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BRAZIL ENERGY AND POWER

THE GAS MARKET AT THE SOUTHERN CONE OF SOUTH AMERICA

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HOUSTON, APRIL 23rd 200**



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Southern Cone Integration – Up to 1999

Up to 1998



Very limited integration





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Southern Cone Integration

End of nineties



The integration begins



1990's

Argentina - Privatization YPF and Gas del Estado

Bolivia - Capitalization and privatization of public enterprises

Brazil – Opening of petroleum industry to private investment

Export contracts:

Argentina →

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Chile
Uruguay
Brazil

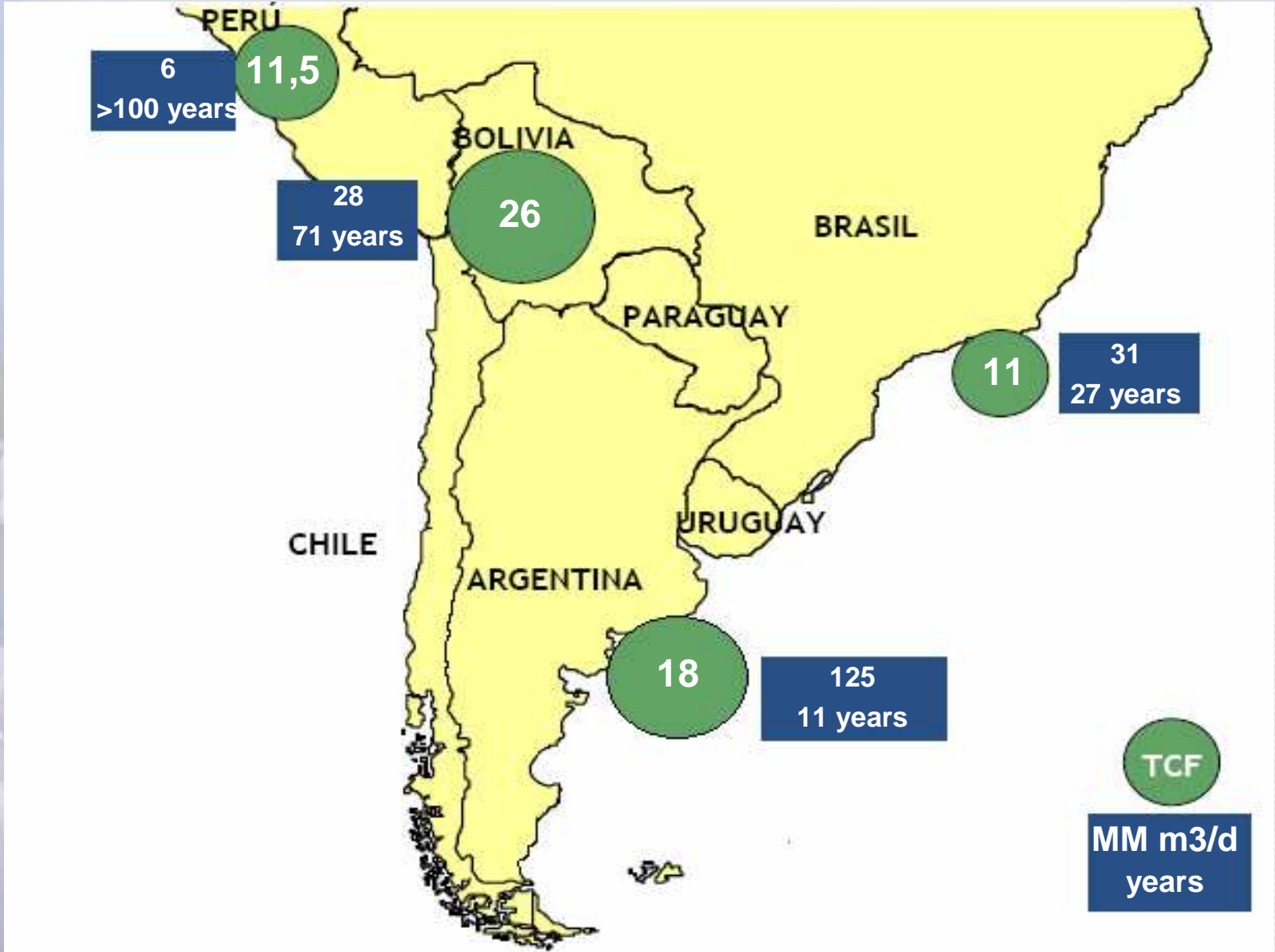
Bolivia → Brazil

After 2000 **Bolivia** –Nationalization of natural gas industry

Argentina - Exports restrictions

- ENARSA's (government company) creation

Proved Reserves, Production, and Consumption



Grown of demand until 2012

Countries	MM m3/d
Argentina	+20
Brazil	+60
Chile*	+10
TOTAL	+90

**Supply by Argentina will be reduced
The gap between demand and supply will be larger
New supply alternatives will be needed*

- How to supply this increasing demand?

**Regional
Supply**




**International
Supply**




Bolivia 

- Current proved reserves estimated → 26 Tcf*
- Current reserves committed → 16 Tcf
- US\$ 1.800 millions needed to develop the reserves
- Status: operation contracts negotiated and approved, waiting for registration

* Source: BP December 2005

- Argentina 
 - Current proved reserves estimated → **18 Tcf***
 - Import contract Argentina (ENARSA) – Bolivia (YPBF)
 - 28 MM m³/day (maximum)
 - 5 US\$/MMBTU
 - 20 years
 - Total additional supply → **7 Tcf**

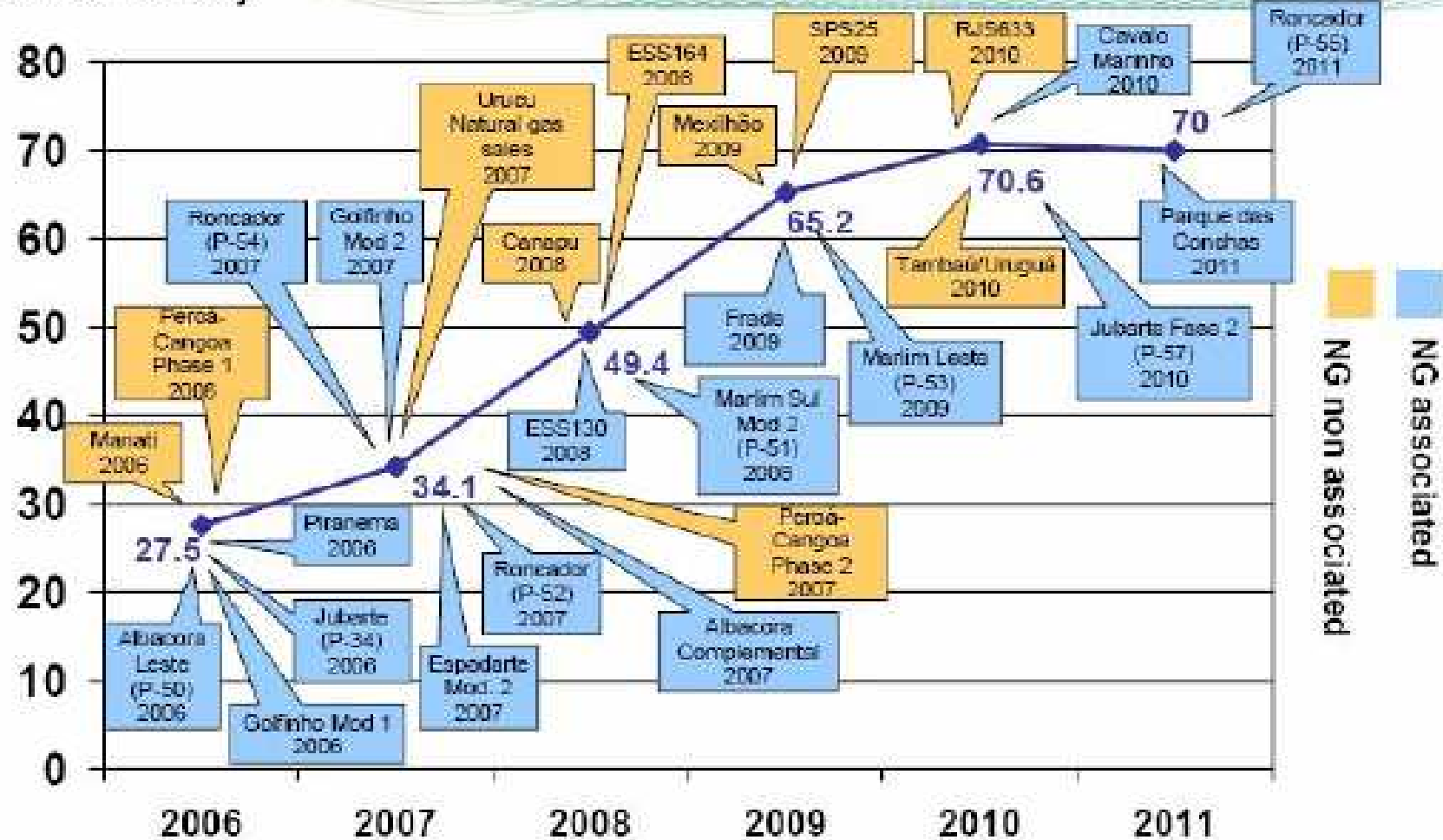
* Source: BP December 2005

- Brazil 
- Current proved reserves estimated —→ 10.9 Tcf
- PLANGAS - Gas Production Anticipation Plan
 - Objective: Anticipate gas production
 - U\$ 21.1 billions investments between 2007 and 2011
 - Additional offer of 24 MMm³/day until the end of 2008

- Brazil - PLANGAS



Million m³/day



- International Supply – LNG units




FSRU

Floating Storage and Regasification Unit



SRV

Shuttle and Regasification Vessel

- Brazil 
 - PLANGAS - Gas Production Anticipation Plan
 - Petrobras will build 2 LNG regas units until 2009



Ceará – Pecém
Capacity - 6 MMm³/d



Rio de Janeiro – Baía de Guanabara
Capacity - 14 MMm³/d



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International Supply - Uruguay

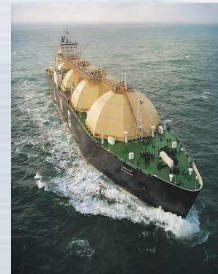
Uruguay



- Petrobras is considering a LNG regas unit in Montevideo
- Additional supply for Uruguay and Southern Cone
- Status:
 - Evaluation



- Chile 
 - LNG regas unit in Baia de Quintero until 2009
 - Capacity: 5 MM m³/day
 - Investment US\$ 400 millions



- Demand for natural gas is increasing faster than production
- Additional gas supply options: regional x international
- Supply increase and guarantee are key issues
- With LNG, Southern Cone will be inserted in the natural gas global market
- The Southern Cone supply requires:
 - huge investments
 - integration
 - know how
 - legal stability
 - adequate pricing
- Petrobras is investing to supply the increasing demand in the Southern Cone