

Financing Renewable Projects in Developing Countries

New Energy for the South 2005

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Justus Vitinius

Agenda



- **DEG**
- DEG's requirements for financing
- Renewable projects in developing countries
- Case study: Qingdao Huawei Windpower Project, China

DEG – Deutsche Investitions- und Entwicklungsgesellschaft mbH



- Founded: 1962
- Shareholder: 100% KfW
- Head office: Cologne
- Capital invested: EUR 5.6 billion
- Employees: 330

Our business is “Developing”



- Structuring and financing of private investments in Asia, Africa, Latin America, Central and Eastern Europe
- Investing in profitable projects that contribute to sustainable development and are both environmentally and socially acceptable
- Our aim: Establish and expand private sector structures in developing and transition countries
 - for a sustainable economic growth
 - for lasting improvement in the living conditions of the local population

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Financing criteria



- Experienced partners
- Credit standing of partners
- Sound business plan
- Market analysis and other due diligence studies
- EPC contract on turn-key basis
- Long-term offtake and O&M contracts
- Secured legal system

Risks DEG is prepared to take



- Country risk, i.e. political and economic
- To a certain extent
 - Missing track record ⇔ finance of business start-ups and greenfield projects
 - Sponsors' risk
 - Currency risk

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Advantages of renewable energy in developing countries



- Business development, especially private sector; creation of new jobs
- Transfer of technology and know how
- Abatement of poverty (e.g. electricity in remote areas, cooling systems for pharmaceutical products)
- Avoidance of bottleneck in energy supply ⇒ utilisation of local resources, thus reduction of dependence on foreign countries and imports
- Positive effects on environment and people's health, less pollution
- Climate protection: less greenhouse gas emissions
- Protection of resources: reduced demand of fossil fuels and reduced risk of an overusage of biomass

General Constraints and Challenges



- Sometimes unsecure political situation
- Lack of infrastructure
- Lack of environmental consciousness
- Long-term offtake contracts to cover specific market risks
- Creditworthiness and standing of buyer evidenced through reliable financial information
- Lack of substantial equity participation of experienced local partner
- Missing adequate coverage of currency exchange rate and transfer risks

Legal / regulatory requirements



- Regulatory framework in place to support renewable energy investments
- Timely procurement of licenses and approvals necessary to secure the whole financing
- Reliable process for the registration of securities
- Adequate protection for foreign capital investment
- Transfer of earnings and capital must be assured

DEG's financing tools



- Long-term loans:
 - up to EUR 20 million
- Mezzanine finance:
 - usually between EUR 2.5 – 15 million
 - combining formative elements of equity participation and classical loan
- Equity capital:
 - usually between EUR 2.5 – 15 million
 - in certain cases, voting rights and seat on board of directors
 - clearly defined exit strategies

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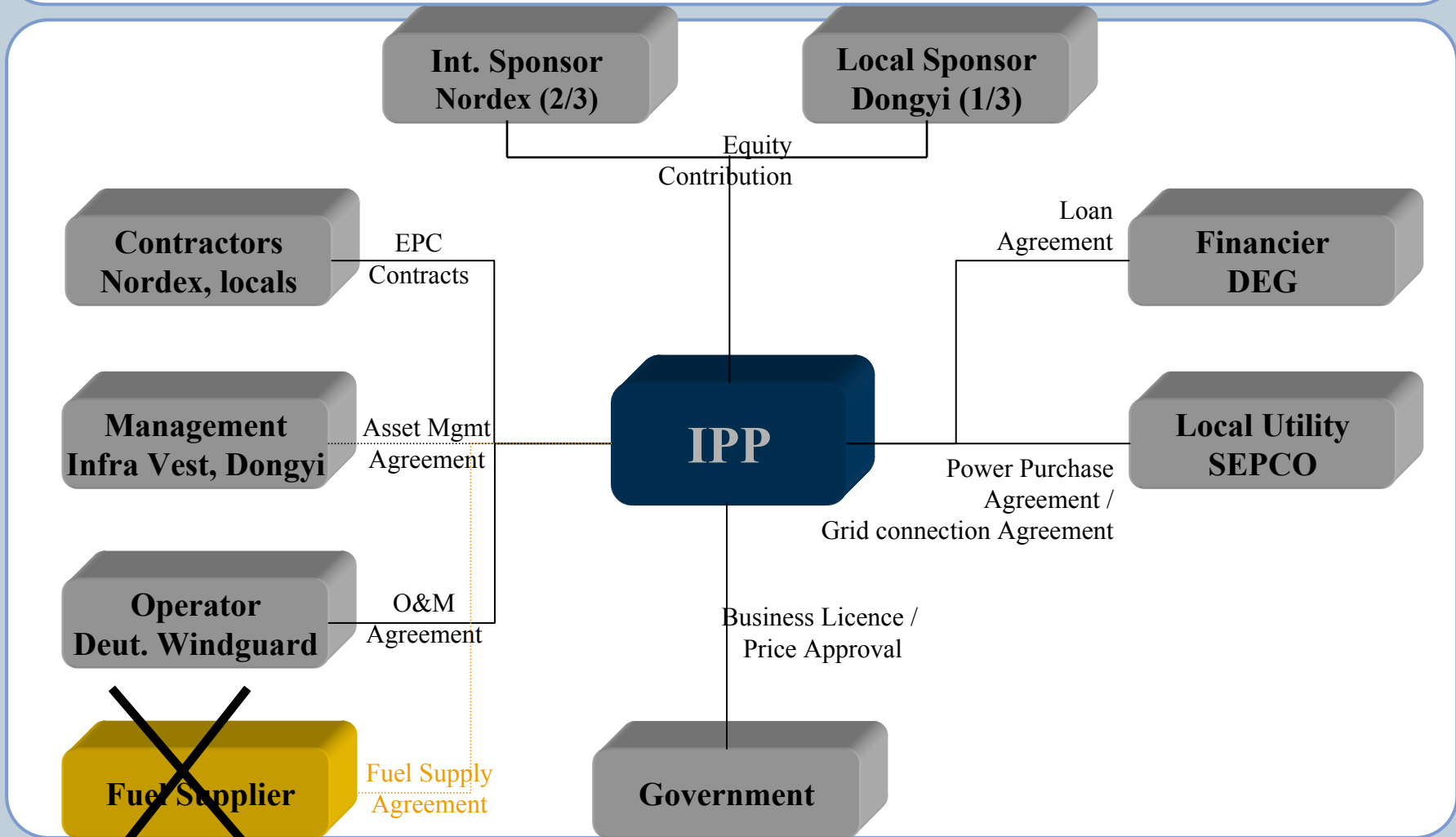
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Qingdao Huawei Windpower – P.R. of China



- 15 Wind turbines located in Qingdao (eastern coast)
- 16.35 MW output (about 34.200 MWh p.a.)
- 17.5 million US\$ total cost (DEG HK\$ 79.7 million loan i.e. 58%)
- Joint venture between Nordex Energy GmbH (2/3) and Qingdao Dongyi (1/3)
- Maturity of 9 years including 1 year grace period
- Mortgage style repayment schedule
- Cash sweep mechanism
- Cross currency swap HK\$ to €

Structure of the project



Risks & Opportunities



- Wind yield (assessed by wind studies)
- EPC risk (main supplier is Nordex, semi-turnkey contract, technical completion guarantee)
- Tariff subsidy of approximately 79% compared to grid average (financial completion guarantee)
- Currency risk (HKD/€ Swap)
- Administrative weaknesses (central, provincial and local government)


- Wind power is an encouraged sector of foreign investment
- Carbon reduction (25.000 t p.a.) with possible additional income of 1million USD if certification is successful


Get in touch !



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