PPPs in the Energy Sector – IPPs and Case Studies

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PPPs in Energy

- **For an energy project development a PPP characteristically takes the form of a Design Build Finance Operate (DBFO) arrangement.**

- **A typical example of an energy PPP project is the so-called "independent power producer" (IPP) project.** This usually involves the development of a new (greenfield) power generating facility by a private company that sells the power on a wholesale basis to a government utility that distributes the power to individual customers. In the case of IPPs, the assets will belong to the private company, but the power will be sold to the government (or a government power utility) for retail distribution as a public service to customers. For IPPs, the critical form of PPP contract is the PPA between the private power generator and the government purchaser of the power.

IPPs (although similar principles would apply to transmission/distribution projects)

- Financed on a “project finance” basis ie with lenders substantially seeking repayment of debt from cashflow arising under a long-term contractual arrangement – the Power Purchase Agreement (“PPA”) and with limited recourse to the sponsors

- All power production technologies are relevant – diesel / coal / hydro / solar / wind / geothermal / gas – although certain distinct differences exist

Key Structural Issues in IPPs

What is necessary for any IPP? (renewable or otherwise)

- **Long-term sustainable cashflow**
  - ✓ the developer/owner must be credible
  - ✓ the offtaker needs to be reliable and creditworthy
  - ✓ the document providing for the cashflow needs to be "bankable"
  - ✓ the power plant needs to be able to be built to time/specification/price to get to the cashflow (ie, the EPC documents need to be "bankable")
  - ✓ the enabling legal, regulatory and political environment needs to be right in the country
  - ✓ the risk allocation, generally in respect of the project, must be well structured

Key Structural Issues in IPPs

Host governments need to provide mitigation for key political risks

❖ **Political Risk Issues**

- ✓ War
- ✓ Riot
- ✓ Expropriation
- ✓ Currency convertibility / repatriation
- ✓ Consents / authorisations
- ✓ Tax incentives
- ✓ General “enabling environment”

Key Structural Issues

- **Sustainability**

The risk allocation in the documents is probably irrelevant if the Project does not make basic economic sense to all parties.

Key Structural Issues

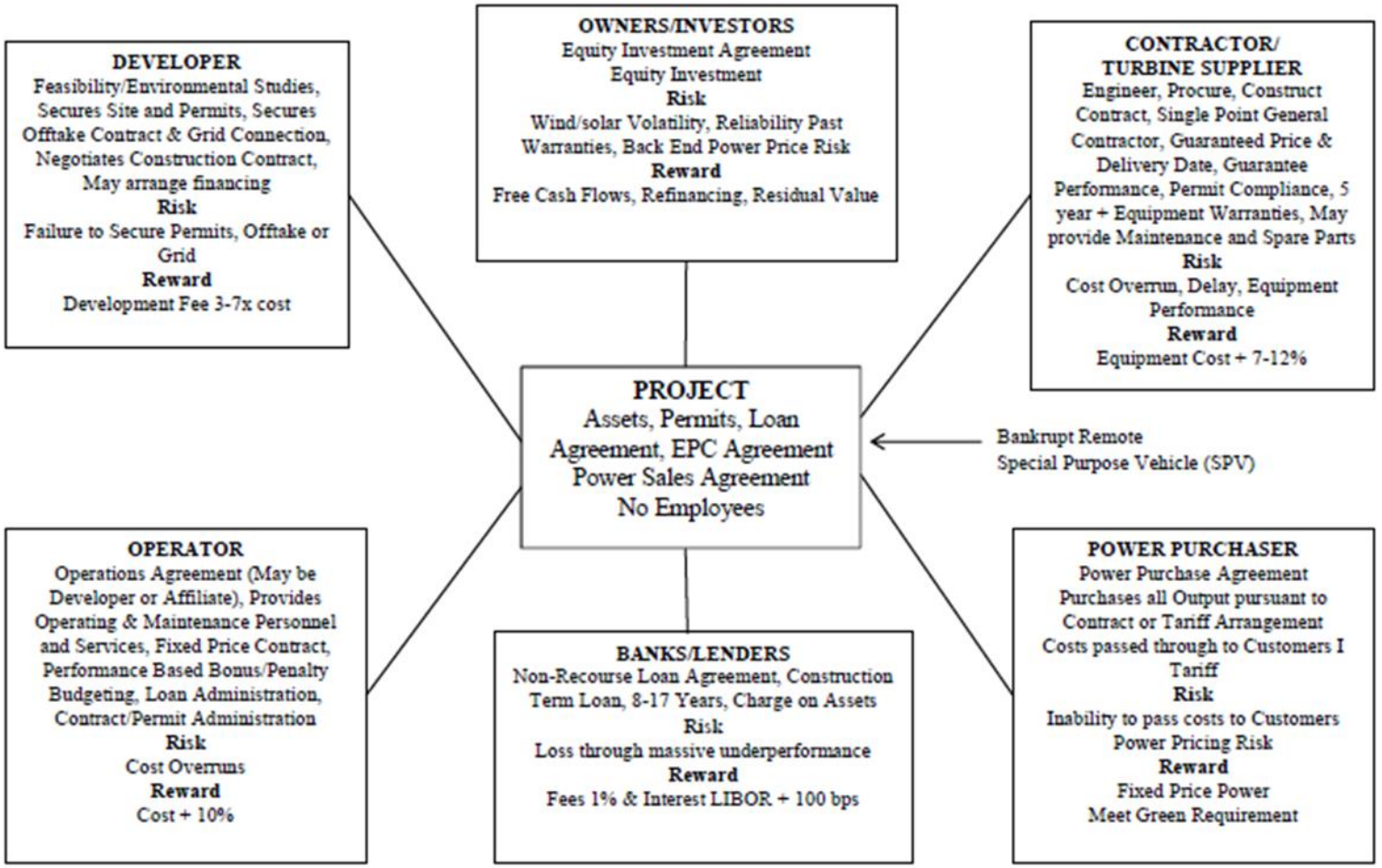
- **Financeability**

Risks need to be allocated in the right way

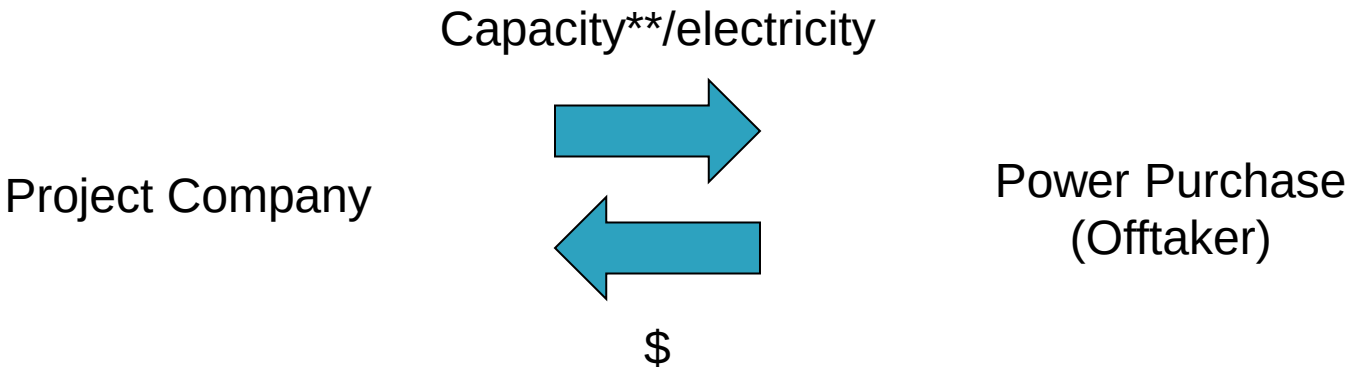
TO the party best able to assume those risks

UNDER documents which properly deal with such allocation.

Risk Allocation in wind and solar projects



Power Purchase Agreements



** tariff structure depends on type of power, e.g. wind

(a) General Introduction to PPAs

- Form of PPAs over the years – not evolved too much from early precedents
- Risk allocation between project company / offtaker varies, to a degree, between countries and power production technology
- PPA needs to fit correctly into context of rest of "jigsaw puzzle" of EPC Contract / Government Contract / Licences / Debt & Equity arrangements / O&M structure / regulatory structure

Important PPA Risk Factors

ii. Increased Costs

Change of Law / Change in Tax

- Changes following date of PPA
- Who takes risk? Host Government or Offtaker? What are risk implications for parent company?
- What are implications for lenders in terms of due diligence / risk mitigation strategies?

Important PPA Risk Factors

iii. Events of default

- What are “typical” events of default?

On Offtaker	On Project Company
Failure to pay	Failure to achieve performance standards
Other material default	Failure to achieve COD within agreed period
Insolvency	Insolvency

Termination Compensation

"Classic" Project Finance

	IPP Default	Offtaker Default	(Natural & Political) Force Majeure
Debt	Yes	Yes	Yes
Equity	X	Yes	[Perhaps]
Return on Equity	X	Yes	X

PPA issues (1)

Liquidity support / credit enhancement:

- gives project company and lenders confidence tariff under PPA will be paid when due
- standard practice for IPPs in developing countries
- letter of credit / escrow account / other security mechanism to provide a short term liquidity guarantee in respect of PPA payments

PPA issues (2)

Government Guarantee:

- in addition to short-term liquidity guarantee
- Government guarantee of the offtaker's obligations under the PPA
- both equity and lenders will require an understood and reasonable security

PPA issues (3)

Termination regime:

- PPA is sole cashflow-providing document
- equity and lenders rely solely on PPA cashflow for payment of returns and debt service
- therefore important that if PPA is terminated due to offtaker default that there is a compensation mechanism that allows return of equity and debt, together with all related costs and lost assumed dividend flow

PPA issues (4)

Force Majeure regime:

- nature of the force majeure regime in a PPA (and IA) is important
- the ability for either party to be excused from its obligations is key, again bearing in mind the reality that the only cashflow which lenders and equity are relying on is the PPA, as supported by the IA
- it is generally considered that events which are in the control of the host Government are not “force majeure” events but are rather “political force majeure” events for which Government should assume the risk

PPA issues (5)

Interconnection:

- project may need transmission interconnection or substation works
- preference is for the private sector to undertake all such related infrastructure
- then handed over to offtaker on COD
- cost related to such works would simply be reflected as part of the cost of the project and paid for through the tariff accordingly
- if this structure is not followed, the obligation to build such infrastructure would need to be fully assumed by offtaker with the obligation to pay the tariff under the PPA being absolute, notwithstanding any failure by offtaker to complete such infrastructure works

IA issues (1)

Political risks:

- host Government needs to assume all typical political risks for a project of this nature
- including providing all necessary consents and authorisations for the project
- also providing suitable undertakings as to the legal and tax regimes prevailing for the lifetime of the project
- assumptions will be made in the underlying financial model for a project as to what costs (including tax and other legal impositions) will impact the project
- both equity investors and lenders will need to have certainty that such costs are not subject to being increased (without the ability to recover such increase through the tariff)

IA issues (2)

Termination regimes:

- similar to the PPA, the termination scenarios need to be clear and based on market practice

- lenders and equity investors will need to be confident that on any failure by GOV or offtaker under the IA or PPA that there is a mechanism for the recovery of a suitable termination compensation amount)

PPA / IA “back-to-back”

PPA and IA to be “back-to-back”:

- critical for investors and lenders
- terms of both PPA and IA need to be clear and consistent
- PPA and IA have to create a general enabling environment for a project
- linked to each other and with other documents such as any Connection Agreement in respect of a required connection to the offtaker system

Case Study Cabeolica Wind Farm

First commercial-scale, privately financed PPP wind farm in SSA

Case Study – Cabeolica

- A PPP was established in 2008 between InfraCo Limited, a privately managed donor-funded infrastructure development company, the Government of Cape Verde (Ministry of Tourism, Industry and Energy) and Electra, S.A.R.L., the local utility company.
- The PPP administers the development, financing, construction, ownership and operation of four wind farms in Cape Verde, with a total installed capacity of 25.5 MW
- The main objective of the Cabeólica PPP is the production of electricity from wind for the national grid under an independent producer regime.

Public-Private Participant
Public Sector:
•The Republic of Cape Verde;
•Electra, S.A.R.L.; majority Government-owned utility company

Private Sector:
•African Finance Corporation
•Finnish Fund for Industrial Cooperation Ltd. (Finnfund)
•InfraCo Limited (Developer of the project)

Case Study – Cabeolica

Lessons Learned

Energy Policies

- The Government of Cape Verde (GovCV) set the target of reaching 25% Renewable Energy by 2011, which created a good basis for the Cabeólica PPP
- Government guarantees were available as well as tax and duty exemption agreements

Financing

- •Cabeólica's investments are based on the Project Financing scheme with 30%-70% equity-debt ratio. The PPP had a key role in establishing the financing by facilitating the long-term PPA with Electra, and by providing the supporting guarantees and tax exemptions.
- •InfraCo Limited, as the main developer of the project, created the dynamics behind the financial project by identifying investors to take the risk of investment and assuming a shareholding position, as well as, identifying international financial institutions to assume the financing.
- •The main investors (Africa Finance Corporation; Finnish Fund for Industrial Cooperation and InfraCo Limited) invested roughly € 20 million.
- •The main lenders were the European Investment Bank and the African Development Bank. They provided loans of roughly € 45 million in total.

Case Study – Cabeolica

❖**General Business Framework** – including the government and the state-owned utility as shareholder in the project company gave government an additional incentive to see the project succeed

❖**Lack of Developers** – the developer was InfraCo, part of the PIDG. InfraCo was set up to tackle the risks of early stage development – risks that the private sector typically would not accept. Without the availability of this early stage risk capital the project is unlikely to have succeeded

❖**Issues with Offtaker** – Offtaker was not sufficiently creditworthy to support a 20 year PPA but additional government support structures were put in place through which the government provided an unconditional guarantee of some of the offtaker's payment obligations under the PPA

❖**Political Risk -** Cape Verde has one of the most stable political systems in Africa

Case Study – continuation

- **Availability of Long-Term Debt** – DFIs were happy to provide financing
- **Availability of Equity** – provided by InfraCo
- **Availability of Equipment** – the project benefited from an equipment supplier/contractor that was keen to expand its operations in the region, that had the capability and experience to build this challenging project and that could offer a full EPC package. This was one of the most important factors that allowed this project to obtain suitable financing.
- **Other Innovations** – the Government of Cape Verde entered into Establishment Convention giving the project company certain tax and foreign currency benefits.
- **PPP Legal Framework** The key legal framework for PPPs was already in place.

Case Study – Outcomes

- Cabeolica is expected to provide 25% of the country's energy.
- The cost of generating power about 20% less than before (huge savings obtained on decrease in energy imports).
- Cape Verde achieved more energy security.
- The success of this first wind farm project attracted significant additional private sector interest in the country.
- It benefits 95% of the population with more reliable, cleaner and cheaper power.

Case Study Salkhit Wind Farm Project Mongolia

Case Study – Mongolia Wind Farm

- Mongolia did not have a PPP legislative or regulatory framework in place until 2010
- Today their PPP legislative framework is one of the most highly regarded legislative frameworks in the world
- State Policy on PPP was Adopted by the Parliament in 2009 in order to promote private sector participation in all areas of national economy
- The Law on Concession Adopted by the Parliament in 2010, which defines all processes of PPP implementation. The Government has also approved several regulations regarding the detailed bidding process and evaluation of bid proposals.
- In addition to PPP legislation, Mongolia has adopted a progressive Renewable Energy Law giving producers preferential rights to sell their output

Case Study – Mongolia Wind Farm

- Mongolia's first wind farm was recently constructed – the 50 MW Salkhit wind farm. As of 20 June, 2013, Salkhit is connected to the grid and has started producing electricity.

- A private entity, Newcom LLC has leased 30,000 hectares in Sergelen soum in the vicinity of Salkhit Uul and proposed to construct and operate a wind park to generate up to 50MW of electricity for the national grid.

- The private sector was in charge of the construction, operation and decommissioning of a wind park comprising of he following components:

1. Control center compound and electrical substation.
2. Access road from highway A0101 to the control center.
3. Transmission line from the substation at the control center to the town of Nalaikh, where the power will enter the national grid.
4. On-site access roads from the control center to the turbines, and underground transmission lines to carry electricity from the turbines to the control center substation.
5. 25 wind turbines

Case Study – Mongolia Wind Farm

The specific goals and achievements of the project were:

- Reduction of greenhouse gas emissions
- Helped to stimulate the growth of the wind power industry in Mongolia
- The project was also first renewable power project to connect to the Mongolian grid, representing a challenge to the grid operator, which was able to benefit from international capacity building efforts.

Salkhit wind farm was built with debt and equity financing of US $47.5 million from the EBRD and the same amount from FMO, the Dutch development bank.

The funds were provided to Clean Energy LLC, a company now 51 per cent owned by Newcom, 14 per cent owned by each the EBRD and FMO, and 21 per cent by General Electric.

This wind farm has awakened interest in wind power in Mongolia from other investors, both local and international.

Photos of Construction: https://www.flickr.com/photos/ebrd/sets/72157634089179300/

Video overview: https://www.youtube.com/watch?v=eC-IzV5GXJo