



# OFFSHORE WIND

## CHALLENGES IN THE BUSINESS CASE

14 JUNE 2018

## DISCLAIMER

- This presentation was prepared by Amsterdam Capital Partners B.V. (hereafter “AMSCAP”) exclusively for the Winddays 2018 (the “Client”). This presentation is incomplete without reference to, and should be viewed solely in conjunction with, the oral briefing provided by AMSCAP
- The information contained herein is confidential and proprietary to AMSCAP and, accordingly, by accepting this document, the Client agrees that it (a) will maintain the information and data contained herein in the strictest of confidence and will not disclose any of its contents to any person and (b) will not copy, reproduce, distribute or pass this document to any person at any time without the prior written consent of AMSCAP
- The information in this presentation may be based upon management forecasts and reflects prevailing conditions and views of AMSCAP as of this date, which are accordingly subject to change. No representation or warranty is made or accepted in respect of the information contained herein
- The information contained herein is not, and under no circumstances is to be considered a prospectus or advertisement

# TABLE OF CONTENT

	<b>Page</b>
■ INTRODUCTION AMSCAP	<b>4</b>
■ INCREASE MERCHANT RISK	<b>6</b>
■ BIGGER TURBINES → LESS OUTPUT	<b>9</b>
■ FOCUS AREAS IN A FINANCIAL DUE DILIGENCE	<b>11</b>

# INTRODUCTION AMSCAP

### ■ AN INDEPENDENT OFFSHORE WIND FINANCING BOUTIQUE

**Luchterduinen**  
(129 MW)



Business case management and constructing **PPA and Construction Insurance Package**


**Gemini**  
(600 MW)



**Largest** ever project financed offshore wind project




**Merkur**  
(396 MW)



**Financial advisor,** first large scale deployment of the **GE - Haliade**




**Undisclosed**  
(75-150 MW)




Financial advisor, **equity valuation** & coordination of binding offer

**Borssele 1&2**  
(700 MW)




**Financial advisor,** coordinated bid & raised 100% of equity

**Borssele 3&4**  
(700 MW)



**Financial advisor,** coordinated bid & raised 100% of equity

**HKZ 1&2**  
(700 MW)



Strategic advisor, **business case assessment new technology**

**Dunkerque**  
(500-700 MW)

**Financial advisor,** Tender bid management, equity and debt arranger

## INCREASED MERCHANT RISK

# CHALLENGES IN THE BUSINESS CASE

## INCREASED MERCHANT RISK

### ■ MERCHANT RISK

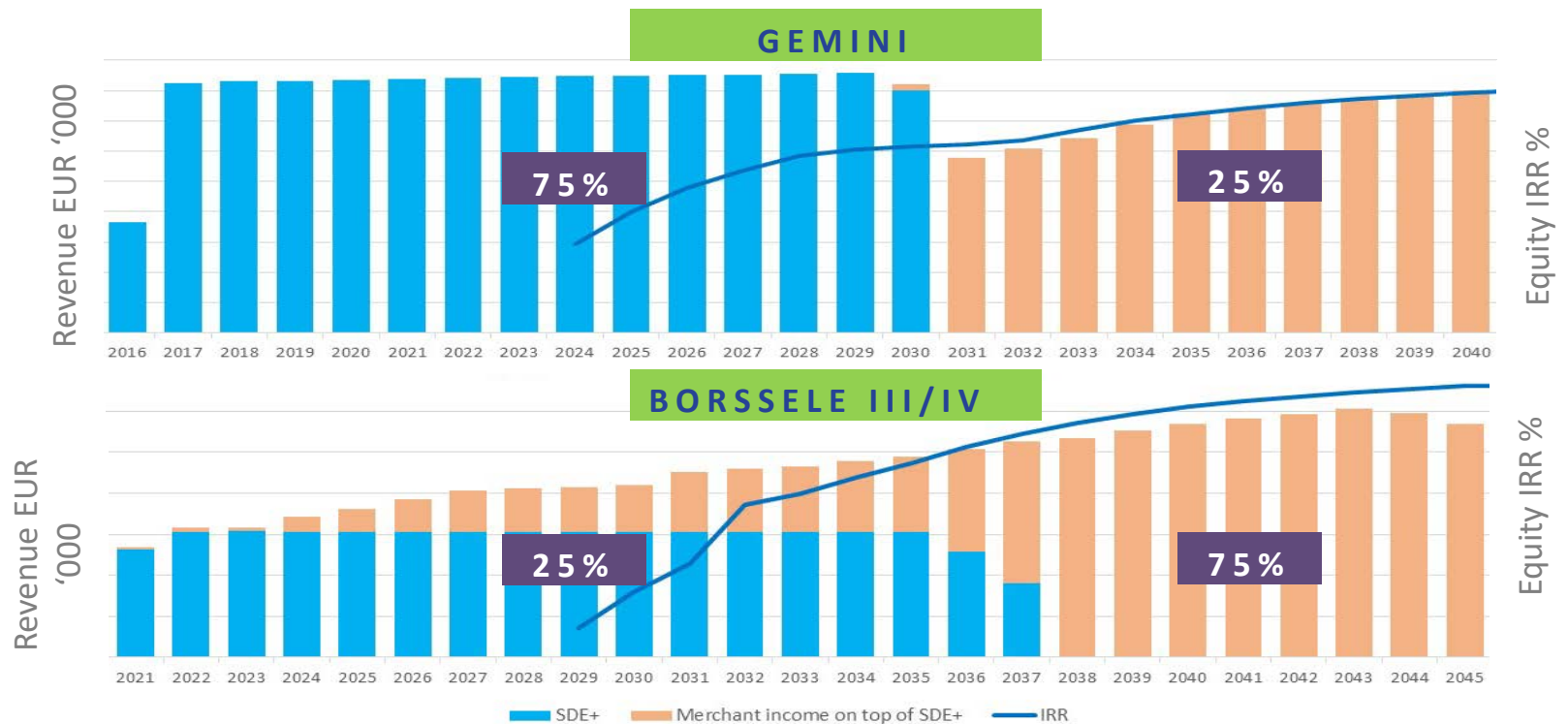
- As subsidy prices have decreased over time, a larger portion of the equity return is realised through merchant income → this means equity investors are more exposed to the development of future power prices
- The following slide shows indicative revenues lines from two Dutch projects, being Gemini (2016) and Borssele III/IV (2021) that both benefit from the subsidy scheme SDE/SDE+

# CHALLENGES IN THE BUSINESS CASE

## INCREASED MERCHANT RISK

### ■ EXAMPLES EQUITY IRR VERSUS MARKET RISK

- The exposure to merchant risk has flipped from about 25% in Gemini to an estimated 75% in Borssele III/IV





BIGGER TURBINES → LOWER OUTPUT

# CHALLENGES IN THE BUSINESS CASE

## BIGGER TURBINES → LOWER OUTPUT

### ■ EXAMPLE ENERGY PRODUCTION LEVELS

- The spectacular decrease in the LCOE for offshore wind is a.o. driven by lower CAPEX and OPEX resulting from installing fewer turbines with a significant higher nominal capacity (8-10MW)
- However, the rotor diameter of the current available XL turbines didn't increase in the same pace as the nominal capacity. This means that the electricity output of an average offshore windfarm has decreased over the pas couple of years

	GEMINI	BORSSELE III/IV
Installed capacity	600MW	731.5 MW
WTG	Siemens 4MW	Vestas 9.5MW
Rotor diameter	130 meters	164 meters
Swept area	1.9 mio m <sup>2</sup>	1.6 mio m <sup>2</sup>
Guestimate production p.a	2.6 TWh	2.7 TWh *
Guestimate full load hours	4,333	3,722 *

- Hence, revenues are not only suffering from lower income due to less subsidy, but also due to lower energy production

\* Source WindPowerEngineering.com, based on powering about 825,000 Dutch households

## FOCUS AREAS IN A FINANCIAL DUE DILIGENCE

# CHALLENGES IN THE BUSINESS CASE

## FOCUS AREAS IN A FINANCIAL DUE DILIGENCE

### ■ FINANCIAL DUE DILIGENCE

- Besides market exposure, the following elements are also of key importance to equity investors when assessing the risks in a financial due diligence and determining the appropriate value of an asset

Focus areas	Examples of considerations
Project life time	25 – 30 years, repowering
Contracted CAPEX	# contracts, interfaces, contingency levels
Grid connection	Responsibility, schedule and delay LD's
Insurances	Deductibles, assumptions over the project life time
Construction planning	Slack in planning,
Pre-completion revenues	Optimising PCRs as a source of revenues, guarantees
Wind yield	Losses, uncertainties, WTG availability levels
Offtake agreement/Subsidies	Tenor, imbalance costs, profile costs, replacement
Contracted O&M	O&M strategy should match the O&M spent profile
Debt financing T&C	Debt terms in line with market, IRS
Refinancing	Refinancing terms, interest rate risk

# CONTACT DETAILS

JAN-PETER ELFFERS

[ELFFERS@AMSCAP.EU](mailto:ELFFERS@AMSCAP.EU)

+31(0)6 155 695 91

