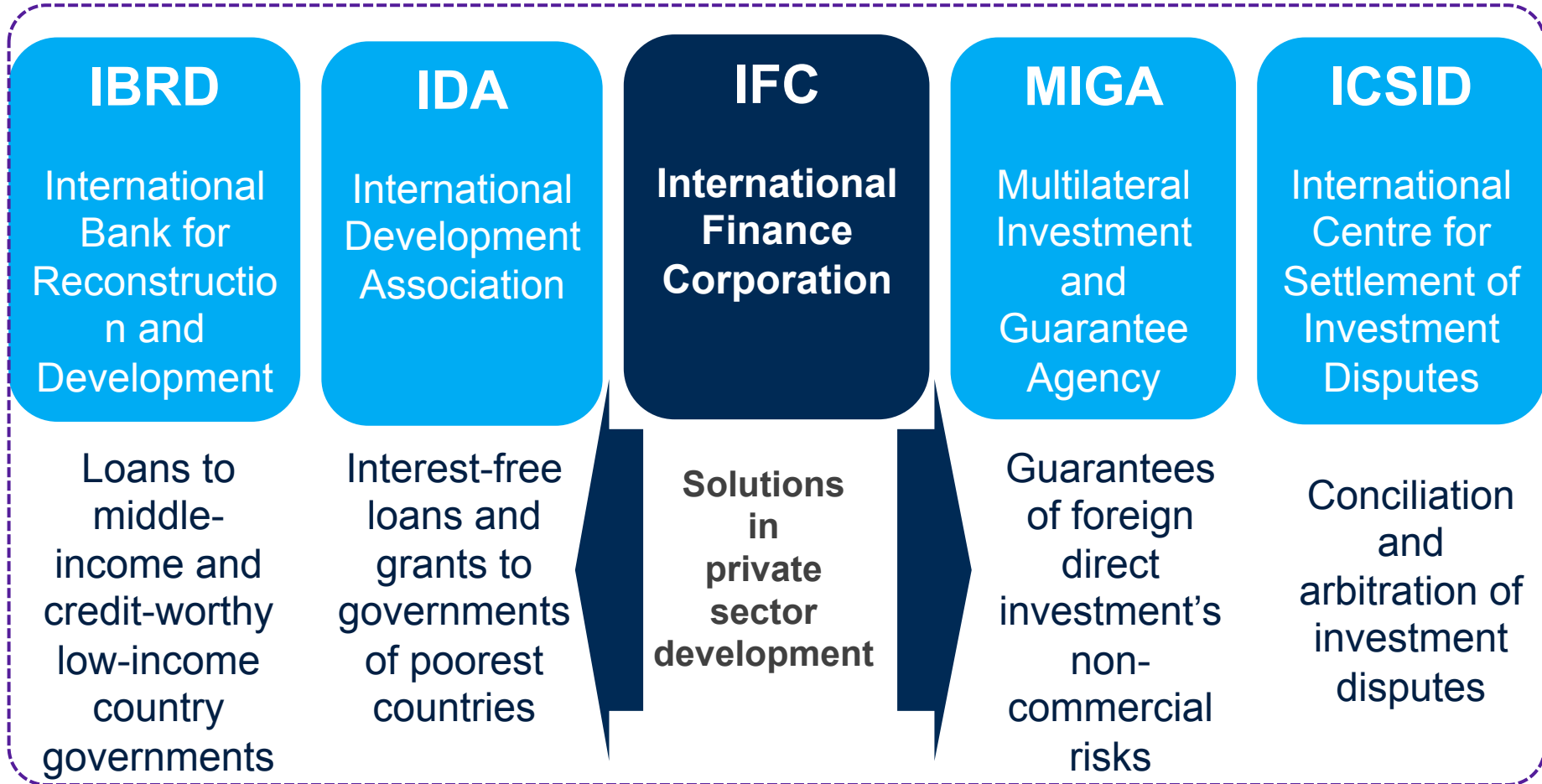


# 1 IFC: A MEMBER OF THE WORLD BANK GROUP



**WORLD BANK GROUP**

## 2 INVESTMENT

### LOANS

- Project and corporate financing
- On-lending through intermediary institutions

### EQUITY

- Direct equity investments (up to 20% of company's equity)
- Private equity funds

### TRADE FINANCE AND SUPPLY CHAIN

Guarantee of trade-related payment obligations of approved financial institutions

### SYNDICATIONS

- Capital mobilization to serve developmental needs
- Over 60 co-financiers: commercial banks, fund, and DFIs

### RISK MANAGEMENT SERVICES

Derivative products to hedge interest rate, currency, or commodity-price exposures of IFC clients

# 3 SUCCESSES AND CHALLENGES IN FINANCING RENEWABLE ENERGIES

## Successes and Challenges:

- Favorable Market conditions
  - Favorable regulatory framework in the country for generators that also enable and **promote private investments**
  - PPAs should be sufficiently **attractive** for **investors** as well as the **oftakers**
- Committed and Experienced Sponsors / Investors
  - Demonstrate necessary **financial capacity** to offer the minimum capital required (equity) as well as provide the necessary **guarantees** until Project completion
  - Preferable to have prior experience in these kinds of Projects (Project Finance), which implies being **familiar** with the **costs** and **requisites** of said transactions
- Strong and Financially-Sound Offtakers
  - Demonstrate **capacity** to **honor** their **obligations** under the PPAs
  - Have complete **clarity** about the **commitments** being acquired under the **PPA**
  - Ensure that all **contracts** are duly **approved** by the relevant **authorities** and **Board Members**
- Local knowledge: Due preparation
  - Having **experience** in the **country** where the Project is/will be located and/or having local partners/representatives to attend specific local market needs (including processing necessary documentation as part of the process)
- Minimizing the Risks of Providers
  - Use of **proven technologies** and Tier 1 providers of solar panels, inverters, etc.
- Bankable, Risk-Distributed Contracts (PPA – EPC – O&M)
- Preparation and Evaluation: Key Factors
  - Preparing viability, investment, property, construction rights, engineering and environmental studies
  - Contracting consultants to verify key factors of success (technical, market and legal) to verify key factors of the Project
  - Accepting that lenders will rigorously evaluate the assumptions presented by the Company (resources, production, etc.) and will independently conclude findings (usually much more conservative than Sponsors). Emphasis on p(50) and p(99)

## 4 FACTORS POTENTIALLY LIMITING RENEWABLES ENERGY DEVELOPMENT

### Price Signals in the Long Term

- Introduction and incorporation of natural gas (LNG) in the region: in which markets and at which price?
- Fuel prices evolution
- Incorporation of more renewable energies (i.e. wind, solar, hydro)
- Development of Interconnections (i.e. Colombia – Panamá, more capacity with Mexico, etc.)

### Capacity to Absorb (more) Renewable Energies

- Some markets are limited in terms of capacity to absorb certain technologies (i.e. wind in Nicaragua, solar in Honduras)
- Dispatch restrictions, frequency regulation, etc. of intermittent energies (i.e. solar in Panama)

### Transmission Restrictions

- Usually managed by the Government -> limited capacity to invest rapidly in the necessary expansion to incorporate new technologies. Guatemala is the exception.

### Regulatory Framework

- Regulatory incentives and sustainability
- Dispatch

## 5 NATURAL GAS: BENEFICIAL CHANGES FOR CENTRAL AMERICA

### Opportunity/Challenges:

- Some CAM countries are heavily dependent on oil, thus a key objective is to **substitute** oil for natural gas through LNG imports
- Main barriers to date for CAM is that the **region lacks** large demand **volumes** and strong creditworthy anchor **offtakers**
- However, current trends in LNG markets create opportunities given:
  - Expected large increase in gas/LNG Supply
  - More portfolio trading instead of purchasing from producers
  - Increasing relevance of spot or short term markets
  - New Pricing Schemes
- But perhaps more importantly, emergence of a sizeable nearby market in the US for new sources of LNG exports

### Gas is the Fuel that will provide sustainable low cost of base load power in the long term: ~ \$95-\$110/mwh

- Under assumed WBG fuel prices, **Gas is the technology candidate of choice** for LT expansion in Central America
- Provides electricity at **lower cost** than HFO-fired plants or Run of River Hydros
- ROR Hydros do have a high dispersion of unitary costs of investments
- However, best sites for ROR hydros in CAM have been already developed;
- Coal may be competitive from a cost perspective but:
  - It is non-renewable and a fast depleting energy source
  - Underground coal mining is dangerous
  - Contributes to high emission of harmful gasses such as CO<sub>2</sub>, SO<sub>x</sub>, NO<sub>x</sub>, CO<sub>2</sub>, and trace elements, such as mercury
  - Colombia is the main coal supplier for Central America although the quality of thermal coal produced in Colombia continues to decrease.