Investment Banking Department Asia

LEAD THE VALUE

Project Finance for Offshore Wind in Taiwan

4th Asia Offshore Wind Day

Investment Banking

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三井住友銀行
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1. Leading Global Project Finance Bank

Global Bank of the Year
Deal of the Year for 10 deals

In Taiwan

- Opened Representative Office in 1998
- Branch opened in 2002
- About 130 employees
- Offering wide range of products including NTD loans and derivative products
- Financial Advisor to wpd for Yunlin and Guanyin

Infrastructure Journal Awards

2017	**Global MLA of the Year**
2016	FA of the Year (Global)
	FA of the Year (Asia Pacific)
	FA of the Year (Latin America)
	FA of the Year (MENA)

The Asset Triple A Awards

2017	**Project Finance Advisory House of the Year**
	Project Finance House of the Year
	Project Finance House of the Year (Australia)
	Project Finance House of the Year (Japan)
2016	Project Finance House of the Year Asia Pacific

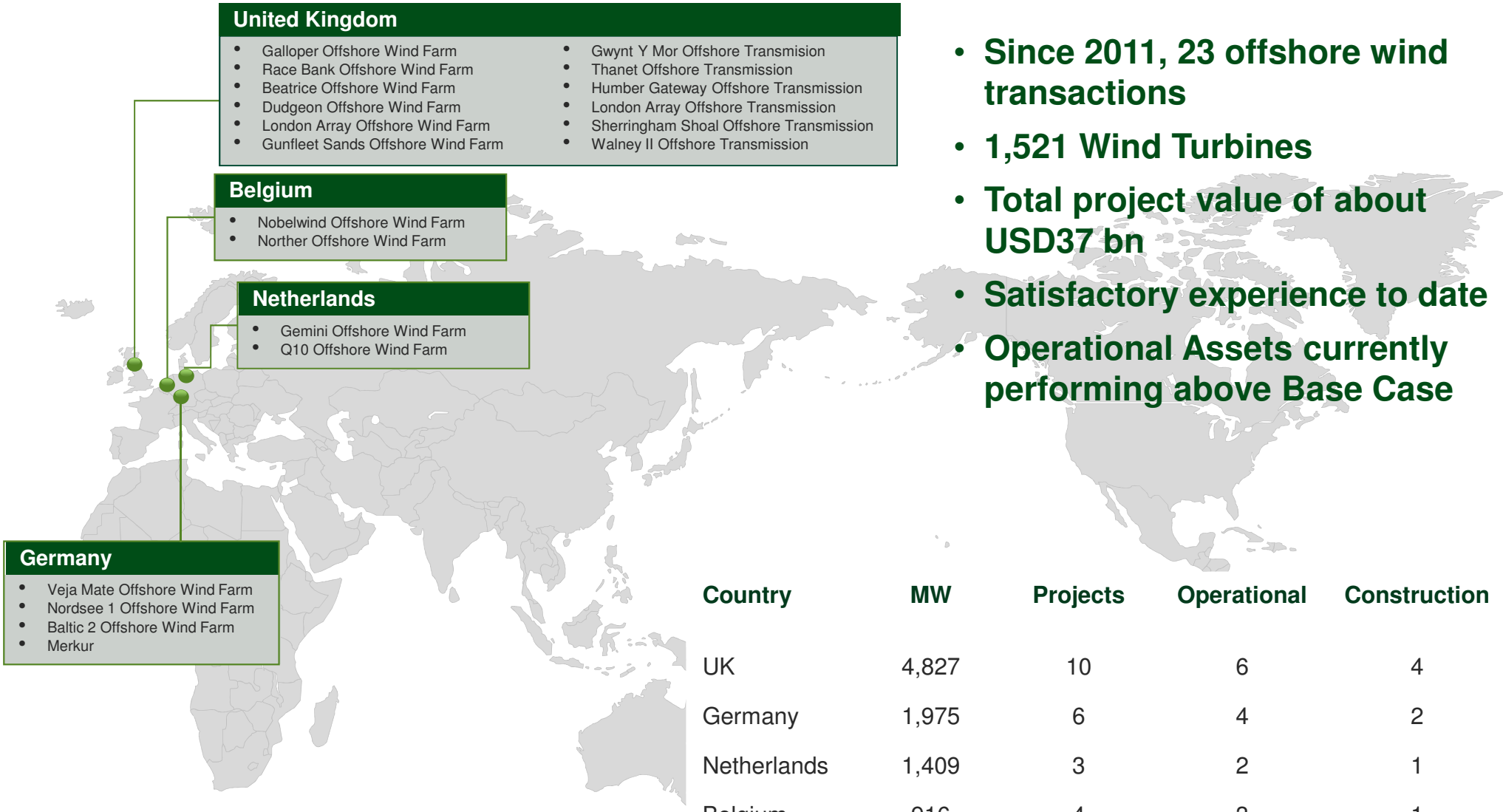
1. SMBC Group's Role in Offshore Wind Finance

With more than 400 project finance professionals globally, SMBC Group is present across the entire financing value chain

- **Financial Advisory:** Greenfield projects, competitive tenders and acquisition opportunities
- **Lending, taking up additional roles:**
  - **Pre-Financial Close :** Documentation Bank, Technical Bank, ECA Coordinator, etc.
  - **Post Financial Close:** Agent Bank, Account Bank, LC Issuing Bank
- **Acquisition Finance:** Active in the acquisition finance market since 2004 and has been involved at a structuring level in many acquisition transactions
- **ECA Finance:** Through performing agency roles with Euler Hermes, EKF, JBIC, NEXI, etc., SMBC group is very familiar with their requirements and internal processes
- **Bonds:** Bond refinancing solutions based on SMBC group's leading arranging expertise and distribution platform

Credit: Gemini Wind Park

1. European Experience



- **Since 2011, 23 offshore wind transactions**
- **1,521 Wind Turbines**
- **Total project value of about USD37 bn**
- **Satisfactory experience to date**
- **Operational Assets currently performing above Base Case**

Country	MW	Projects	Operational	Construction
UK	4,827	10	6	4
Germany	1,975	6	4	2
Netherlands	1,409	3	2	1
Belgium	916	4	3	1
Total	**9,127**	**23**	**15**	**8**

2. Offshore Wind: General Risk Assessment

	Risk Area	Key Considerations
Regulatory	**Regulatory Framework**	• Strong political support & stability of regulatory framework • No incidence of retrospective change • Tariff passed down to end-users
Construction Risks	**Sponsor**	• Track record & proven experience in delivering successful projects • Ability to manage multiple contractors
	Weather / Geological	• Wind, wave, earthquake and atmospheric conditions, etc. to be accommodated in construction scope and schedule
	Technology / Schedule	• Acceptable turbine design & operational track record • Acceptable credit standing & supporting security package • Suitable construction schedule with buffer for weather delays
Operation Risks	**Wind**	• Availability of historical data & P90 debt sizing
	Contractor	• Track record of satisfactory offshore O&M contracts undertaken • Acceptable supporting security package
	Offtake	• Acceptable counterparty risk
	Power Price	• Limited market risk

2. Learnings from Europe (1)

Sovereign Risk

- 2011: Spanish Government established renewable tariff scheme
- Scheme was generous (€500 /MWh)
- Scheme costs were not passed down to the consumer
- 2015: revised tariff introduced reducing amount paid to generators by 30%
- Transactions had to be restructured
- Scheme remains very generous (€350/MWh) with potential for further revision

Wind Resource Risk

- Early onshore wind project were based upon inaccurate wind resource studies
- Projects have therefore struggled to achieve Base Case
- Wind resource estimation has improved since then

Merchant Risk / High Leverage

- Early UK offshore projects included merchant risk and P50 wind assumptions
- Projects struggled due to merchant power price assumptions / higher leverage

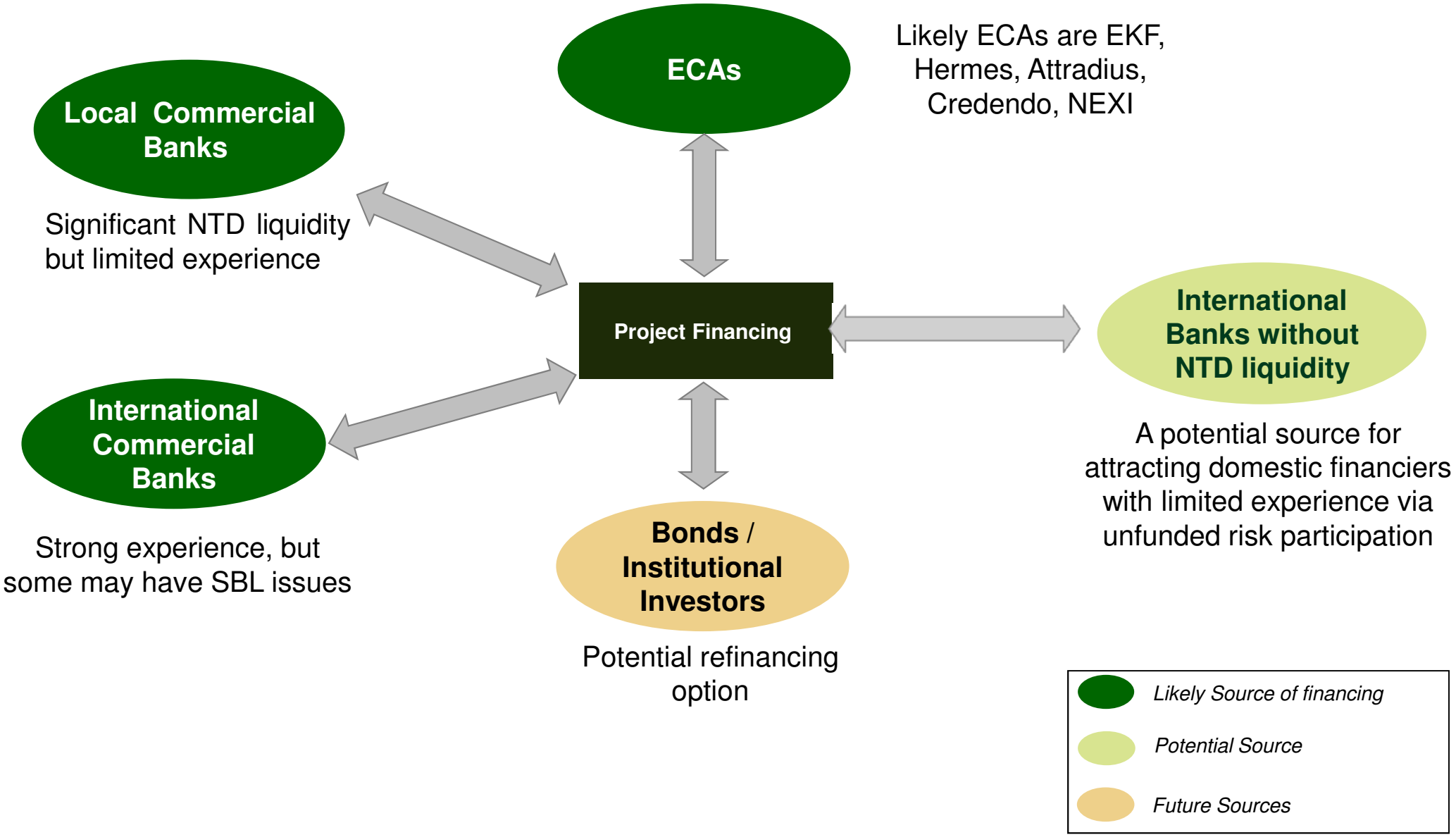
2. Learnings from Europe (2)

Criteria	European Experience	Taiwan
Country	• Strong government support / regulatory regime • Cost of subsidies passed to end-users	• Strong Regulatory and Legal Framework in Taiwan • Funding of RE subsidies to be passed through to end users
Sponsor	• Strong sponsor group	• Focus on experienced offshore wind developers
Tenor	• Tenor matching the subsidy regime and PPA tenors. • In some cases, legal maturity exceed the subsidy regime but cash sweeps exist to reduce tenor to within the subsidy	• Sufficient tail to PPA maturity
Construction	• Preference for limited (3-5) multi-contract approach • Full multi-contract approach to be managed by a highly experience construction manager and larger contingency	• Same as for European Approach
Contractors	• Experienced contractors with strong credit quality • Contractual terms should offer meaningful security to back obligation	• Same as for European Approach
Wind Resource	• To be backed by sufficient wind data • P90 debt sizing	• Same as for European Approach

3. Financing Considerations

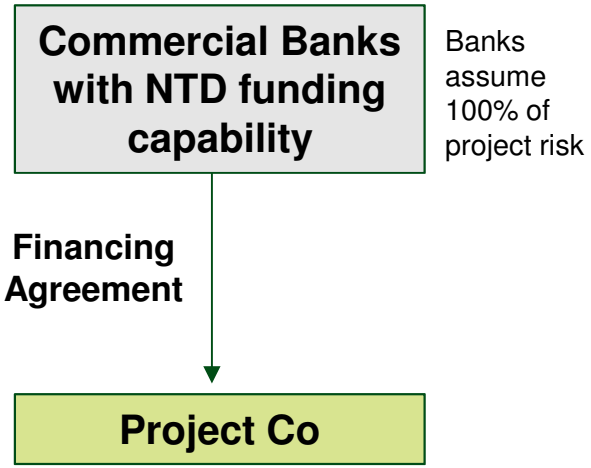
- **Overall bankable structure**
- **Liquidity Pool**
  - Limited experience of domestic banks
  - Single Borrower Limit
  - Size of the deal
  - Situation in neighbouring markets
- **Presence of ECAs**
  - Localisation
- **Alternate structures**
  - Funded Vs Unfunded solutions
- **Sponsor expectation**
  - European standards in Taiwan?
- **Limited hedging market**
  - Tenors in the range of 5 to 10 years

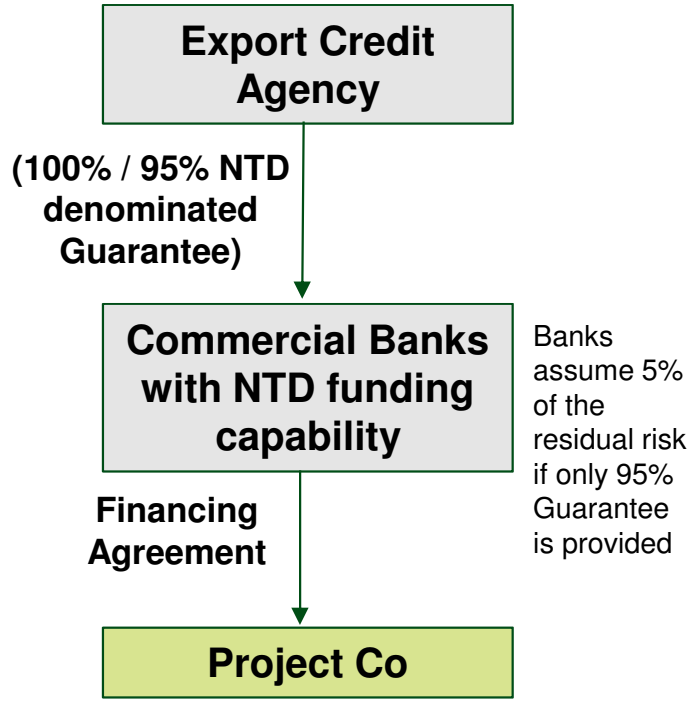
3. Sources of Liquidity



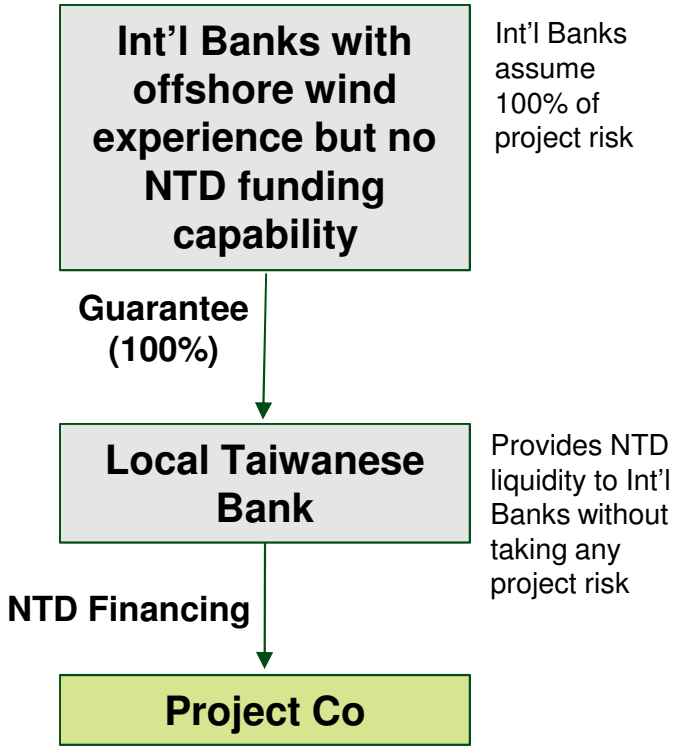
3. Financing Structures

Funded Solutions





Unfunded Solution



3. Financing Terms

Criteria	Europe (then)	Europe (now)	Taiwan
Tenor (Operations)	12-15 years	19 years	Probably somewhere between 'then' and 'now'
Sizing DSCR P90	1.35	1.25	
Lock-up	1.15	1.10	
EoD	1.05	1.05	
Leverage	70/30	80/20	
Debt Service Support	DSRA (6m)	DSRF (6m)	
Equity	Up front	After Debt	
Pre Completion revenue	P90	P50 with collateral to P90	
Contingency (Total)	7-12% Capex	7-12% Capex	
Merchant Risk	Yes	Yes	
PPA Tenor	Full Term	Negative Tail	
Hedging	70% Min	70% Min	
Shareholder Retention	COD + 1-2 years	COD	
Turbine O&M	OEM Full Term	OEM Yrs 1-5 / Project Co	

Questions

Thank you