



Financial Schemes for Renewable Energy Projects

*co-organised by
the Delegation of the European Union to Thailand and
the Department of Alternative Energy Development and
Efficiency, Ministry of Energy*

Challenges for Investing in Small Scale Renewables in Thailand

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Outline

- Credentials - KASIKORNBANK Group
- Key Barriers
- Possible Solutions
- Project Financing



Credentials

KASIKORNBANK Group

- The 4th largest local commercial banks in terms of asset size with THB 2,005 billion as of 30 Sep 12
- The pioneer in commercializing renewable power project financing in Thailand
- The most active bank in providing the integrated financing solution to clients in the renewable space with a variety of optimum financing products both debt and equity
- One of the leading Mandated Lead Arrangers in power sector, Thailand and Asia Pacific *Source: Project Finance Magazine*
- Dedicated power sector team ~20 headcounts



Credentials

KBank's Selected Experience

To date, KBank has financed 395 MW of renewable energy projects (excluding Hydro)

 <p>Solar Power Co., Ltd. Project # 1-16</p> <p>Syndicated Loan</p> <p>Mandated Lead Arranger Facility & Security Agents Jul 2011-Nov 2012</p>	 <p>Natural Energy Development Co., Ltd.</p> <p>Syndicated Loan</p> <p>Lead Arranger Financial Advisor Jun 2010</p>	 <p>Solararta Co., Ltd.</p> <p>Syndicated Loan</p> <p>Mandated Lead Arranger Facility and Security Agents Jun 2011</p>	 <p>SPP Two, SPP Three & SPP Four</p> <p>Syndicated Loan</p> <p>Mandated Lead Arranger Facility and Security Agents Dec 2011</p>
 <p>K.R. Two Co., Ltd.</p> <p>Syndicated Loan</p> <p>Mandated Lead Arranger Financial Advisor Facility Agents Nov 2011</p>	 <p>First Korat Wind Co., Ltd.</p> <p>Syndicated Loan</p> <p>Mandated Lead Arranger Financial Advisor Facility & Security Agents Jul 2011</p>	 <p>Sahagreen Forest Co., Ltd.</p> <p>Sole Lender</p> <p>Jun 2011</p>	



Key Barriers

Difficulty in accessing long-term debt financing especially for small renewables

- Scale – Size does matter
- Sponsor
 - Inexperienced Sponsor
 - Long-term commitment and support to the project
- Unfamiliarity with technologies
 - Insufficient track record
 - Uncertainties over their performance
- Specific risks to each type of project
 - Feedstock supplies – for biomass and biogas projects in particular
 - Environmental impact – for WTE projects



Key Barriers

Difficulty in accessing long-term debt financing especially for small renewables

- Complexity of project financing structure and process
- Other issues
 - Relatively high transaction costs e.g. Lenders' Advisors including Technical, Insurance and Legal
 - Resource management pre and post development



Risk Mitigations

- Credit enhancement structure
- Participation/support by local as well as multi-lateral agencies
 - As shareholder
 - As loan provider
- Involvement of strategic investors
- Dealing with size: Establish “Lending Guidelines”
 - Checklist of the required minimum qualifications
 - Standardized project financing package



Project Financing

- Limited recourse project financing
 - Depend on the risk of Sponsor
 - Sponsor's support to ensure project completion
- Lending guidelines
 - Checklist of the required minimum qualifications

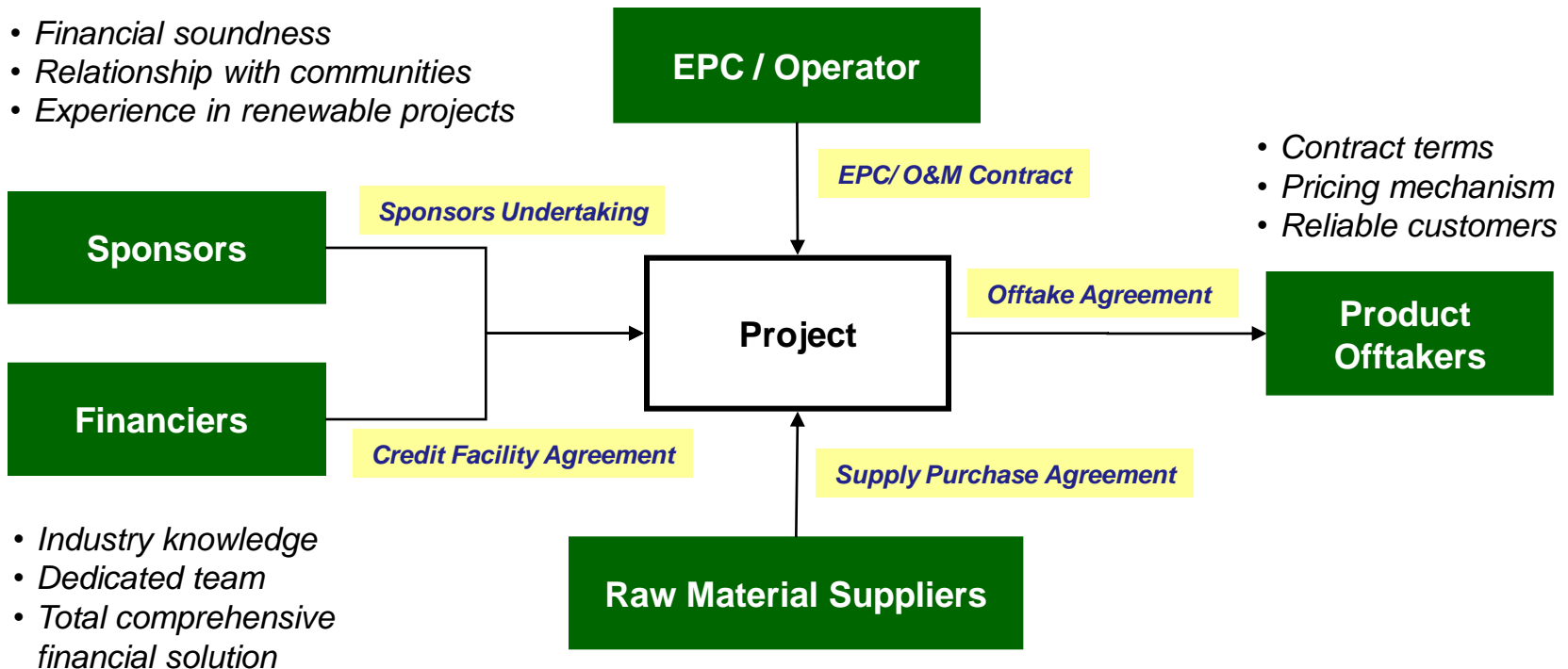


Project Financing

How each stakeholder enhance the project structure...

- Experience / Technology / Financial strength
- Contract terms/ Liquidated damages
- Insurance and Warranty (performance guarantee)
- Independent engineer required

- Financial soundness
- Relationship with communities
- Experience in renewable projects



- Industry knowledge
- Dedicated team
- Total comprehensive financial solution

- Contract terms
- Pricing mechanism
- Reliable customers



Project Financing

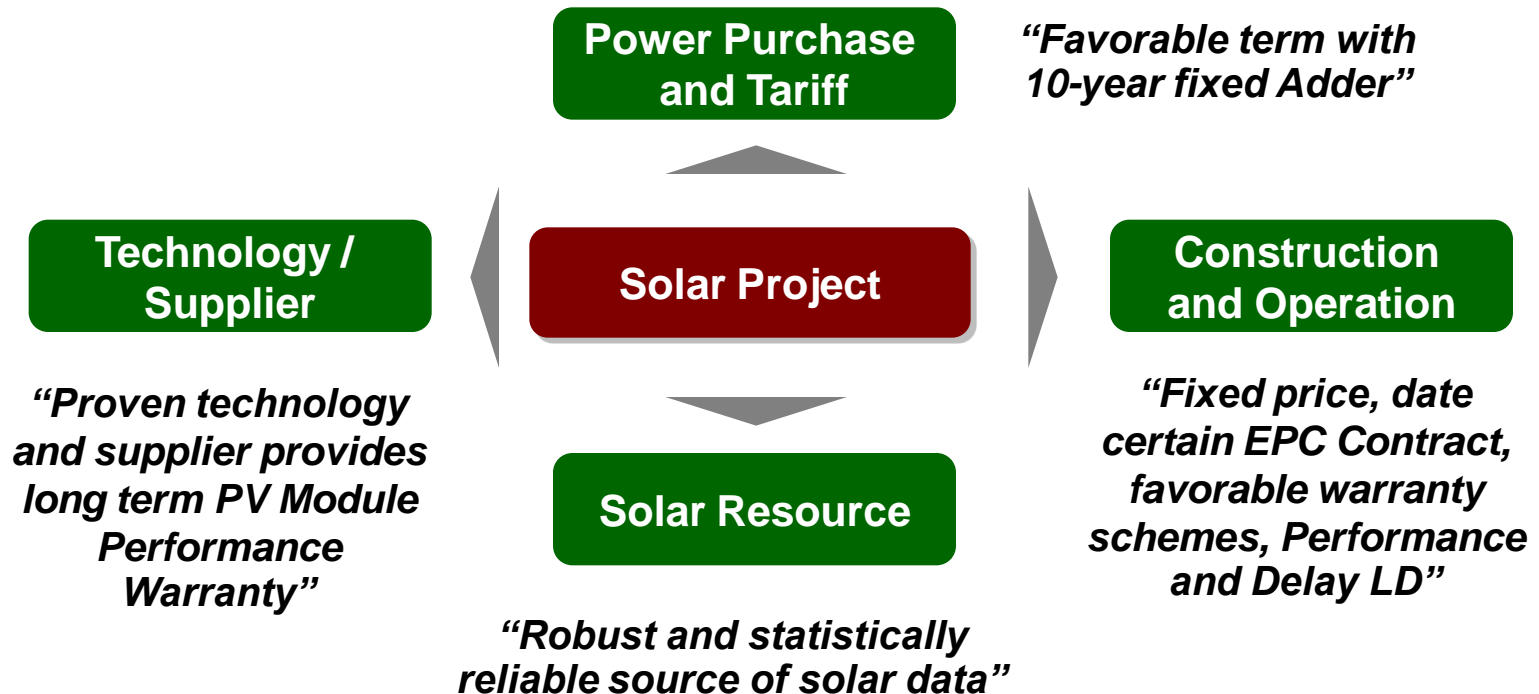
Indicative terms and conditions

Facility Types	Tranche A: Long Term Facility Tranche B: Working Capital and/or Trade Finance Facility Tranche C: Hedging Facility (IRS)
Purpose	To support the development and construction of a renewable power project
Benchmark Interest Rate	Either MLR or THBFIX and apply the applicable margin
Tenor	Not exceeding the tenor of the government's subsidy (Adder period)
Key Security	i) Conditional assignments of all related contracts and project's proceeds ii) Mortgage of project's security iii) Pledge of reserves and waterfall accounts iv) Sponsor supports
Key Covenants	i) Debt service ratio – i.e. Debt Service Coverage Ratio (DSCR) ii) Leverage ratio – i.e. Debt to Equity (D/E Ratio) iii) Minimum cash position iv) Sponsor's undertaking in project ownership



Successful Case

1. Solar Project Financing





Successful Case

2. Solar Project Financing (Con't)

Key Stakeholder

Strengths Provided

Sponsors

- Experienced Sponsors
- Proper selection of location and technology as well as matching and cost-effective components

Off-taker

- Strong Governmental Agency
- Power purchase agreement under strategic and long term governmental support

Counsels/Consultants

- Understand issues of renewable – supplier warranty, contract termination, performance warranty
- Understand dynamic of technical development – assessments of area, irradiation yields, physical structure and BOPs

**Financial
Advisors/Lenders**

- Keen and familiar with renewable projects – understand key specific characteristic of renewable projects
- Understand project requirements – able to advise and deliver appropriate financial structure

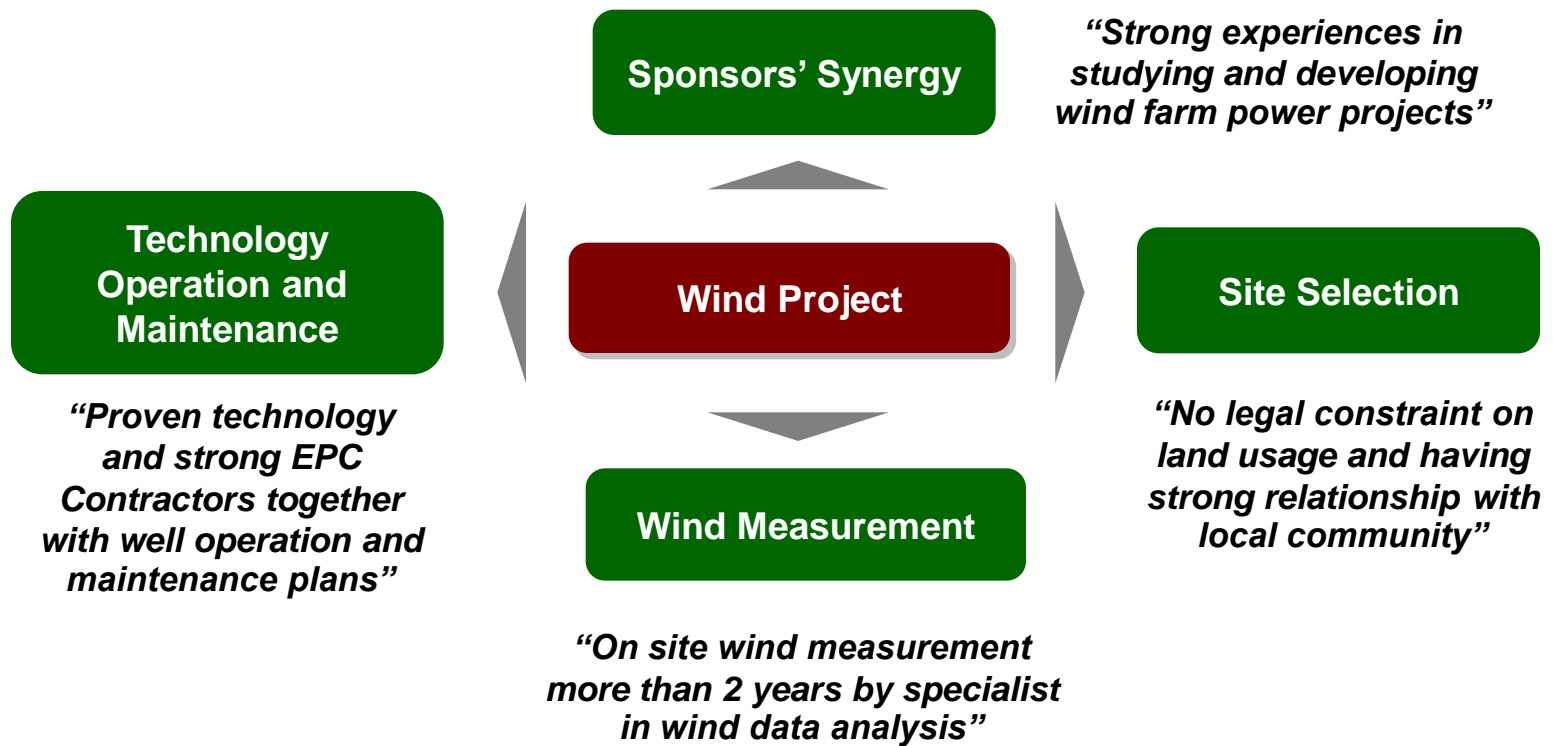
**EPC/Equipment
Suppliers**

- Strong R&D and track records – traceable and proven records
- Production readiness – provide quality products within timeframe
- Commitment of services – ability to provide commitment/warranty



Successful Case

2. Wind Project Financing





Successful Case

2. Wind Project Financing (Con't)

Key Stakeholder

Strengths Provided

Sponsors

- Experienced Sponsors
- Proper selection of location, long period of wind measurement, applied value experiences from both local and foreign Sponsors

Off-taker

- Strong Governmental Agency
- Power purchase agreement under strategic and long term governmental support

Counsels/Consultants

- Legal due diligence under new regulations applied to the first wind farm power project in Thailand
- Technical wind specialist particularly on wind data measurement and analysis

Financial Advisors/Lenders

- KBank understands how to raise fund both equity and debt; and balances and maximizes the benefit of Sponsors and Lenders
- KBank successfully arranges the strong syndicated lenders with bankable terms and conditions

EPC/Equipment Suppliers

- Proven track record of wind turbines and strong experiences in construction wind farm power projects together with O&M plans
- Concrete relationship with local community
- Environmental friendly and high safety standard