Wind Project Financing in Kazakhstan

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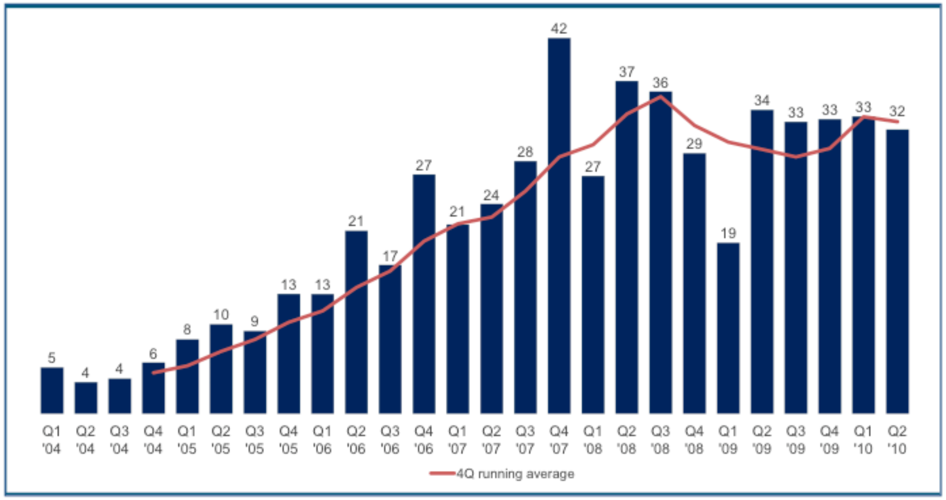
Agenda

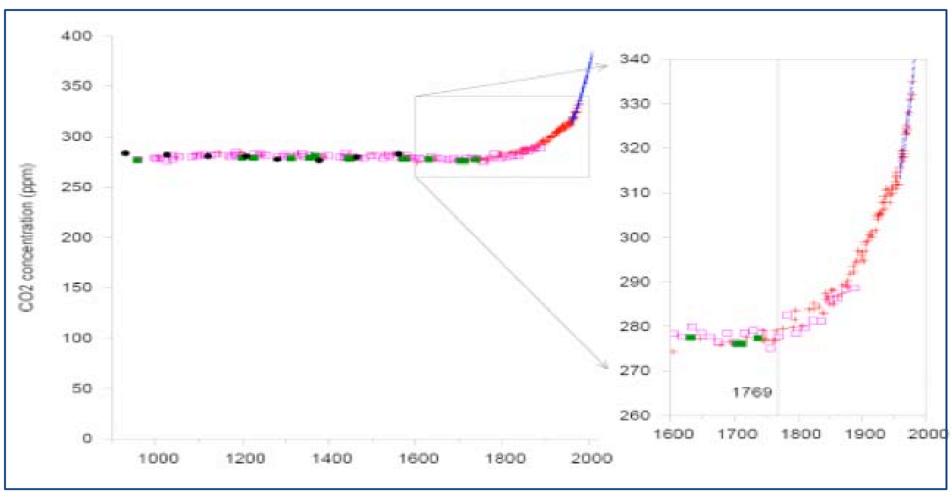
- Introduction
- Wind Project: the Basics
- Spectrum of Financing Alternatives
  - Project Finance
  - Equity Finance
  - Private-Public Partnership
  - Balance Sheet Finance
  - Islamic Finance
  - Alternative Financing Overview
  - Carbon Finance
- Conclusion and Recommendations

New Investments in Clean Energy



Source: Bloomberg. New Energy Finance

- First half of 2010: $65bn of new investments in clean energy
- Wind showed strength in investments:
  - Off-shore wind
  - Maturity of on-shore technology
  - China and other emerging markets



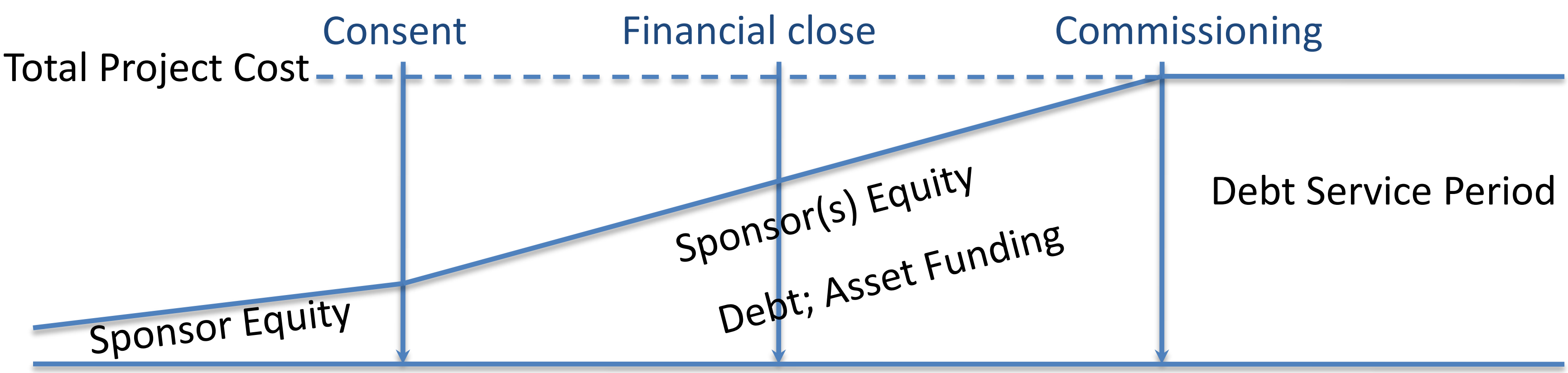
Source: www.withouthotair.com

- Driven by
  - Security of oil & gas
  - Rising demand for electricity
  - Escalating carbon emissions

Kazakhstan: Renewable Energy

- Kazakhstan ratified Kyoto protocol
- June 2009 – Parliament passed the final amendments to the Law on Renewable Energy Sources
- Wind Potential:
  - Rich in wind resources
  - Meets the electricity demand
  - Contributes to the development of local industry
  - Technological transfers, positive socio-economic development
- Investments - ?

Wind Project: Development Stages



Development
- Acquisition of Location
- Wind Analysis
- Planning Consents
- Other approvals
- High-level Financial Analysis

Financing
- Secure Project Funding
- Detailed technical, environmental, financial due diligence
- PPA
- Legal structure
- EPC, Procurement

Construction
- Delivery
- Assembly
- Infrastructure
- Connection to grid

Commissioning/Operating
- Wind farm is commissioned
- 1-2 years to test for “bugs”
- Handover to buyer
- Owns and operates

Spectrum of Financing Alternatives

Specific alternatives available would be driven by the timing and market conditions at that time, scale or stage of the specific project or a portfolio of projects, etc. It is likely that a combination of sources listed below will be required in order to secure full project funding.

Traditional

- **Equity**
  - Private equity
  - Strategic Investors
  - Sovereign Wealth funds
  - Infrastructure Funds
  - Public Markets
- **Debt**
  - Project debt : be prepared for a marathon
  - Bonds
- **Balance Sheet**
  - Large corporates

Unconventional

- Green Bonds
- **Carbon Finance**

Additional

- Grants
- HNWI (high net worth individuals)
- Vendor finance

Islamic Finance

Wind Project: Financing Stages

Development stage:
HNWI, Corporates, Equity Funds of Development Banks

Growth Capital /Construction Stage:
Equity (Private Equity, Infrastructure Funds, Strategic Investors), Project Debt (Development, Commercial banks)
Islamic finance

Operating Stage:
Infrastructure Funds, Private equity (Buy-out) Funds, Bank Debt, Islamic Finance, Corporates

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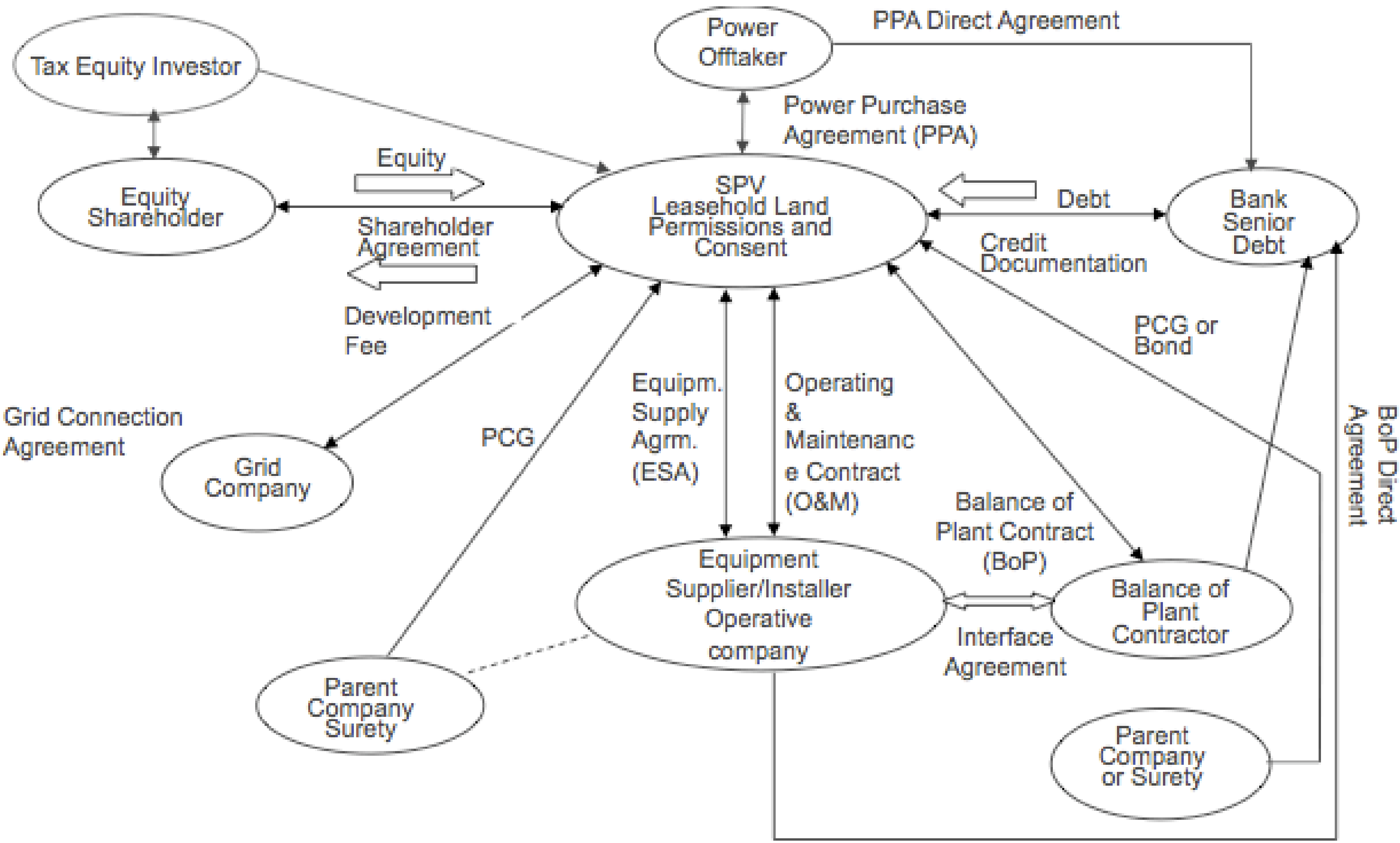
Project Finance

- Not every financing of a project is “Project Finance”
- Project Finance: well-defined, with internationally accepted structures and standards
- Various definitions. Key: it is debt financing based on future cash flows of the project itself. Also known as non-recourse financing as there is no recourse to anything but the cash flows and assets of the project (or the recourse is very limited)
- Consequences: has to be secured and risks have to be mitigated by a set of contract arrangements and guarantees
- Sources:
  - Export Credit Agencies (“ECA”)
  - Multilateral Agencies (”MLA”), Development banks: EBRD, EIB, ADB
  - Commercial International and Local Banks

Participants

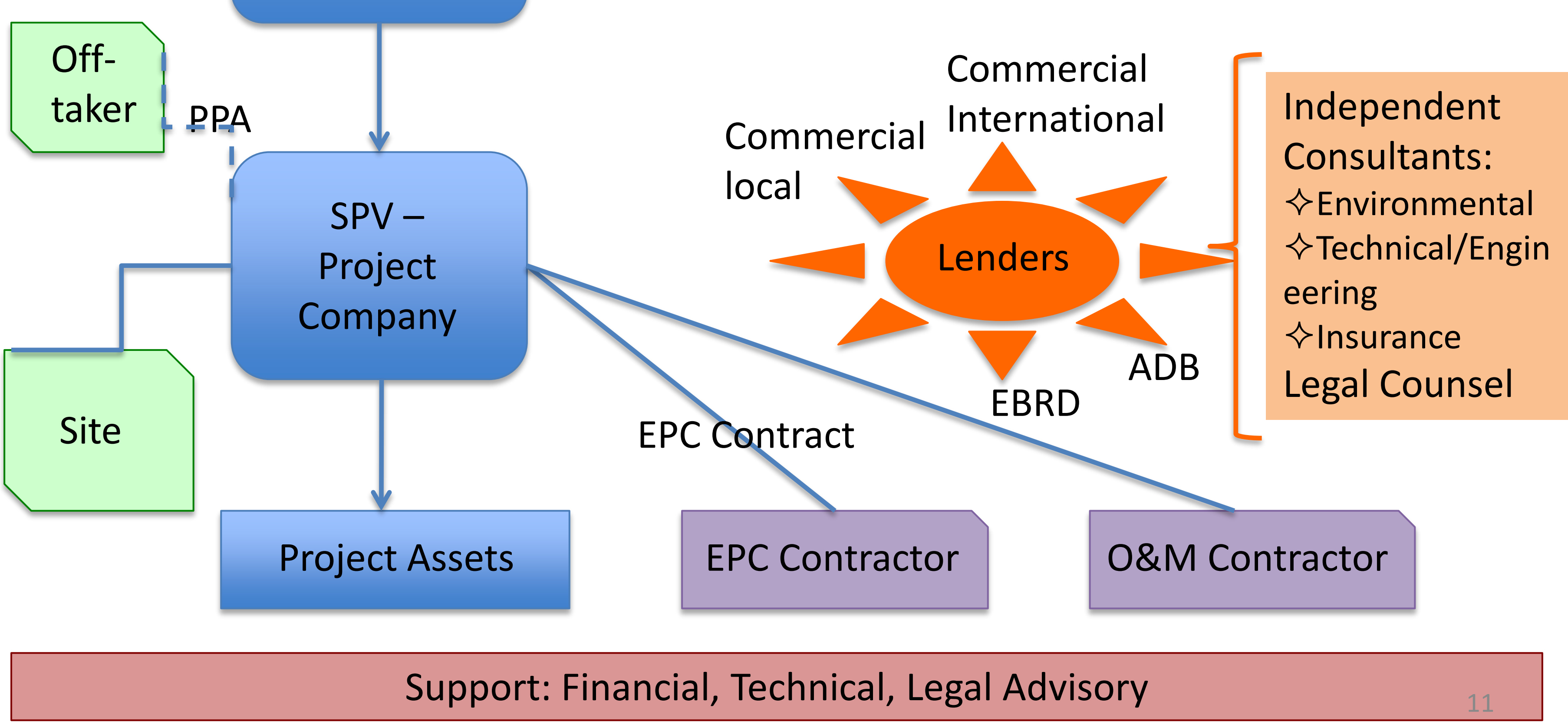
- Developer
- Sponsor(s)
- EPC Contractor
- Equipment Supplier
- O&M Contractor
- Off-Taker(s)
- (Banks, other debt providers)
- Advisors (financial, legal, technical)
- Host country government

Sample Project Structure



A simplified version

SPV enters into a credit agreement with one or more lenders. In case of multiple lenders, one bank (the lead arranger) would normally coordinate work with others



Risk Allocation: “Ringfencing”

- Protecting the project against all risks
- How? Agreements, guarantees, insurances, opinions, warranties, etc. for each risk
- Risks are allocated to parties who is best able to manage it / most appropriate to bear it
- Contract is King!

What makes a project bankable

Since risks are shared, one criterion of a project's suitability for financing is whether it is able to stand alone as a distinct legal and economic entity .

- Commercially sound:
  - Wind speeds, reliability of wind data
  - Grid connection
- Environmental requirements:
  - What about the birds and the airports?
- Names and track record of
  - Sponsor
  - Developer
  - EPC Contractor
- Off-take agreements:
  - PPA: price, term, guarantee
  - Creditworthiness of the off-taker
- Economically Sound: IRR / DSCR/etc.
- Regulatory regime: permits, licenses, etc.

Project Debt Financing Process

- Timing: 12 months + … be prepared for a marathon
- Sources: Development / Multilateral Banks: EBRD, EIB, ADB, IFC, etc.
- Commercial: International / Domestic

Phase I: Structuring

- Initial Project Assessment
- Identification of Key Issues
- Due Diligence
- Development of funding strategy
- Development of Project Docs
- Selection of lender consultants

Phase II: Execution

- Lender full due diligence
- Financial term sheet(s) development and negotiation
- Structure development
- "Ringfencing " exercise
- Financial Close
- Debt Syndication

Equity Funding (Sponsors)

Several potential sources of equity finance from strategic and financial investors. The choice depends on objectives, constraints and appetite. A competitive process may need to be considered in order to optimize value and commercial terms.

Strategic Investors

- Suppliers (e.g. turbine suppliers)
  - Gamesa, Vestas, GE
- Customers
  - Distribution networks/ their ultimate owners
- Local Kazakh companies (O&G, conglomerates, industry)
- International companies (energy and beyond) with strategic presence / interest in Kazakhstan
- Example: International Companies investing in renewables: Areva, EDF, TOTAL, Gamesa, BP, Samsung, Mitsui, Enel and many more

Financial Investors

- Private equity
  - EBRD (PE arm)
  - ADB (PE arm)
  - PEs with geo and industry focus
- Specialized infrastructure funds
  - MRIF (Macquarie Renaissance Infrastructure Fund)
- Sovereign Wealth Funds
  - Samruk / Kazyna
  - Masdar

Process Considerations

- Two-stage vs. accelerated
- Usually takes around 6 months to complete
- External advisors: legal, financial, technical
- Key stages:
    - Preparation: Business Plan, Pre-marketing, Preparation of marketing materials
    - Stage 1: Solicitation of feedback; Indicative offers; Elimination of parties, preparation of dataroom
    - Stage 2: Dataroom, site visits, detailed due diligence; Binding offers
    - Negotiation and signing of agreements
    - In an accelerated process (2-3 parties) stages 1 and 2 are combined

Project Finance: some numbers

- Equity : 30-40%
- Debt: 60-70%
- Typical project returns: mid teens (for the project), equity investors typically look for higher returns
- Tenor (length of the debt): depends on the project
- Pricing: driven by quality, country, project-specific risks, etc.

Public Private Partnership (PPP)

- What is it?
  - A symbiotic relationship b/w a private entity and a public / government body for the completion of a project
- So much time on Project Finance – what for?
  - The structures / risk allocation principles are similar
  - Similar due diligence
  - Investment criteria / bankability
- Who did this in relation to wind projects?
  - Spain used PPP to develop its wind sector;
  - India: proposed equity investment to ADB (Asian Development Bank)
  - Accompanied by:
    - price mechanisms, contracts by the government on the guarantee to sell electricity produced by wind farms
    - Guarantees that reduce risks during wind farm set-up stage
    - Risk-return dilemma

PPP for Wind in Kazakhstan

- Why relevant to Kazakhstan?
  - Useful for development on a utility scale
  - Mitigates risks
- Potential source examples:
  - Macquarie Renaissance Infrastructure Fund (MRIF)
    - New Fund: Has raised $530mn; Target: over $1bn
    - Kazakhstan is one of the target markets
    - The bulk of projects will be financed through PPP
    - Kazyna Capital Management (KCM) and Eurasian Development Bank (EDB) are among investors in MRIF
    - Focus: roads, airports, ports, electricity and gas distribution, heating networks, communications infrastructure, rail networks, water and sewerage utilities, social infrastructure. Renewables - ?
  - Asian Development Bank (ADB): experienced in PPP and wind

Example: India

- ADB investing $40mn in a PPP for Renewable Energy Development
- A new Joint-Venture Company is formed by a consortium of Sponsors:
  - NTPC (National Thermal Power Corporation): 40%
  - ADB: 20%
  - GE Energy (USA): 20%
  - Kyushu (Japan): 20%
- The foreign partners (GE, Kyushu) selected jointly by ADB and NTPC
- Basis for selection:
  - ✓ Financial strength
  - ✓ Global experience in carrying out renewable energy projects
  - ✓ Long-term interest in investing in the Indian power sector
- The Government shall not, directly or indirectly, hold more than 50% of the issued and outstanding shares
- Facilitates development of RES on a larger scale, as a power utility would, rather than on a project-by-project basis

Balance Sheet Finance

- A company (e.g. utility) uses its balance sheet to finance a project:
  - Cash
  - Equity
  - Debt: the company can raise corporate debt, whereas SPV cannot due to unattractive risk profile
- Examples:
  - **China**: investment in 2009 ca. $34 bn, the majority of which was for new wind projects. The majority of that was Balance Sheet financing
  - **India** 2010:
    - Altrade Group: 30MW wind project is Rajastan
    - CLP Power India: 39.6MW wind project in Karnataka
    - National fertilizers: 14.7MW Jaisalmer Wind Farm (USD 15mn)
    - Gujarat State Fertilizers: 18MW Adodar Wind Farm
  - **Turkey** 2010:
    - Agaoglu Group (diversified): 93MW wind farm in Bandirma
    - Akuo Energy of France: 148MW wind farm in Ankara

Balance Sheet Finance

- How is it applicable to Kazakhstan?
  - Attract investments from local energy, conglomerates, other industry companies
- World Experience: conventional Energy companies, large conglomerates
- In-line with move to adopt GHG reduction obligations
- Does not have to be forever: the company can SELL the project at any stage and realize profits

Islamic Finance

- Consistent with the principles of Islamic law, Shariah
- In 2009 the government introduced principles of Islamic finance in Kazakhstan
- Kazakhstan is a member of
  - The Islamic Development Bank (IDB)
  - Organization of the Islamic Conference (OIC)
- Expands investors universe and opens new markets:
  - Important in the post-crisis world
  - Country’s debut sovereign Sukuk (Islamic equivalent of bond)
- Specific rules and regulations:
  - Interest on loan is prohibited under Shariah
  - Challenges for Kazakhstan: originators are limited to Islamic banks and national holding or managing holding companies
- Already present in Kazakhstan: Al-Hilal Bank of Abu Dhabi
- Renewables is a halal industry under Shariah
- Investing in Renewables: IDB, ICD (Islamic Corporation for the Development of the Private Sector)
- Experience: Malaysia, Turkey, Middle East

Additional Funding Options

- Vendor Finance - GE, Vestas, Gamesa, etc.
  - Example: Gamesa provided $28mn (35% of the total investment) for the 50MW wind farm in Shandong province of China
- Grants and Foreign Aid
  - Various programs for sustainable development
  - Host government grants, investment programs
  - Foreign aid (which will in most cases require to purchase goods and services from the private sector of the country providing such financial aid)
  - Wind Examples:
    - Government of China and Denmark have launched a grant program in 2010 (until 2013) in renewable energy development. The Danish Government will provide experience and grant ca. $18mn
    - Shanghai government plans to launch clean energy fund. The grant program will be established to encourage investment in RES, incl. wind
- Export-Import Finance
  - Export-import bank. Export agencies providing support in the form of loans and guarantees
- HNWI (High net worth individuals)
  - Good at the initial stage or for small-scale projects
  - Tax incentives - ?

Alternative Financing Instruments

- Green Bonds
  - World Bank (IFC)
  - Asian Development Bank
- Climate Bonds
  - Would be issued by governments
  - Due to novelty and scale of issuance, government guarantees and political risk insurance may be needed
- Carbon Finance

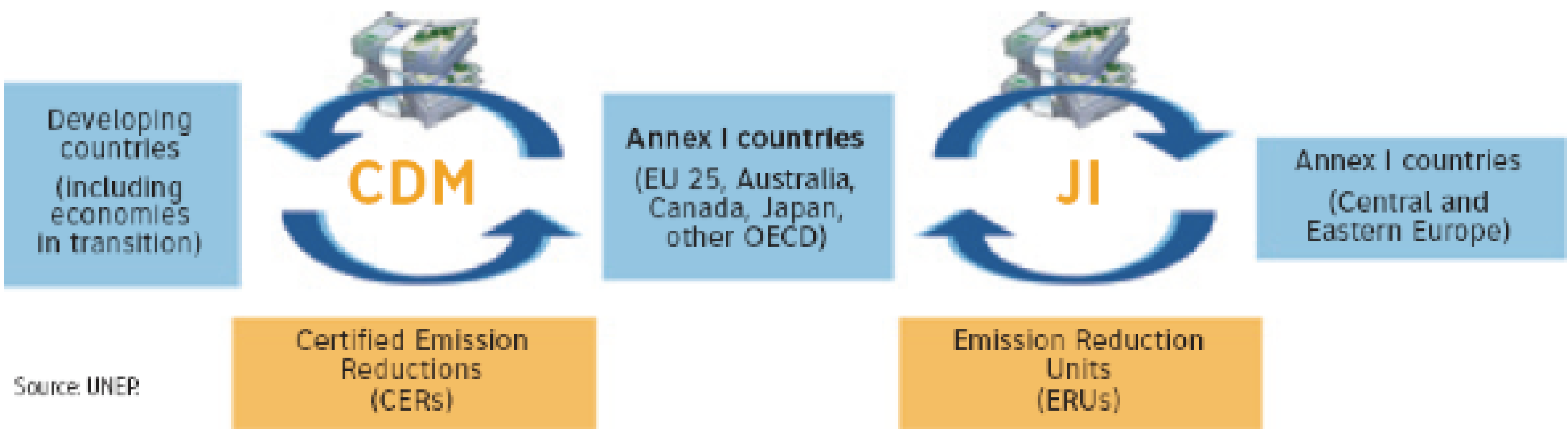
Carbon Finance at a Glance

- Kyoto Protocol'97 – agenda and vision for action
- 40 Annex-I Countries subjected to legally binding emission targets ….2012
- Costs of abatement – clear incentives:
  - Developed Countries: $50-100/ton
  - Developing Countries: $1-10/ton
- Kazakhstan is a non-Annex I country

Carbon Mechanisms

- 3 trading instruments:
  - Emissions Trading – between developed countries
  - JI (Joint Implementation) – between countries with GHG reduction targets
  - CDM (Clean development mechanism) – between developed and developing countries

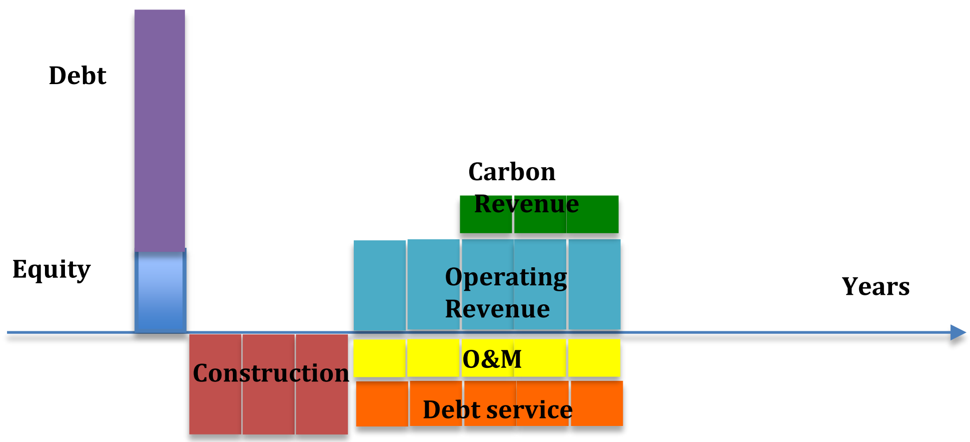
The project mechanisms: the CDM and JI



Although the two project mechanisms are similar, they differ in their geographical scope. The CDM concerns developing countries, including economies in transition, while JI concerns the industrialized (Annex I) countries.

Carbon Financing: Opportunities

- Can help regardless of who the equity sponsor and/or debt providers are
- Typical 60MW project might generate 100K tonnes of CO2 reductions per year
- … to cover 5%-10% of project cost
- Can increase project IRR by 0.5-15% (for wind more like ca 5-7%, but…. depends on e.g. $price/tCO2)



- Local Market: GHG
- Local Trading System or Carbon Exchange
- Position for CDM

Carbon Finance: Challenges

- Government’s view on Kyoto? Annex B party?
- Price per tCO_2 in Kazakhstan?
- Guarantees to ensure carbon revenue and hence financing can be part of the project?

Carbon Financing: Process Considerations

- A lengthy process:

  PIN (project idea note) → Host Country Approval → Validation → Registration → Monitoring Verification & Certification → Issue ERUs
- Would be beneficial to work with a Carbon Fund:
  - Carbon Fund will work with project Sponsor to estimate carbon reduction potential
  - Support from the Fund to prepare Project Idea Note and Project Design Document
  - May contract to buy credits up-front / provide partial up-front payment (depends on the Fund: e.g. EBRD provides partial up-front payment)

Note. ERU – emission reduction unit

Investment Barrier Considerations and Mitigating Factors

- No precedents of renewable projects, lack of local expertise
  - ➢ Strong Developers, Sponsors, Equipment Supplier, EPC, O&M Contractor, Advisors (financial, legal, technical) Build an Exemplar Project !!!
  - ➢ Banks are FIRST in line to finance your SECOND project
- Regulatory regime
  - ➢ Clarity on licenses, land lease, tariffs, processes and enforceability. A legal opinion is required
- Political Risk
  - ➢ Political Risk Insurance/Guarantee from Multilateral and/or Export Credit Agency
  - ➢ Private Insurance Company with High Rating
- High Level of physical depreciation of energy distribution and transmission infrastructure
  - ➢ Invest to modernize, BUT…
    - Investment is limited is part due to high level of sector regulation and unfavorable for investment tariff system

Investment Barriers Considerations and Mitigating Factors

- Creditworthiness of off-takers
  - The Government or Sponsor(s) may need to "underwrite" the payment
- Quality and reliability of data (winds speeds)
  - The further back you can go the better
  - Internationally recognized opinions
- Project Returns and Financial Risks
  - FOREX PPA in/tied to "hard" currency?
  - PPA: At LEAST tenor of debt +1-2 yrs
  - Carbon Finance – can boost returns to meet/exceed hurdle rates, BUT
- Carbon Finance implementation / viability:
  - Government's position on Kyoto protocol / commitments: Annex I, GHG emissions?
  - UN support, partner with EBRD

Conclusion and Recommendations

- Kazakhstan is positioned in a highly attractive geographical area:
  - Good wind resources according to the studies and expert opinions
  - A broad spectrum of financing alternatives to be leveraged from the West, Asia and Middle East in addition to local sources
- To overcome barriers that hinder investments in the sector, existing issues need to be addressed and clarified:
  - Regulatory regime for renewable generation implementation
  - Pricing mechanisms to support the development that would be acceptable to investors: long-term with credit-worthy off-takers
  - Kazakhstan's position with respect to Kyoto protocol and GHG emissions reduction obligations
  - Scale of alternative energy in Kazakhstan: target share of the alternative energy in the overall generation by source and the government's commitment to the targets
- Kazakhstan would benefit from having strong creditworthy sponsors and partners (Developers, Financial Institutions, EPC, O&M contractors, Advisors):
  - Would allow to build track record and ensure technology and skill transfer
- Government, strong sponsor guarantees, public private partnerships and development banks are likely to provide additional comfort to investors and mitigate risks
- Various routes/sources of financing and structures should be considered to find an optimal solution for each project or a portfolio of projects

Thank You!