



BRAZILIAN SUMMARY ON CO₂ CAPTURE AND STORAGE SCENARIO

Presented to the IEA/CSLF Workshop on Near Term
Opportunities for Carbon Capture and Storage
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GUIDELINES - POLICIES



- ✓ Developing Countries, like Brazil, are not expected to bear the additional costs of a low-carbon economy.
- ✓ Brazil has a very clean energy matrix and has voluntary contributions to avoid GHG.
- ✓ CCS is a one of the best ways of mitigating climate change in large volumes.
- ✓ Facilities with high efficiency and CCS (state of art) will cost more to build and to operate. Higher energy cost.





GUIDELINES - POLICIES

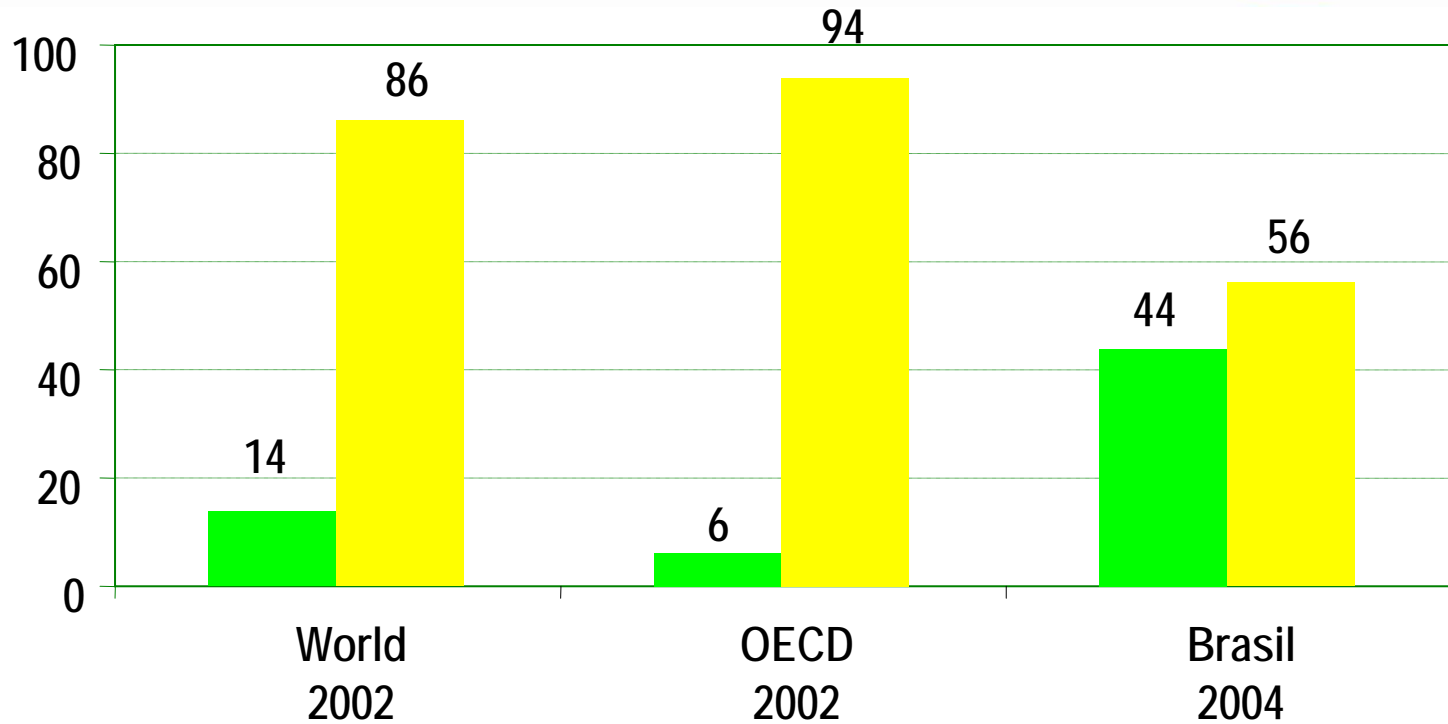




- ✓ Energy for poor or developing countries, like Brazil, must be bearable, environmentally correct and available to all. (9,5 million people without energy)
- ✓ The World must figure out a way to permit growth in developing nations while lowering emissions.
- ✓ The policies for the energy sector should be based on sound and comprehensive research and facts, not wishful thinking and activism.
- ✓ The world must understand that pollution has no frontiers and misery is worst environmental problem.





BRAZIL ENERGY MIX

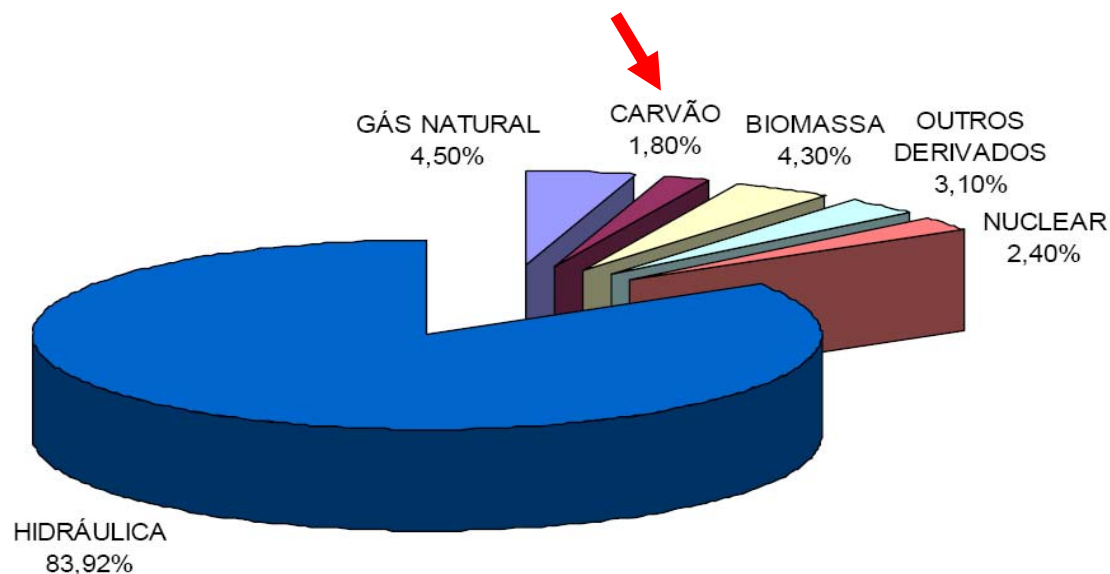


 RENEWABLE
 NON RENEWABLE

Fossil Fuels are not in base load, low CO₂ for the integrated electric system for the total energy production

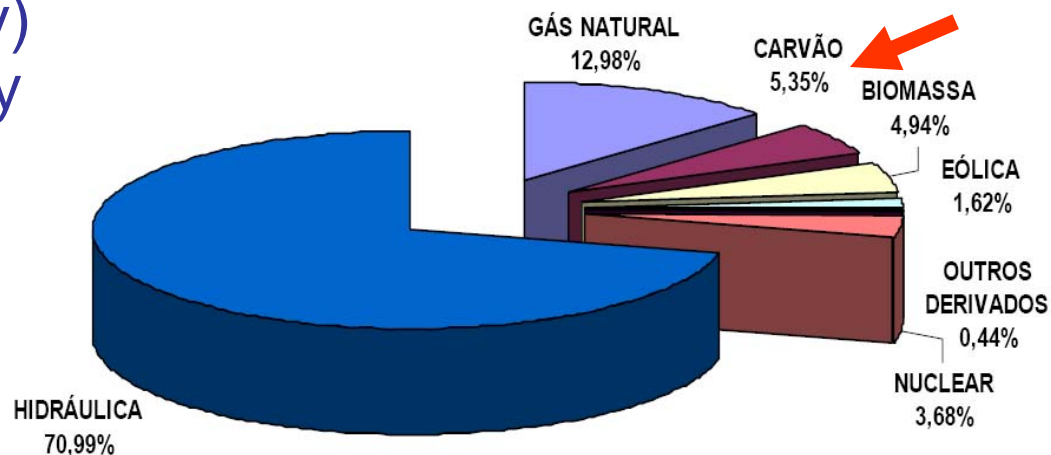
CO₂ emissions
Brasil – 1.69 tCO₂/tep
OECD – 2.36 tCO₂/tep
tep – t oil equivalent

Electric Energy Matrix - 2005



Electric Energy Matrix - 2023

✓ 374 TWh (2005) →
 618TWh in 2015 (5%p/y)
 = 2.500 to 3.300 MW p/y
 for a GNP 4-4,5% p/y



Source: MME/PPEE2015



The Brazilian Fossil Industry View



- ✓ We need:
 - to develop and adapt technologies CCTs and CCS suitable for local conditions.
 - create brains, research centers and networks for R&D&D
- ✓ The fossil Industry is doing its voluntary contribution and looking ahead with actions:
 - Coal and Oil network to develop technology for Coal Bed Methane and Carbon Capture and Storage (Carbometano Brasil),
 - Petrobras network for climate change mitigation with focus on CCS





CCS Projects and Opportunities



✓ Oil and Gas

- EOR/CCS on the 300 ton/d Pilot Projects at Araçás, Buracica and Rio Pojuca fields in the Reconcavo Basin, Bahia State.
- CCS 370 ton/d Demonstration Project in Miranga Field, Bahia state, to be started early 2008.
- Feasibility studies for a high CO₂ concentration natural gas capture and storage Project in Campos Basin, Rio de Janeiro State, to be started in 2008.
- Feasibility studies for a 3,500 ton/d EOR/CCS Project from a coke gaseification plant in Bahia State, to be started in 2012.

Coal

- Carbometano Brasil – Methane Production for Energy Generation and Clean Fuels from Coal in Santa Catarina State, to be started in 2007





Conclusion



- ✓ It's necessary to **create a global alliance** and establish new trade models, development and technological financial assistance for the developing countries to apply CCTs and CCS.
- ✓ Create a Financing Vehicle - **Carbon Fund** – under the UN Convention – UNFCCC to pay marginal costs.
- ✓ Others specific financial instruments: green funds; loan guarantees or direct loans, extended payment periods, tax exemptions and/or credits; direct subsidies for construction and/or production; export credit insurance; improvement of political and credit risks and above all predictable and non-discriminatory energy policies.
- ✓ Establish partnerships and create financial assistance to promote R&D&D and Human Resources in developing countries.





Thank you for your kind attention

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