



“Financing as barrier and opportunity”

Budapest, Hungary September 27, 2004
Bratislava, Slovakia September 30, 2004



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**"Financing is the biggest obstacle
for cogeneration investments"**



TOPICS

- **Why?**
- **Country characteristics**
- **Project characteristics**
- **Investor characteristics**
- **Case**
- **Seller's role in financing**
- **Opportunity sources of financing**
- **National development banks**
- **Export credit agencies**
- **European investment bank**
- **Bilateral European development institutions**
- **CDM**



WHY?

- **COUNTRY** characteristics
- **PROJECT** characteristics
- **INVESTOR** characteristics



COUNTRY characteristics



INVESTMENT CLIMATE

- **POLITICAL STABILITY**
- **MACROECONOMIC STABILITY**
 - **TRANSPARENT LAWS**
 - **CONSISTENT POLICIES**
- **ACCESS TO CAPITAL MARKETS**



THE ASIAN BANKING SECTOR

- **FINANCIAL STATE**
- **STRUCTURE**
- **LENDING FOCUS**
- **LENDING CULTURE**
- **CREDIT MANAGEMENT CAPABILITIES & PREREQUISITES**



THE CASE OF CAMBODIA

- Total loans only about 50% of total deposits
- Short term lending only to SMEs (by volume)
- Average spread for interest rates > 15% (June 2004)
- Lending policies:
 - ^ Tenor
 - ^ Borrowing entity
 - ^ Loan purpose
 - ^ Collateral



THE CASE OF CAMBODIA (cont.)

- **FUNDING**

- * Banks do not have access to long term (LT) capital
- * Some IFIs provide LT funds to commercial banks

- **CAPACITY OF BANKS**

- * Limited risk management capacity
- * Lack of experience in LT lending
- * Lending to equipment perceived as unacceptable risks (due to lack of credit analysis skills and specialised lending)
- * Leasing law under preparation



THE CASE OF CAMBODIA (cont.)

- **ABILITY OF SMEs TO MEET REQUIREMENTS**
 - * SMEs have inadequate records and collateral, poor plans ...
 - * Financial reports of SMEs, if any, are rarely audited
 - * Customer Confidentiality Act prohibits exchange of customer information between banks

- **BUSINESS ENABLING ENVIRONMENT**
 - * No protection of lender's interest = body of law inadequate (Secured Transaction Law drafted)
 - ^ no legal framework for registering security interest in moveable property
 - ^ no priority over other lenders
 - * Judicial system unreliable (Law on Commercial Court drafted)



Focus shift: IS BUYER CREDITWORTHY?

After 1997 banks raise credit standards and introduce modern risk management techniques focusing on:

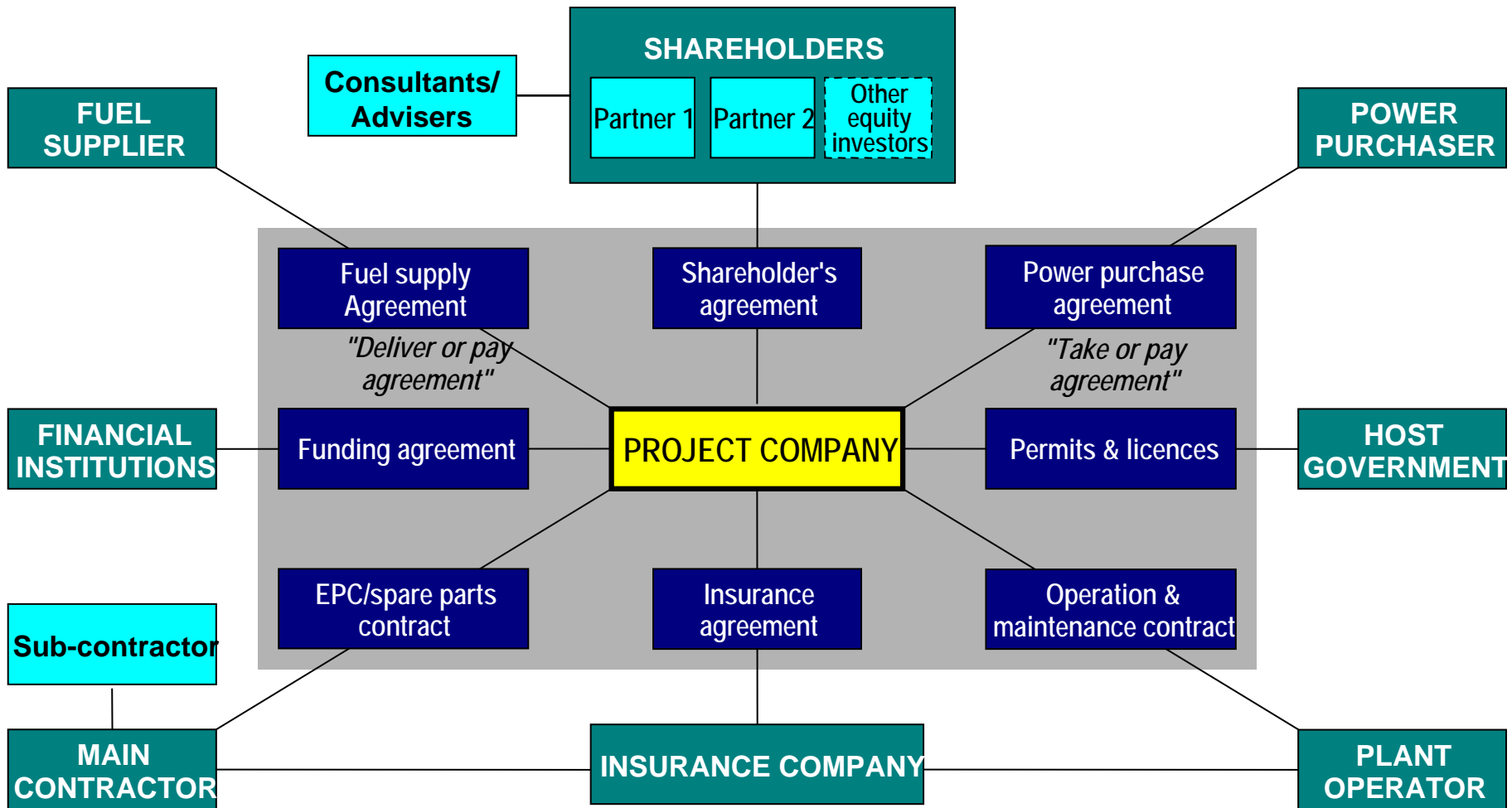
- Operation and financial performance
- Lending decisions based on cash flow not on collateral
- Disclosure and transparency in financial accounting
- Investment analysis



PROJECT characteristics



STAKEHOLDERS





FINANCIER'S PERSPECTIVE

(until loan maturity)

- TECHNICAL/OPERATIONAL RISKS
- COMMERCIAL RISKS
- POLITICAL/REGULATORY RISKS



FINANCIER'S PERSPECTIVE (cont.)

TECHNICAL/OPERATIONAL RISKS

- Few renewable technologies seen as fully proven (blue chips)
- Even technically proven can be susceptible to implementation delays
- Arrangements for construction (established criteria?)
- Mitigate technical problems by warranty agreements



FINANCIER'S PERSPECTIVE (cont.)

COMMERCIAL RISKS

- **Contractual: scrutinise all contracts re. risks**
- **In particular:**
 - **Fuel supply: availability, reliability and price development? Long-term contracts?**
 - **PPAs (with grid or other buyer): contract period, selling price, financial standing?**



FINANCIER'S PERSPECTIVE (cont.)

POLITICAL/REGULATORY RISKS

- Robustness of regulatory framework
- Level of political support
- Degree of certainty that incentives remain for duration of debt?
- Grid prices for electricity
 - determined by whom?
 - Predictability?
 - Stability?



INVESTOR characteristics



BUYER / INVESTOR

- Often family owned, small or medium sized = low credit rating
- Often non-professional procurer (not core business)
- Secretive
- Risk-shy
- Loan application focus on project
- Environmental issues not properly addressed



CASE



53 Mwe BAGASSE-FIRED, Thailand (2004)

- Special purpose company set up for the project
- Plant adjacent to sugar mill which supplies bagasse for fuel
- Electricity sold to (1) sugar mill and (2) surplus to grid
- PPA with grid (EGAT)
 - * firm contract for 21 years
 - * tariff (1) for energy payment = indexed to natural gas price and
 - * tariff (2) for capacity charge = indexed to USD exchange rate
- Total project cost: THB 620 million
- Financing: 29% equity and 79% loan from local commercial bank
- Loan maturity: 11 years incl. 2 years grace period
- Interest rate:
 - * before operation = MLR (fixed 1st year); thereafter = MLR - 1.00%
- Security:(i) mortgage of land, building and equipment; (ii) assignment of PPA and supply agreement; (iii) corporate guarantee for the loan; (iv) all risk insurance for equipment & assets in bank's name



SELLER'S ROLE IN FINANCING



SELLER'S ROLE IN FINANCING

- NO INVOLVEMENT
- ARRANGE FINANCING
- FINANCE PROJECTS



OPPORTUNITY SOURCES of FINANCE



OPPORTUNITY SOURCES of FINANCE

- **National Development Banks**
- **Export Credit Agencies**
- **EIB & other Multilateral Finance Institutions**
- **European Bilateral Development Finance Institutions**
- **CDM**



NATIONAL DEVELOPMENT BANKS



THE INDUSTRIAL FINANCE CORPORATION OF THAILAND

- **OBJECTIVES**
 - Assist private industrial investment
 - Develop domestic capital market
- **PROJECT FINANCE INITIATIVES**
 - Loan
 - Loan + ESCO + (Buy Back + CDM)
 - Equity + ESCO + BOT + (BB + CDM)
 - Combination



THE INDUSTRIAL FINANCE CORPORATION OF THAILAND

INVESTMENT APPRAISAL - COMPONENTS

- **MARKETING**
- **TECHNICAL**
- **FINANCIAL**
- **COLLATERAL**



THE INDUSTRIAL FINANCE CORPORATION OF THAILAND

INVESTMENT APPRAISAL – MARKETING

- RAW MATERIAL SUPPLY
 - CUSTOMER
 - MACROECONOMIC
- GOVERNMENT POLICY
 - COMPETITOR
 - AGREEMENT



THE INDUSTRIAL FINANCE CORPORATION OF THAILAND

INVESTMENT APPRAISAL - TECHNICAL

- Technology
 - Location
- Investment amount
 - Operation cost
 - Contractor
- Environmental risk



THE INDUSTRIAL FINANCE CORPORATION OF THAILAND

INVESTMENT APPRAISAL – FINANCIAL & COLLATERAL

- Project cost
- Projected performance
 - Stakeholder
- Collateral assessment



EXPORT CREDIT AGENCIES (ECA)



European Export Credit Agencies

- Support domestic exports under OECD consensus rules
- Provide insurance or guarantee to exporters and banks for political and commercial risks
- No difference between OECD-ECAs re. political risks
- Commercial risks – prices can differ between OECD states
- Open for all ASEAN except Burma



New: Local currency financing

- Target group = buyers operating in the domestic market
- Mainly currencies with mature interest rate hedging markets (Singapore, Malaysia, Thailand)
- Buyer credit with international bank having local presence as intermediary
- At first default = right for ECA to
 - Accelerate repayment period
 - and convert to hard currency loan



Benefits of ECA financing

- Long maturities
- Low funding costs
- USD and Euro most common
- but local currency financing also possible



Rules-of-thumb

- **Supplier credits more suitable for smaller deals (up to Euro 1 million)**
- **Buyer credits suitable for high value capital goods (minimum Euro 1 million)**
- **Financing costs difficult to assess as exporters cover them in the price**



EUROPEAN INVESTMENT BANK (EIB)



EIB

- **Only European multilateral finance institution with a formal program for lending to Asia (ALA III)**
- **Finance investments in all ASEAN, except for Burma and Cambodia**
- **Investments > €25 million can be financed directly by EIB or via intermediary**
- **Smaller projects: EIB lends through credit lines with partner banks**
- **Global loan facility (GLF) for SMEs in Indonesia (€28m) and the Philippines (€70m)**
- **EIB makes the funding and intermediary bank handles disbursement and loan management**



Global Loan Facility

- **Credit lines available to banks**
- **Max €12.5 million and up to 50% of investment costs**
- **Local authorities/firms with <500 employees and with fixed assets up to €75 million.**
- **New investment up to €25 million by SMEs or local authorities**
- **Between 5-12 years (15 years in exceptional cases)**
- **Interest rates: agreed with intermediary bank which takes the financing decision**
- **Application directly to the intermediary bank**



Benefits of EIB Financing

- Long maturities
- Low cost (AAA rating)
- Risk sharing (political risk)
- USD & Euro most common. Local currencies possible if functioning domestic capital markets
- Catalyst for other funding



CDM



CDM PROSPECTS

- **Thailand = the front runner**
- **Theoretical potential for renewable energy projects <15 MW**
- **Overall progress in Southeast Asia is slow due to**
 - * **uncertainties on global level**
 - * **national characteristics**
 - * **project profiles**



For more information

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<http://www.cogen3.net>

Thank You !