

REGULATION, COMPETITION AND GROWTH

Brazilian Electricity System

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Overview

- Economic Reform
- Electricity System Reform
- Results (so far)
- Current Issues

1. Motivation

- **Economic Crisis (1980's)**

- Inflation out of control
- Inability of the Government to finance new investments
- Protection for domestic producers

1. New Economic Policy

- Fiscal austerity
- Real (stable currency)
- Capitalist shock (competition)

- Less State

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2. Reform of the Electricity System

- Privatisation
- Competition
- Regulator

2. Objectives

- Better resources allocation (efficiency)
- Attract private capital

2. Electricity System

- Old Structure
 - 23 provincial DISCOS
 - 4 federal GENCOS + TRANSCOS
 - 4 provincial vertically integrated companies
 - Itaipu

2. Electricity System

- Old Structure

- Regional differences
- 95 %hydro
- Tariffs substantially below long term marginal cost
- Expected expansion: thermal

2. Electricity System

- New Structure
 - Independent regulator
 - System operator
 - Open access
 - Wholesale power market (Power Exchange)

2. Electricity System

- **New Structure**

- Central planning for transmission
- Coordinated hydropower dispatching
- Spot price fixed using models (marginal cost)
- Price cap for contracting power (captive consumers)

2. Electricity System

- Privatisated
 - DISCOS
 - Few GENCOS
 - New transmission lines
 - System operator

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3. Results (so far)

- **No competition**

- Initial contracts prices are too low
- Spot prices are not trusted
- Hydrological risk are passed over

- No thermal power plants

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3. Results (so far)

- **Investment**

- Timing incorrect
- Composition unsatisfactory
- Private investors risk perception is too much high

- State companies are called in

3. Results (so far)

- **Regulator**

- Unable to achieve its goals
- Everybody unhappy with its performance

- Government intervention

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3. Results (so far)

- Private utilities
 - Poor financial performance
 - Substantial tariffs increase
 - Consumption below expected figures

4. Current Issues

● Competition

- Is vertical integration a risk management need?
- Can competition provide the right choice of power generation technologies?
- Is there a need for competition to ensure timely investment to keep supply and demand in balance?
- What sort of competition is possible to introduce for the water in the reservoirs?

4. Current Issues

State Role

- Should government take some risks? Which?
- Should government provide financing? To which sort of project?
- How should lower income consumers be charged?
- Is there any room for regional policy?

4. Current Issues

- Regulator

- How far can it actually be from government?
- How can its decisions be articulated to other regulators decisions?
- How to move from low cost initial contracts to much higher marginal costs?
- How to insure reasonable rate of return in foreign currency?