Risk Allocation and Mitigation

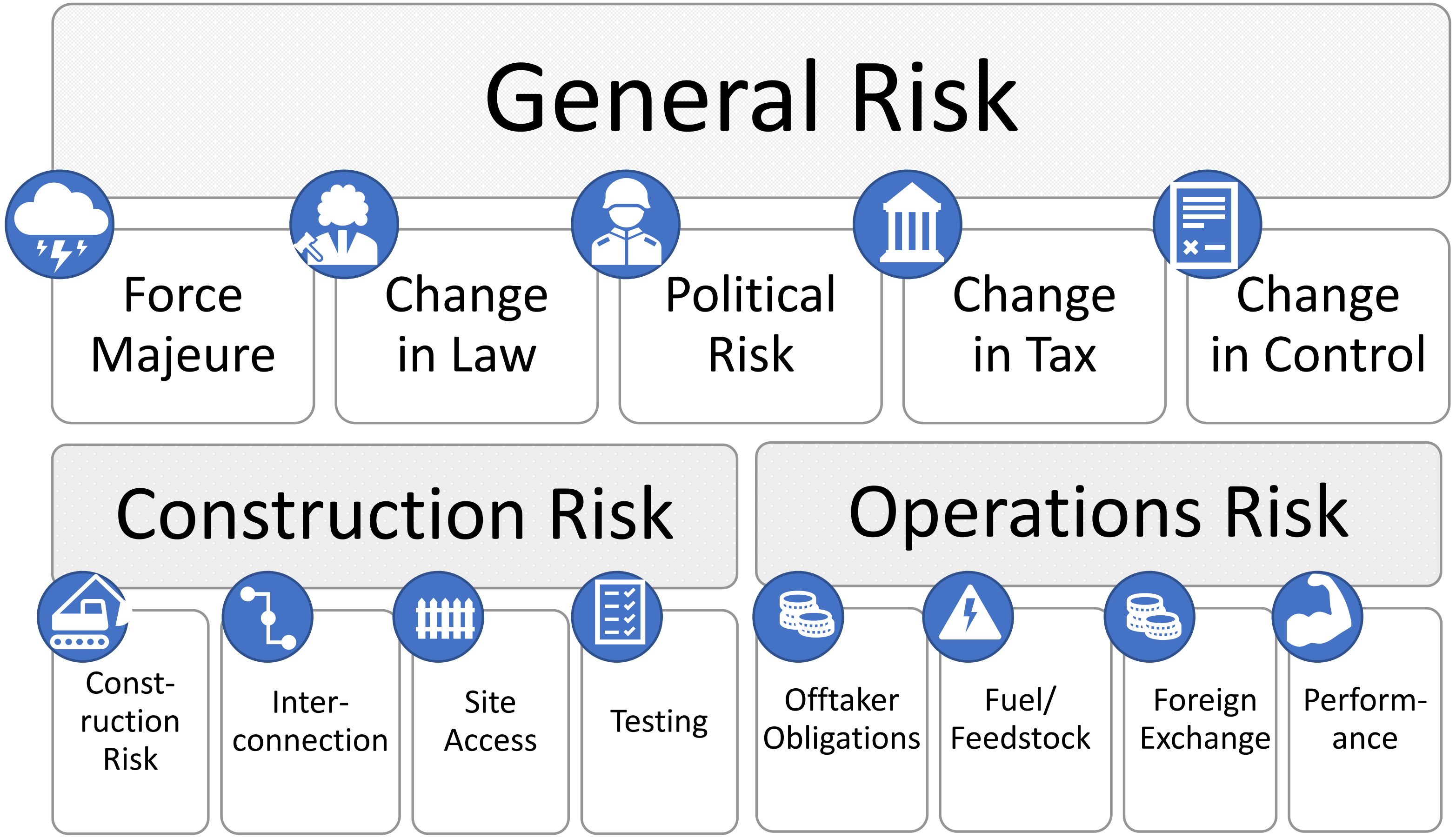
Project made possible through funding by:

In Partnership with:

Institutional Partners:

INTRODUCTION

- A successful and bankable PPA must have an equitable balance and allocation of risk among the contracting parties
  - **Risk *should* be allocated to the party best able to manage it.**
- Types of risks and mitigation methods vary from project to project depending on jurisdiction, regulatory framework, generation technology, etc.



DEVELOPMENT AND CONSTRUCTION PHASE RISKS

Pre-Construction

- Land procurement
- Failure to commence construction

Construction

- Abandonment
- Delays in achieving COD
- Deemed completion
- Construction cost escalation

Site Access and Availability

- Right to occupy
- Site suitability
- Site-related infrastructure

Interconnection Infrastructure

- Transmission interconnection
- Construction by offtaker or project company
- Delivery point

Testing and Commissioning

- Failure to meet contracting capacity
- Output/heat rate risk allocation

DEVELOPMENT AND CONSTRUCTION PHASE RISKS

Failure to Meet Contracted Capacity

Minimum Capacity	Contracted Capacity	Results
Equal or Greater	Equal or Greater	Achieved COD
Equal or Greater	Less than	Project company may face negative financial consequences
Less than	Less than	Breach of the PPA

Practice Note: Renewable Energy COD Testing

*For renewable projects, the PPA will define a **contracted capacity.** For COD testing, the PPA will often require a minimum facility capacity (60-75% of contracted capacity).*

OPERATION PHASE RISKS

Market Risk

- Offtake obligations
- Curtailment

Performance

- Dispatch

Fuel and Other Feedstock Supply

- Tolling arrangements
- Fuel supply agreements
- Fuel transportation agreements

Transmission Risk

- Bundled vs unbundled system

FOREIGN EXCHANGE RISKS

Reserve Currency

- Power projects can be financed in local currency or in a *reserve currency*.
  - The electricity tariff under the PPA is also normally denominated or indexed to the reserve currency that the loan is denominated in
  - Other project agreements (fuel supply agreement, operations & maintenance agreement, etc.) may also be denominated in a reserve currency

A reserve currency is a currency that is held in large quantities by governments and central banks as part of their foreign exchange reserves.

- **In emerging markets, power projects are almost entirely financed by reserve currency**

Currency Mismatch

- Occurs when debt service and payment obligations are denominated in a ***reserve*** currency but the offtaker earns revenue in a ***local*** currency.
- There are foreign currency adjustment mechanisms to resolve the mismatch.
  - PPAs normally allow for periodic adjustments if the project company incurs any losses in the conversion process
- Hybrid “reserve/local currency” financing is increasingly possible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