The Role of BNDES in the Biofuels Sector
1. The BNDES

2. Main facilities

3. Renewable energy financing at BNDES

4. Why sugarcane?

5. Studies and publications
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Mission
To foster sustainable and competitive development in the Brazilian economy, generating employment, while reducing social and regional inequalities.

Vision
To perform its duty as the development bank of Brazil, to be innovative, outstanding, and to proactively tackle the current and relevant challenges of our society.
Group Structure

FINANCES LONG-TERM INVESTMENTS

BNDES

BNDES PAR
Equity Participation

FINAME
Machinery and Equipment Production and Acquisition

BNDES Plc
Internationalization of Brazilian companies
BNDES Highlights

- Public and private funding.
- High-quality assets.
- Support to micro, small and medium-sized companies.
- Headquartered in Rio de Janeiro.
- Offices in São Paulo, Brasília and Recife.
- Representatives offices in Montevideo, Uruguay, and Johannesburg, South Africa.
1. BNDES Overview

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Credit policy & procedures

- Eligibility procedures.
  - Entity must be legally established in Brazil and commercially registered.
  - All loans require collateral and repayment capacity.
  - Enterprise complies with environmental legislation.
  - In indirect operations (Brazil), the final credit risk will be borne by one of the more than 100 private and foreign accredited financial institutions.
- International operations – support to Brazilian exports and internationalization of Brazilian companies.
Export Support

- Pre-shipment - financing for the production of goods and services for export.

- Post-shipment (buyer or supplier credit) - financing for the commercialization of goods and services in foreign countries via importers.

- Bioenergy projects are eligible for export support.
Foreign Direct Investment

- Support for Foreign Direct Investment through the financing of Brazilian companies operating in foreign countries.

- Financing for investments to be made by foreign companies based in Brazil.

- Main objectives of investment financing: market entry; mergers and acquisition; joint-ventures; expansion and modernization.
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BNDES offers special lines of credit to clean energy operations:

- Hydro
- Wind
- Solar
- Bioenergy
- Transmission and distribution projects
- Cogeneration
- Feasibility studies for the energy sector
1. Expanding productive capacity
2. Fostering technological development
3. Maximising positive externalities
4. Stimulating socioenvironmental sustainability
5. Contributing to the formation of an international bioethanol market
Biofuels Agenda

- Increase in scale (greenfield or modernization)
- Sugarcane crops
- Engineering and capital goods
- Cogeneration
- Research and development
- Social and environmental projects
- Infrastructure and logistics
- Industry consolidation (M&A)
- Internationalization
- **BNDES PRORENOVA**
  - Expansion and renewal of sugarcane fields.

- **BNDES PASS**
  - Ethanol storage.

- **PAISS Industrial**
  - Innovation – particularly cellulose.

- **PAISS Agrícola**
  - New breeds of sugarcane – advanced biotechnology and transgenesis projects.
BNDES’ Interest Rate - Direct Loans

Financial Cost

+ 

BNDES Basic Spread

+ 

Credit Risk Rate

= 

Total Interest Rate

Funding Cost
TJLP
TJ-462
Currency Basket
LIBOR

Margin to cover operational expenses

Margin to cover non-performing loans

BNDES’ Interest Rate

Direct Loans
Disbursements to biofuels projects

Support for more than 120 projects that will provide a nameplate capacity of:

- Cane crushing: 125 million tons
- Ethanol: 8 billion liters
- Sugar: 4.2 billion kg
- Electric energy surplus: 2.500 MW

US$ billion
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High-yield feedstock competitiveness

- Wheat
- Sugar sorghum
- Cassava
- Corn
- Beet
- Sugarcane

Ethanol produced from cellulosic residue

Liter/ha: 0, 2,000, 4,000, 6,000, 8,000, 10,000
Lowest carbon footprint

Energy efficiency - BOE output/ BOE input

- Corn average: 2.3
- Sugar cane Brazil-top: 11
- Sugar cane Brazil-average: 9.3
- Sugar cane Brazil-bottom: 6.7

Sugarcane biomass can provide all primary energy required in its own industrial process and also generate a surplus that can be added to the power grid.

Source: USDA apud Villela Filho (2011)
Huge potential in tropical regions

Potential producers of high-yield biomass
Proper Soil, Climate, Energy Balance and 30M+ ha of rain-fed available arable land w/o Competition for Food

Source: FAO, World Bank, McKinsey
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Co-produced by the BNDES, FAO, ECLAC and CGEE.

An instrument for international dialogue.

Scientifically identifies pros and cons of different raw materials used to produce ethanol.

Provides information for decision-makers (private and public) on the economic and environmental benefits of production and use of sugarcane bioethanol.

www.sugarcanebioethanol.org
Other studies and publications

- Periodic sector analyses
- Feasibility studies
  - Production of Biofuels in West African Economic and Monetary Union (UEMOA)
- Guidelines for socioenvironmental analysis of investment projects
- Engagement with international organizations in the creation of sustainability indicators
Thank You!

daniel.vivas@bndes.gov.br