

## **WBCSD Side Event**

# **Attracting Investment for Climate Technology Transfer**

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**Toru Kubo**

**Principal Climate Change Specialist**

**Head of Carbon Market Program**

**ASIAN DEVELOPMENT BANK**

# Key Messages

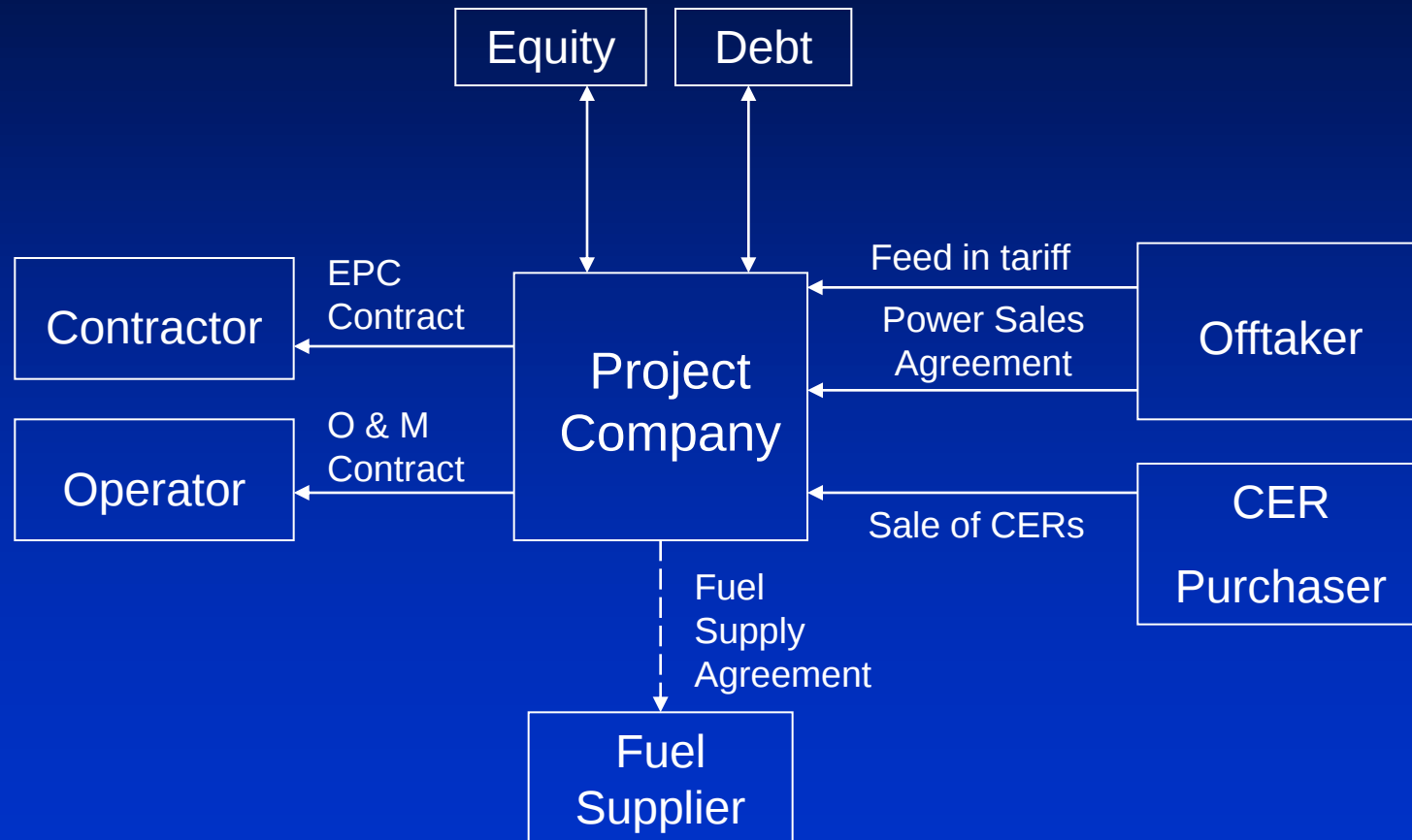
- Lots of money out there seeking opportunities
- It's a contest with other markets – and current negotiations aren't that good looking!
- Who can make their markets attractive to investors?
  - Policy – long term
  - Regulations – practical, including near and mid term fixes and evolves in a consistent manner along long term policy
  - Affordability, absorptive capacity
  - Financial assistance

## Key Messages (cont.)

- The Devil is in the detail!
  - Involve key players early
  - Be honest about what we don't understand/lack experience
  - Draw on relevant expertise, mindful of the need to manage conflict of interest
- There are plenty of good cases to draw on
- There are also plenty of bad cases
  - The best lessons are learnt from the worst cases – but they aren't shared in public workshops!

# The Detail

# TYPICAL RENEWABLE ENERGY PROJECT CASH FLOWS



# Renewable Energy Project Issues

- High upfront capital costs and low capacity factor during operation
- Relatively low return and uncertainties over tariff level
- Credit risks of off-taker
- Intermittent resource (not base load) - availability and quality of data is limited
- Technical and economic criteria of equipment
- Project size tends to be small – high transaction costs
- Newly implemented and untested government supports (tariff, tax incentives)
- Long term fixed interest rate finance is rare
- Carbon finance is under-utilized

# Business Due Diligence

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## A. Market Analyses

- ✓ Power Market: Demand, Supply Competition, Regulations
- ✓ Regulatory and Policy Framework for Wind Power Development
- ✓ Recent Development in Wind Power Market
- ✓ Forecasting Tariff Change Trends and Their Implications for the Project
- ✓ Operation Analysis on Selected Existing Wind Farms
- ✓ Analysis of the Power Grid Operator – Off-taker
- ✓ Project Economic Analysis

# Business Due Diligence

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## **B.** Engineering Verification

- ✓ Resource Re-assessment (wind, solar, hydro, others)
- ✓ Equipment Procurement and Performance Evaluation
- ✓ Wind Farm Design Optimization
- ✓ Power Grid Integration
- ✓ Dispatch Arrangements
- ✓ Construction Scheduling and Supervision Arrangements
- ✓ Completion Testing and Validation Arrangements
- ✓ Maintenance Scheduling Reliability Enhancement

# Business Due Diligence

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## C. Corporate Governance

- ✓ Corporate Development Strategy
- ✓ Operational/Organizational Structure and Capacity
- ✓ Operations of the Board and Shareholders Meetings
- ✓ Capability of the Management Team
- ✓ Technical and Operational Human Resource
- ✓ Incentive Structure
- ✓ Shareholders Support
- ✓ Relationships with Stakeholders (local government agencies, service contractors, off-taker...)
- ✓ Corporate Citizen Responsibility and Support to Hosting Communities

# Business Due Diligence

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## **D.** Environmental and Social Safeguards

- ✓ Environmental Impact Analysis Review
- ✓ Land Acquisition and Resettlement Issues
- ✓ Analysis on Social Issues and Poverty Alleviation
- ✓ Other Compliance, Anti-Corruption, and Safeguard Issues
- ✓ Analysis on CER Potentials and Arrangements

# Financial Due Diligence

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## A. Sponsor Creditworthiness Assessment

- ✓ Reviewing Sponsors' 3 Years Audited Financial Statements
- ✓ Track-records/Financial Performance of Sponsors' Existing Wind Farms
- ✓ Ability to Inject Adequate Equity
- ✓ Quality of Guarantees on Project Completion/Debt Service Gap Coverage (if applicable)

# Financial Due Diligence

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## **B.** Project Financial Analysis

- ✓ Reviewing Project Construction Costs and Financing Plan
- ✓ Reviewing Projections on Project Operational Costs
- ✓ Reviewing Accounting and Auditing Policies of the Project Company
- ✓ Developing/Reviewing Project Financial Model
- ✓ Conducting Cash Flows and Financial Statement Analysis
- ✓ Break-even Analysis and Sensitivity Analysis
- ✓ Debt Service Coverage Analysis
- ✓ Mechanisms and Accounts for Debt Services and Financial Settlements

# Financial Due Diligence

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## C. Insurance Consultation

- ✓ Reviewing Current Insurance Markets
- ✓ Identifying/quantifying Insurable Risks
- ✓ Recommendation of Suitable Insurance Plan

# Legal Due Diligence

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- ✓ Advice on Applicable Laws, Regulations, and Policies
- ✓ Integrity checks of Sponsors
- ✓ Reviewing the Legal Status of the Project Company (Shareholders Agreement, By-laws, registration...)
- ✓ Reviewing Project Licenses/Permits/Contracts

# The Devil

# What went wrong?

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**Unfortunately the best lessons often come from the worst projects!**

"Unfortunately, we won't know what's wrong with you until we do an autopsy."

# The PPP viability scale



# Hope over experience

## Outturn compared with Forecast

|                     |               |
|---------------------|---------------|
| Capital cost        | +50 to +100%  |
| Implementation time | 0 to +50%     |
| Operating cost      | 0 to +200%    |
| Ridership           | - 33% to -67% |

(Example of rail systems)



“So what if I underestimated costs and overestimated revenues? It all averages out in the end.”

# Need to ensure interests are aligned

Economic interests must be aligned – is this in the long-term interest, not just of the developers / investors, but also the end users?



# Summary: Success Factors

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- Strong government support – real priority programs/projects of the country
- Clear long term policy
- Sound regulatory environment
  - Government needs to understand "key issues" for both sponsors and lenders and show flexibility under changing circumstances
- The devil is always in the detail: use experienced advisers, sponsors, lenders, mindful of conflict of interest
- Committed sponsors
- A fair deal for all parties
- Selective use of financial assistance – cover the downside; aim for leverage

# Thank you!

For more information:

Toru Kubo

[tkubo@adb.org](mailto:tkubo@adb.org)

ASIAN DEVELOPMENT BANK

The diffusion of environmental technologies to address climate change is constrained by two market failures:

Environmental externalities

Financial market failures



These are addressed by (among others):

Government policy on climate change

Support for early stage financing

# Policies to support climatech

## Market creating policies

- Technological requirements
- Performance requirements
- Demand side policies (e.g. energy subsidies)
- Tax breaks

## Direct support policies

- Tax breaks
- Subsidies (loans, direct payments, etc.)
- Other incentives

## Other

- R&D policy
- Industrial policy
- IP policy

Predictability is the most important consideration  
for climatech support policy

# Environment for Venture Capital investments in climatech diffusion

## Macro economic environment

- Stability (inflation etc.)
- Growth

## Potential market size

- Scalability (segment size + growth potential)
- Technological readiness

## Business environment

- Ease of administration
- Access to services/resources
- Taxation levels etc.

## Investment and exits

- Ease of inward investment
- Restrictions on foreign ownership
- Financial market depth
- IPO and M&A activity

## Investor protection and corporate governance

- Accounting standards
- Enforcement of contracts

## IPRs

- Strength of IPR legislation
- Enforcement capacity