global Presence and Capabilities

With eight Managing Directors and six Directors, we represent one of the largest sector generation focused-teams on Wall Street, differentiated by the team's global integration

Key Points

- The PEI team is the second Investment Banking sector team to be established by Cantor, following the creation of the Healthcare team in 2016
- The PEI team:
  - c. 35 investment bankers operating out of offices in London, New York, Hong Kong and Dubai
  - Is a globally-integrated investment banking franchise with significant industry experience
  - Through its global setup has privileged access to the world's most competitive cost of capital providers
  - Has established relationships and continuous dialogue with leading infrastructure, power, utilities and energy clients, to provide unmatched insight into the industry
  - Focuses on M&A, Leveraged Finance, Restructuring, Project Finance, Debt and Equity financing solutions

Global Engagement with Key Leadership Involvement

Anshu Jain
President of Cantor Fitzgerald

Global PEI Team

Hari Chandra
Global Co-Head of PEI, London

Michiel Prompers
Head of APAC
Managing Director
Hong Kong

Kevin Phillips
Global Co-Head of PEI, New York

Stewart Robinson
Managing Director
London

Carlos Candil
Managing Director
London

Paul Leece[1]
Managing Director
London

Tomas Gomez[1]
Managing Director
London

John Bills
Managing Director
New York

London

Afonso Salema
Director

Jeremi Martin[1]
Director

Jorden Lacey
Vice President

Sarah Beament
Vice President

Ishan Islam
Vice President

Romain Bobrie
Associate

Dan Shafqat
Associate

Aurelie Slosar
Associate

Daniel Almomen[1]
Associate

Georgia Fotopoulou[1]
Associate

Jorge Aramburu
Analyst

Ryan Jude
Analyst

Mathieu Marroncle
Analyst

New York

Schuyler Fabian
Director

Adil Sener
Director

Robert Kavanagh
Vice President

Konrad Stefanek
Vice President

Alex Heiman
Associate

Ryan Bennett
Associate

Patricia Florescu
Associate

Alex Hyans
Analyst

Taylor Palumbo
Analyst

Hong Kong

Adrian Aw
Director

Nizar Qallab
Director

Constantin Vana
Associate

Ranulf Couldrey
Analyst

(1) Starting September 2018

European Offshore Wind Bonds as Precedent for Asia

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Following the Successful Execution of the WindMW Project Bond, Bond Financings of Offshore Wind Farms Have Gained Rapid Momentum

	WindMW	Gode Wind	Walney	Borkum Riffgrund II
Capacity	▪ 288MW offshore wind farm in Germany	▪ 330MW offshore wind farm in Germany	▪ 659MW Walney offshore wind farm in England	▪ 450MW offshore wind farm in Germany
Location	▪ Germany	▪ Germany	▪ England	▪ Germany
Date of Issuance	▪ 2015	▪ 2015	▪ 2017	▪ 2017
Amount Issued	▪ EUR 978m (8 tranches)	▪ EUR 556m	▪ GBP 1,300m	▪ EUR 832m
Coupon (Periodicity)	▪ USD tranche: 2.125% ▪ EUR tranches: 2.125-3.682%	▪ 3.5%	▪ CPI linked and fixed rate	▪ 3.0-4.0%
Tenor	▪ USD tranche: 12 years ▪ EUR tranches: 6 years 6 Months	▪ 10 years	▪ 16 years	▪ 10 years
Greenfield / Brownfield	▪ Brownfield	▪ Greenfield	▪ Extension	▪ Greenfield

Current Situations

Hornsea Wind Farm
Capacity: c. 6GW (4 projects)
Stage: development/construction
Location: England

Dudgeon Wind Farm
Capacity: 402MW
Stage: fully commissioned
Location: England

Race Bank Wind Farm
Capacity: 573MW
Stage: fully commissioned
Location: England

Sources: Press

Transaction executed by the Cantor Fitzgerald Power, Energy and Infra Team

Case Study: WindMW

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WindMW Case Study: €978mm Investment Grade Green Project Bond

December 2015

Blackstone

WindMW

€978,000,000

Investment Grade Project Bond

Sole Lead Placement Agent & Sole Structuring Agent

- Sole Lead Placement Agent
- Sole Structuring Agent
- Our Team Took the Lead in Delivering the Product, Structuring the Financing, Educating the Ratings Agencies, and bringing a Wide Pool of Investors into the space

WindMW - Overview

- 288MW Offshore wind farm
- Location: Germany
- COD: September 2015

WindMW

Transaction Summary

- **Largest** Global **Renewables Project Bond** Ever
- The **First Internationally-Rated Investment Grade** Instrument for **Offshore Wind**
- **Commitments** were Received by a **European, North American and Asian Institutional Investor Base**, through both EUR and USD (swapped back to EUR) tranches
- The **Offering** was **Highly Customized** and **Offered** in **8 Tranches** to Appeal to a **Broad Audience of Investors**, under 3 Main Categories:
  - **"Short" EUR tranche:** €426mm, 6 year tenor @ 2.125%
  - **"Long" USD tranche (swapped to EUR):** €406mm, 11.5 year tenor @ 3.682%
  - **"Long" EUR tranche:** €146mm, 11.5 year tenor @ 3.590%

Note: Transaction completed by team members while employed at another firm

Lessons Learnt

Run a Global Process	▪ Over **100** institutional **investors contacted globally – mix** of **U.S, Europe** and **Asia** ▪ **Maximized competitive tension** and **optimized price** ▪ We collected **feedback** from all the investors that we approached globally – providing **unmatched insight into returns** and **structural requirements** of **capital market investors** for **offshore wind financings**
Extensive Transaction Preparation and Education is Required	▪ **Extensive education effort by addressing key concerns:** – **Stability of regulation and power price forecasts** ▪ We worked with a leading market consultant to produce **bespoke power price forecasts** – **Credibility of resource forecasts** ▪ We worked with consultant to produce a resource report with **market leading mid 50s% load factor** – **Validity of O&M strategy and budget** ▪ We worked with a leading technical consultant to produce a line by line, **fully researched O&M plan** that supported the **extended asset life assumptions of 30 years significantly enhancing value**
Tailor the Transaction to Achieve the Optimal Outcome	▪ **Innovative structure to maximize demand:** given the various jurisdictions of the investors, we had to incorporate 8 different tranches ▪ **2.95% all in cost of financing achieved** – with the incorporation of a 10% merchant residual

Offshore Wind in APAC Growth and Resulting Financing Requirements

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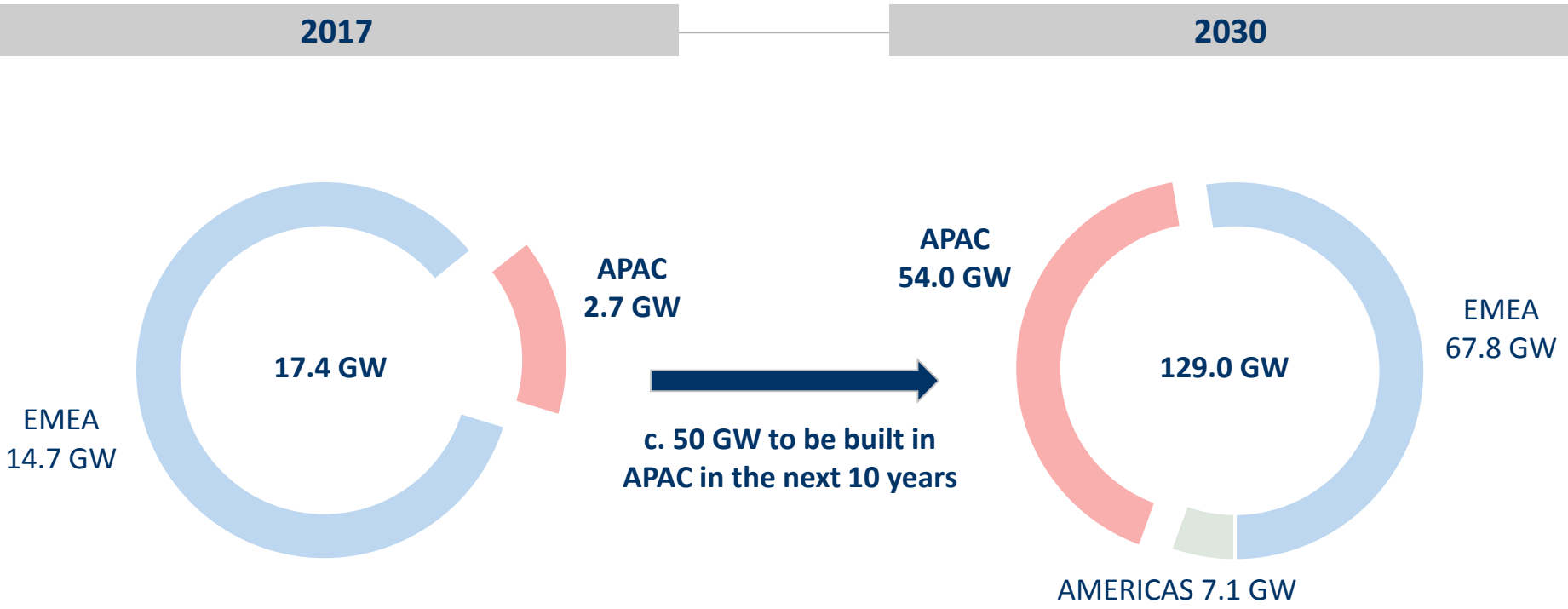
50 GW of Offshore Wind Capacity are Expected to be Built in the Next 10 Years in APAC, Leading the Region to Actively Look For Additional Financing Sources

Global Offshore Wind Installations (Cumulative)



Source: BloombergNEF - June-18

Key Advantages of Utilizing Project Bonds

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Bonds Offer Numerous Advantages and Represent a Good Alternative Source Of Capital

1. **Drive Competition** with Conventional Sources of Project Financing to help **Improve Terms** and **Optimise Cost of Capital**
2. Utilise **Institutional Lenders Appetite** for **Immunising Long-Dated Liabilities** with Assets – thus **Achieving Longer Tenors** and **Extending Debt** to the End of their Contracted Life (potentially into a Merchant Tail)
3. **Diversify Sources of Liquidity** and Free Up Bank Lines for Deployment into Other Projects
4. Set a **Precedent Template for Transactions** to be Executed and **Create** a **Baseline Structure to Attract Capital** into Future Projects
5. Benefit from **Fixed Rate Debt** and thus **Remove Potential Basis Hedging Costs**
6. **Long-term Fully Amortizing Structures** Remove Refinancing Risk and Lock-in Benefit of Prevailing Low-Rate Environment
7. **Greater Flexibility** to Structure in Portability to **Allow Debt to Travel** With Asset at the Point of Sale

Where Can Bonds Be Applied Most Effectively ?

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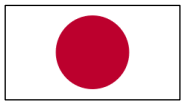
Different Markets Are Suitable for Offshore Wind Bonds

	Australia	 Japan	Taiwan	Vietnam	China	India
Population	▪ 25.15m	▪ 126.49m	▪ 23.61m	▪ 94.58m	▪ 1,400m	▪ 1,330m
GDP per Capital	▪ USD 59,660	▪ USD 40,850	▪ USD 25,980	▪ USD 2,550	▪ USD 10,090	▪ USD 2,130
Sovereign Rating (S&P)	▪ AAA	▪ A+	▪ AA-	▪ BB-	▪ A+	▪ BBB-
Offshore Capacity	▪ Australia's first offshore wind farm has secured financing in 2017 (2 GW – CoD: 2024)	▪ 136MW announced for 2020	▪ 1.0MW announced for 2020	▪ n.a.	▪ 1.6GW (commissioned or finance secured as at June 2018)	▪ 2022 target: 5GW

Sources: IMF, S&P and BloombergNEF

How Can Cantor Help ?

Select Transaction Experience – Financing

Power, Energy & Infrastructure - Debt Financing

Key Highlights

- The team have been active on transactions across the globe with the combined experience across Power, Energy and Infrastructure transactions giving a unique insight into debt investors appetites and capabilities
- The majority of the power and infrastructure transactional experience to date has included a large number of complex, first-of-kind structures globally
- These transaction have been at the forefront of developing the institutional investor base and therefore broadening the availability of debt for project companies / sponsors
- We maintain ongoing dialogue with 100+ global investors who are currently active in the global power and infrastructure space, this includes accounts interested in senior project finance debt, as well as mezzanine and HoldCo debt investors

July 2018

terra firma

RETE RINNOVABILE

€1,390,000,000

Sale of RTR to F2i

Joint Financial Advisor, Ratings Advisor

June 2018

ARCLIGHT

BIZKAIA ENERGIA

Undisclosed

Lead Financial Advisor and Arranger for ArcLight on the HoldCo Private Placement of Bizkaia Energia

December 2017

La Paloma Generating Company LLC

$611,000,000

Restructuring Advisor to the Company

November 2017

OAKTREE

eolia renovables

€135,000,000

Lead Financial Advisor to Oaktree for the HoldCo Financing of Eolia Renovables

November 2017

STONEWAY CAPITAL

$165,000,000

Senior Secured Notes Offering

Sole Global Coordinator and Lead-Left Bookrunner

June 2015 - November 2017

A63, A19 & A150 Toll Roads – (France)

c. €700,000,000

Private Institutional Investor Financing

Sole Note Arranger

August 2017

LAP

LATIN AMERICA POWER

$412,000,000

Investment Grade Project Bond

Sole Lead Placement Agent & Sole Structuring Agent

May 2017

ACWA POWER

$814,000,000

Senior Secured Note Offering

Sole Structuring Advisor & Joint Global Coordinator

March 2017

HERO FUTURE ENERGIES

$125,000,000

Private Placement to International Finance Corporation

Joint Placement Agent

March 2017

Atlantica Yield

€275,000,000

Private Placement

Sole Placement Agent

February 2017

STONEWAY CAPITAL

$500,000,000

Senior Secured Notes Offering

Sole Global Coordinator and Lead-Left Bookrunner

January 2017

EQUINOX ENERGY CAPITAL

£75,000,000

Debt Financing for 82.4 MW Solar PV Portfolio

Sole Advisor to Borrower

December 2016

Blackstone

ARCLIGHT

$1,825,000,000

Acquisition Financing of AEP's Merchant Generation Portfolio

June 2016

DIRECT ROUTE

€150,000,000

Private Placement - Refinancing N17/18 PPP Road – (Ireland)

Joint Arranger

May 2016

Panda Power Funds

$360,000,000

Credit Facilities

Sole Lead Arranger

April 2016

CONCESSIONARIA AUTOSTRADA VENETE

€830,000,000

Investment Grade Project Bond PDM Toll Road – (Italy)

Joint Lead Bookrunner

January 2016

ENA

Itínere

€300,000,000

HoldCo Notes Private Placement

Bookrunner

January 2016

bam PPP

IRIDIUM

€145,370,000

Investment Grade Project Bond N25 PPP Road – (Ireland)

Sole Bond Arranger

December 2015

WindMW

€978,000,000

Investment Grade Project Bond

Sole Lead Placement Agent & Sole Structuring Agent

October 2015

bam PPP

IRIDIUM

€115,000,000

Private Placement M11 Road – (Ireland)

Sole Note Arranger

Note: Transactions primarily completed by team members while employed at another firm.

Contact details

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