PUBLIC ENERGY COMMISSION - SÃO PAULO - BRASIL





Session:

DEVELOPING GAS MARKETS IN THE BROADER REGIONAL CONTEXT Case Studies on Asia and South America

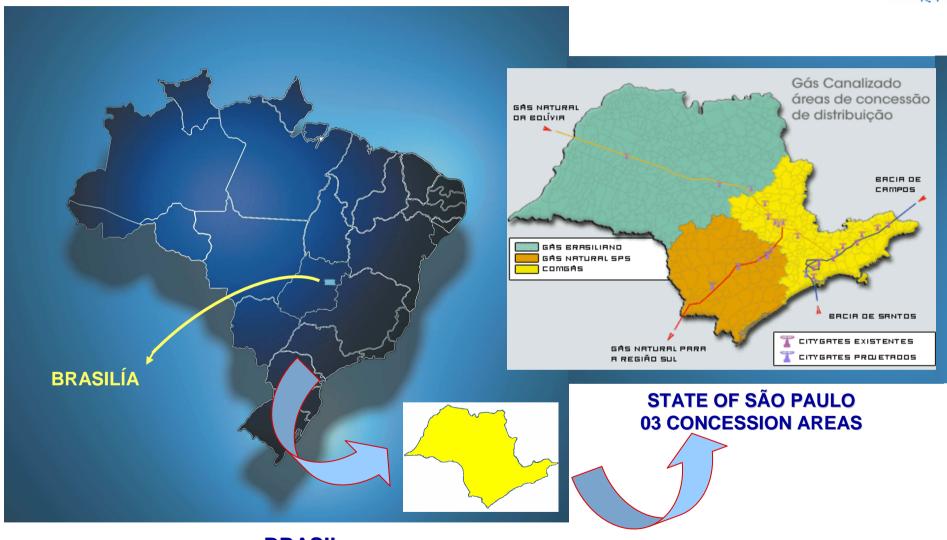
> "23rd WORLD GAS CONFERENCE" **07 DE JUNHO DE 2006**





BRAZIL X STATE OF SÃO PAULO





BRASIL

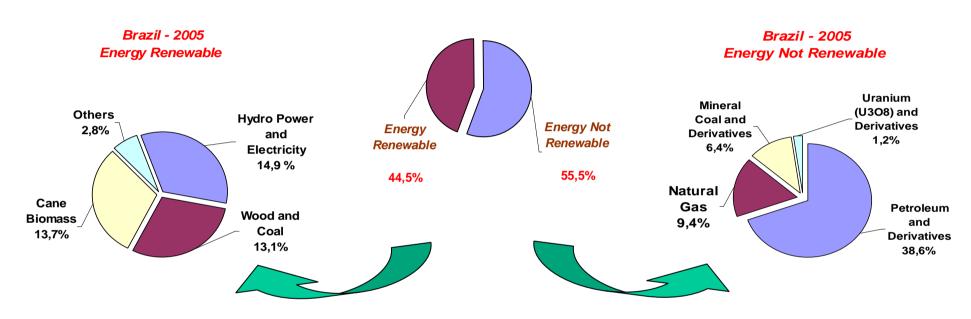
Regulatory Authority for Gas Distribution and Electricity - State of São Paulo



NATURAL GAS – SUPPLY AND DEMAND







Natural Gas Demand - Types of Uses (10³ x m³/day) - December/2005 Co-**Power** Automotive Residential Commercial Total Industrial **Others Generation** Generation 44.365,9 **Brazil** 22.873,6 5.895,3 1.965,4 632,0 568,7 12.265,6 165,3 São Paulo State 13.258,3 1.355,9 233,0 10.458,6 310,6 284,2 576,0 40,0





Conclusion – Case Study Report

1 – Regulation:

- Specific gas law and of related regulation.
- Restructuring the power generation sector.

Comments:

- ✓ Brazil has suitable regulation for E&P.
- √ 3 different gas law proposals are currently in discussion at the Congress, probably will be defined new rules for gas transportation and open access, which would allow more trusted rules for the investors with positive reflex in the whole gas chain.
- ✓ The current rules on gas utilization for power generation had recent development by establishing competition with other thermal alternatives. It is really hard to have a country model based on about 85% depending on hydro electricity sources, rain precipitation and reservoir storage.
- ✓ State Regulations LDC's demands for increasing regulation and improvement of concession contracts in order to prompt the development of distribution, with clear targets and investment.
- ✓ São Paulo State has demonstrated a great development and expansion in consequence of reliable regulatory rules and privatization of gas distribution concessions.
- ✓ ABAR Efforts Brazilian Association of Regulatory Agencies is publicizing good regulatory practices and training regulatory agents, looking for harmonizing Federal and State regulations.



Conclusion – Case Study Report

- 2 Brazil, the largest economy of South America:
 - Hydroelectricity is constraining the development of gas-fired power plants.
 - Oil products are priced competitively for user by the industrial, commercial and residential.
 - Petrobras paid more attention to "oil" activities rather than to "gas".

Comments:

- The gas utilization in Brazil is very limited, with focus mainly on industries and vehicles.
- ✓ The gas use for electricity production must have an economical basis and contribute to the system reliability, considering that hydroelectric power generation is a justified priority.
- ✓ Gas and oil products need a framework of pricing rules, allowing competition and prices adjustments in a predictable environment.
- ✓ Petrobras is currently redirecting its efforts to the development of gas sector.





Conclusion – Case Study Report

3 - Supply and Demand:

- Supply Bolivia, Argentina and others.
- Adequate contracts.
- Infrastructure to reach the market transport and distribution.

Comments:

- Supply expansion constraints of Bolivian gas, due to Statute of Nationalization. Investments constraints and high gas prices can reduce gas competition.
- Argentina supply expansion constraints, due to low investments, gas reserve reductions and internal political prices; which results in product unavailability.
- ✓ Development of "Domestic Gas", mainly for Espírito Santo State and Santos Basin, expecting an adequate supply after 2010. Critical period of 2007-2010 with difficulty to attend the demand and necessity to develop an interruptible market based on thermal power generation. LNG is an alternative option.
- ✓ Necessity of significant investments in transportation and distribution, to reach potential markets, with adequate changes to regulatory framework.





Conclusion – Case Study Report

- 4 Development gas infrastructure:
 - Governments in each country need establish clear rules and regulations.
 - Integration of the regulatory systems between countries. Supply Bolivia, Argentina and others.

Comments:

✓ It is observed that great constraints exist to regulatory integration and clear rules definition for each country. The regulatory agencies are meeting severe budget constraints.

Conclusion – Case Study Report

5 – Prices affordable x retributive of operational and investments for the whole gas chain.

Comments:

✓ The key issue for an accelerated and harmonic development.



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