

## **International Workshop “Bioenergy for a Sustainable Development”**

### **Liquid Biofuels - Strategies and Policies in Brazil**

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### **Biofuels History in Brazil:**

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- **1975 - Created the PRO-ÁLCOOL** National Program of Ethanol
- **1980 - Created the PRO-ÓLEO** - National Program by Production of Vegetal Oils for Fuels (Resolution n° 7 22 October 1980). Not implemented it;
- **1980 a 1985** - any activities of R&D was realized. Ex: OVEG Program;
- **2001** - Biomass Energy Program in the Seating Land by Institut of Agrarian Reform (INCRA), in the Amazon (PROBIOAMAZON);

## **Biofuels History in Brazil:**

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- **2002 (30/12) - Technological Network R&D** (PROBIODIESEL), by Science and Technology Ministry (MCT);
- **2003 (02/07) - Interministerial Working Group** for technical, social and economical viability of Biodiesel Programme, coordinated by Civil House/PR
- **2003 (22/12) - Interministerial Working Group** (14 Ministeries) for formulation and implementation policies to the National Program of Biodiesel, coordinated by Civil House/PR

## **Biofuels History in Brazil:**

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- **2003 (22/12) Interministerial Working Group** for implementation the National Program of Biodiesel, coordinated by the Ministry of Mines and Energy (MME);
- **2004 (16/06) - Public Audience** in the Comision of Amazon, National Integration and Regional Development of the Federal House of Representatives. Was presented the proposition for criation the National Agency for Renewable Energy (ANER).

## **General Considerations:**

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- **Technological Options by national energy systems has direct relations with the power structure in the world;**
- **The searching of a new rationalized market, was considered externalities and international accords for environment protection;**
- **Total substitution (electricity generation) and/or partial substitution of fossil fuels;**

## **General Considerations:**

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- **To attend social and political aspects – sustainable regional development for instance;**
- **International demands for biofuels encourage opportunities in the countries similar to Brazil – with climate appropriate, biodiversity, agricultural soils, manual work and water abundant;**
- **For Brazil is a singular opportunity for social inclusion;**

## **General Considerations:**

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- Brazil has a great potential for energy production from renewable sources as biomass: 309 M há land suitable for agriculture (60 M há used). 325 M há inappropriate for agriculture but adequate for forest. Ex: 1 há palm product 35 barris biodiesel/year x 35 years.
- Potential of production biofuels: + 10 x national consumption of petroleum/year (Actually: 1,8 M bp/y, 15% imported).

## **General Considerations:**

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- **The energetic system – strategic and own dynamic – influence the economy and the organization the space et the social life;**
- **Exportations perspectivs (US\$/E\$);**
- **The theoretical solicitation to Brazil in 2010, national and international, is estimated in 23 bi l of ethanol (440 mil bpe/d) and 17 bi l/d of biodiesel (330.000 bpe/d).**

## **Ethanol Production:**

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- **Proálcool – present (hydrated and anhydrated ethanol): 320 destileries produced 14 bi l/y. Installed capacity: 16 bi l/y. Fusion and acquisitions for french capital (3 destileries).**
- **Plan For 2010: new investment - US\$ 6 bi for 31 new factories, 520 M ton sugar cane/y in 7,5 M há. Carbon market (MDL).**

## **Biodiesel Program:**

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- **Political situation:**
- ✓ **authorized mix of 2% (B2) in 2005 (aditive). 5% (B5) in 2010 (aditive).**
- ✓ **Regulation for the National Petroleum Agency - ANP (petroleum, natural gas, biodiesel and ethanol).**
- ✓ **Actualy, the producers independent retail “éster etílico”.**
- ✓ **Is necessary a permanent forum with democratic participation of the diferents partners, with synergy and governability.**

## **Special Considerations:**

- The Brazilian state and his government loss the capacity to formulate and executed appropriated public politics in renewables energy sources;
- National Projects for generation power with biomass has limited results (PROINFA, incentive to the power generation) Light for All and the Account Consumption of Fuels (CCC), has effects very smallness;

## **Considerations:**

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### **• External initiatives:**

- ✓ **USA – production 17 billion ethanol/y (of corn), in 2007;**
- ✓ **Germany – 1600 station of biodiesel in 2003 (B100, of rapeseed);**
- ✓ **EU – Directive 2003/30/CE of 08.05.2003 substitution 20% the fuels of petroleum for biofuels in the transport in 2020 (2% in 2005)**

## **Important consideration:**

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- ✓ **II Global Forum of Renewable Energy Sources approved IRENA (International Renewable Energy Agency) – Justification: “don’t should let the energy market to decide for renewable energy sources implantation”.**

## **Final Consideration:**

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- **The necessity of stimulate the scientific and technological development of renewable energies, to reformulate the proálcool, to institute o Biodiesel National Program, stimulate the wood production and rational employ, establish the external market of biofuels and to the sell of carbon credits, and others, that demonstrate the relevance to Brazil establishment and professional the activities in that areas.**

## **Practical effects:**

- Endower the Executive by the efficient and effective instrument for to execut a more appropriate energetic policy, for conduit the Country, definitively, in the route of the progression, with employ generation, rent distribution and the regional development was the explicit objetivs that public policies.

## **RECOMENDATION:**

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- **To institut, urgently, the National Development of Renewable Energies Agency – ANER**



**FINALMENTE**

Muito Obrigado!

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