# IPPs in the Philippines

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13 December 2004

# Background

- Power crisis struck the Philippines in the early 1990s.

- Between 1991-1993, 22 contracts for 2,648 MW were signed between the National Power Corporation (NPC) and independent power producers (IPP).

    - 42 power contracts during 1989-1998

    - 27 PPP projects in transport, roads, water, etc.

# Impact of IPP Contracts

- NPC's liabilities reached US$23.5 billion in 2003 from US$6.3 million in 1993.
    - accounts for 1/3 of national debt
- Generation prices doubled from 1998 to present.
- Government incurred contingent liability – US$ 5.5 billion.
- Business confidence shaken by Congressional inquiries.

# Structure of Presentation

- Market environment for IPP contracts
- Cost and Risk sharing in IPP contracts
- Alternative contract design

# Environment for Contracting

- The Philippines is the first country in Asia to have a BOT law --- RA 6957 of 1990, amended by RA 7718 of 1994.

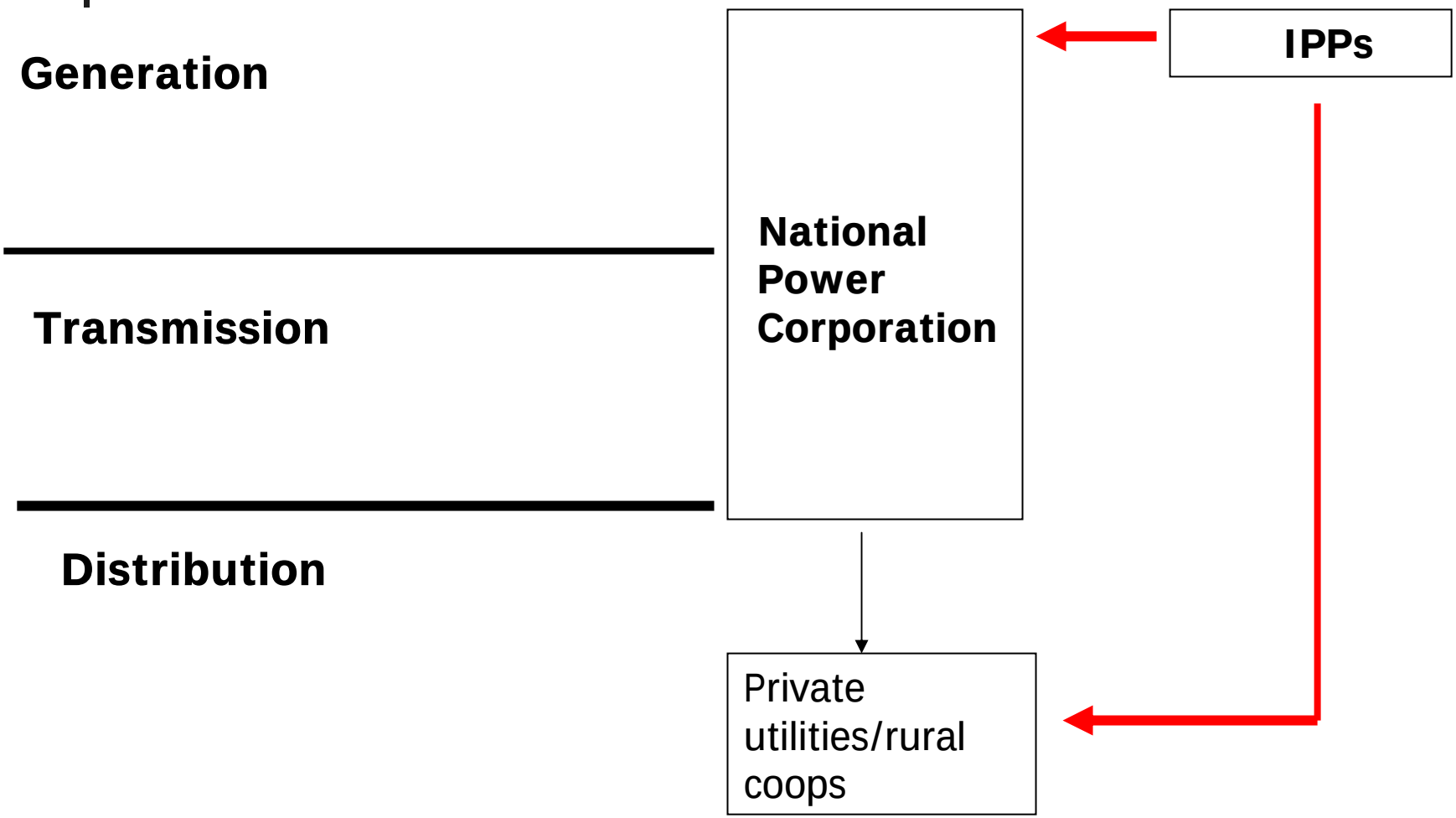
  - If solicited, competitive bidding.

  - If unsolicited, Swiss challenge.

  - No direct government guarantee on private loan

  - Government can cost share up to one half of the project cost.

# Structure of the Power Sector in the 1990s



# Multiple Objectives of NPC

- Ensure stability of power supply
- Relieve government of financial burden
- Keep project cost, hence electricity prices, low
- Diversify fuel supply

# Design of NPC – IPP Contracts

- Contract Type
  - Build-operate-transfer (BOT)
  - Build-operate-own (BOO)
  - Build-transfer-operate (BTO)
  - Build-rehabilitate-operate-transfer (BROT)
  - Rehabilitate-operate-lease (ROL)
  - Rehabilitate-operate-maintain (ROM)

- Operation Scheme
  - Energy Conversion Agreement (ECA)
  - Purchase Power Agreement (PPA)

# Contract design matters.

- Form of guaranteed payment
  - “take-or-pay” vs. lease
- Performance Undertaking
- Financing obligation
- Timing of transfer of ownership

# Allocation of Costs in IPP Contracts

## NPC

- Site
- Real estate taxes, assessments & other charges on site, buildings & improvements
- **Supply & delivery of all fuels for power station**
- Start-up electricity
- Infrastructure requirements & utilities necessary for completion of power station
- Right of way

## IPP

- **Project Financing**
- Economic & technical feasibility of the project
- Design, construction, completion, testing and commissioning of the power station
- Securing licenses, permits and clearances

# Allocation of Risks in IPP Contracts

## NPC

- Inflation
- Foreign exchange risk
- **Market downtrend**
- Fuel availability and price fluctuations
- Hydrology risk
- Government force majeure

## IPP

- Construction risk (cost overruns)
- Technical and commissioning (completion risk)
- **Credit risk**
- Operating risk
  - Fuel utilization
  - Capacity availability
  - Energy generation
- Non government force majeure

# Crisis in IPP Contracts

- After 1997, power supply glut emerged.
- IPPs are blamed for the supply glut.
    - 45% of total installed generation capacity
    - IPP insulated from fuel cost and market demand risks.

# Other Causes of Power Supply Glut

- Distribution utilities contracted their own IPPs.
- Large power users built own generating plants.
- NPC entered into contracts to meet social objectives.

# How should risks be allocated?

- The party in the best position to prevent the risk from materializing and to handle the consequences should bear the risk.

- It is NOT in the public interest to have all risks passed on to the private sector.

- Any risk passed on to the private sector will be factored into the bid, hence project cost.

# Fuel Cost Risk

- ECA vs. PPA
- If ECA, then:
  - NPC absorbs risk of higher fuel price.
  - NPC controls cost through bulk purchases.
  - NPC controls quality of fuel --- solves information asymmetry.
- If PPA, then:
  - Private sector bears risk of higher fuel price.
  - Energy fee adjusted by inflation index less than fuel price inflation.

# Market Demand Risk

- Forms of “take-or-pay”:
  - NPC pays for all energy delivered; discount applies to energy delivered in excess of guaranteed.
  - Proponent can nominate a capacity in excess of contracted. NPC pays for the nominated capacity.
  - NPC pays for the higher of either actual energy delivered or minimum energy off-take.

# Motivations for take-or-pay provision

- Requirement of financial institutions
- Need to control project cost
- Ensure stability of power supply
- Reduces the number of plants that have to be constructed

• Take-or-pay provision is not necessary if government directly finances the project.

# Alternative Design

Case 1: Government absorbs market demand risk.

- Low project cost
- Market downturn: supply glut

Case 2: Private sector absorbs market demand risk.

- High project cost
- Market downturn: supply shortage

Case 3: Government and private sector share market demand risk.

- Partial take-or-pay
- NPC commits to provide redress if demand projections are off

# Alternative Design

- Project cost is higher than in case 1 but lower than case 2.
- Market downturn: all affected

Case 4: Project financing responsibility accrues to government

- No need for take-or-pay provision
- Market downturn: government saddled with debt servicing

# Conclusions

- Government absorption of market demand risk attracted private investments and kept electricity prices low but only in the short-run.

- Future contracts should have more equitable allocation of market risk consistent with objectives of minimizing project costs and maximizing long-term consumer welfare.