



Why PPPs?

PPPs combine the different skills and resources of various partners in innovative ways and allow for the sharing of risks and responsibilities.

This ensures governments benefit from the experience and expertise of the private sector, and allows them to focus instead on policy, planning and regulation by delegating administrative and day-to-day operations.







- (i) Risk identification. The process of identifying all the risks relevant to the project;
- (ii) Risk assessment. Determining the likelihood of identified risks materializing and the magnitude of their consequences if they do materialize;
- (iii) Risk allocation. Allocating responsibility for dealing with the consequences of each risk to one of the parties to the contract, or agreeing to deal with the risk through a specified mechanism which may involve sharing the risk;
- (iv) **Risk mitigation**. Attempting to reduce the likelihood of the risk occurring and the degree of its consequences for the risk-taker; and
- (v) **Monitoring and review**. Monitoring and reviewing identified risks and new risks as the project develops and its environment changes, with new risks to be assessed, allocated, mitigated and monitored. **This process continues during the life of the contract.**





Risk Identification - Main Project Risks

Project Specific Risks

- site risk;
- design, construction and commissioning risk;
- operating risk;
- market (demand) risk;
- industrial relations risk;
- asset ownership risk.

External Risks

- sponsor and financial risk;
- network / interface risk;
- government policy and legislative risk;
- force majeure risk;
- social risk.



Risk Identification (Indicative)



Market & Revenue

- Insufficient tariff income
- Payment/collection risk
- Dispatch

Financing

- · Availability of debt financir
- Interest rate risk
- Foreign Exchange convertability
- Repatriation

Political

- Expropriation
- Changes in law or regulation
- Adverse Government action or inaction
- Access to essential utilities (fuel, roads, water, etc.)
- Increases in taxes



Legal

- Property title/ownership
- Security structure
- Insolvency of Project Company/Government Agency
- Breach of contract

RISK



Construction

- Increase in construction costs
- · Labor availability and disputes
- Accidents or sabotage
- Contractor default
- Equipment availability and import risk
- Force majeure

Operations

- Project Company default
- · Fuel price fluctuations
- Fuel delivery
- Spare parts
- Technology risk
- Environmental risk





Risk Allocation - Core Principle

Allocating a risk optimally — that is, to the party best able to control its occurrence and consequences — reduces the likelihood of the risk eventuating by giving the party best able to control it an incentive to prevent its occurrence.



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Risk Allocation in PPPs

- Government pays for availability or usage, or combination, of a service.
- Government may consciously —takeback" or share some risks where:
 - Private sector charges a higher premium on risk than public sector comparator.
- Government generally takes on:
 - government policy and legislative risk;
 - network / interface risk;
 - some site / land risk.





Indicative Risk Allocation for Power IPP

Government

Political Risk
Change of Law/Tax
Public Agency Performance
Foreign Exchange Convertibility



Sponsors/Lenders

Financing Debt Equity Project Company
Development &
Financing

Operational Risks



EPC/O&M

Construction Risk
Operations Risk
Fixed Price Contracts



Offtaker

Payment Risk Inflation/Foreign Exchange Market Demand/Dispatch



Insurance

Force Majeure
Latent/Design Defects
Some Political Risk



Indicative Power PPP Contract Structure Long-Term Service EPC Contractor Long-term Service **Operator** Agreement Off-taker Construction Operations Contract And Maintenance Power Agreement Purchase Agreement **Fuel Supplier Insurance Fuel** Insurance Supply Policies Agreement **Project Sponsors** Government Company Government Shareholders Agreement Guarantee Transmission **OE** Contract Service Agreement Transmission/Interc Water **Owner's Engineer** Supply on. Real Property/ Agreement Leasing Agreements **Debt Financing Water Supply** Agreements **Real Property** Hedging Agreements **Financial Hedging** Commercial World Banks/IFIs

Key Risks in Renewable Energy

- Site Risk;
 - Reliability of fuel source
 (Wind, water, solar concentration)
- Design, construction and commissioning risk;
 - Risk and benefits of innovation and cutting-edge technology
- Network or Interface Risk;
- Market (Demand) Risk;
- Social Risk.





PPP in Infrastructure Resource Center in Contracts, Laws and Regulations



www.worldbank.org/ppp





