

Ethanol Summit 2013

Markets & Investment - Investing in the Biofuels Industry: Paths and Perspectives

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São Paulo, June 28th, 2013



1. Expand the industry capacity and modernization

- Prorenova (cane renewal and expansion)
- PASS (ethanol seasonal storage)
- BNDES PSI (equipment acquisition)
- BNDES Finem for new capacity

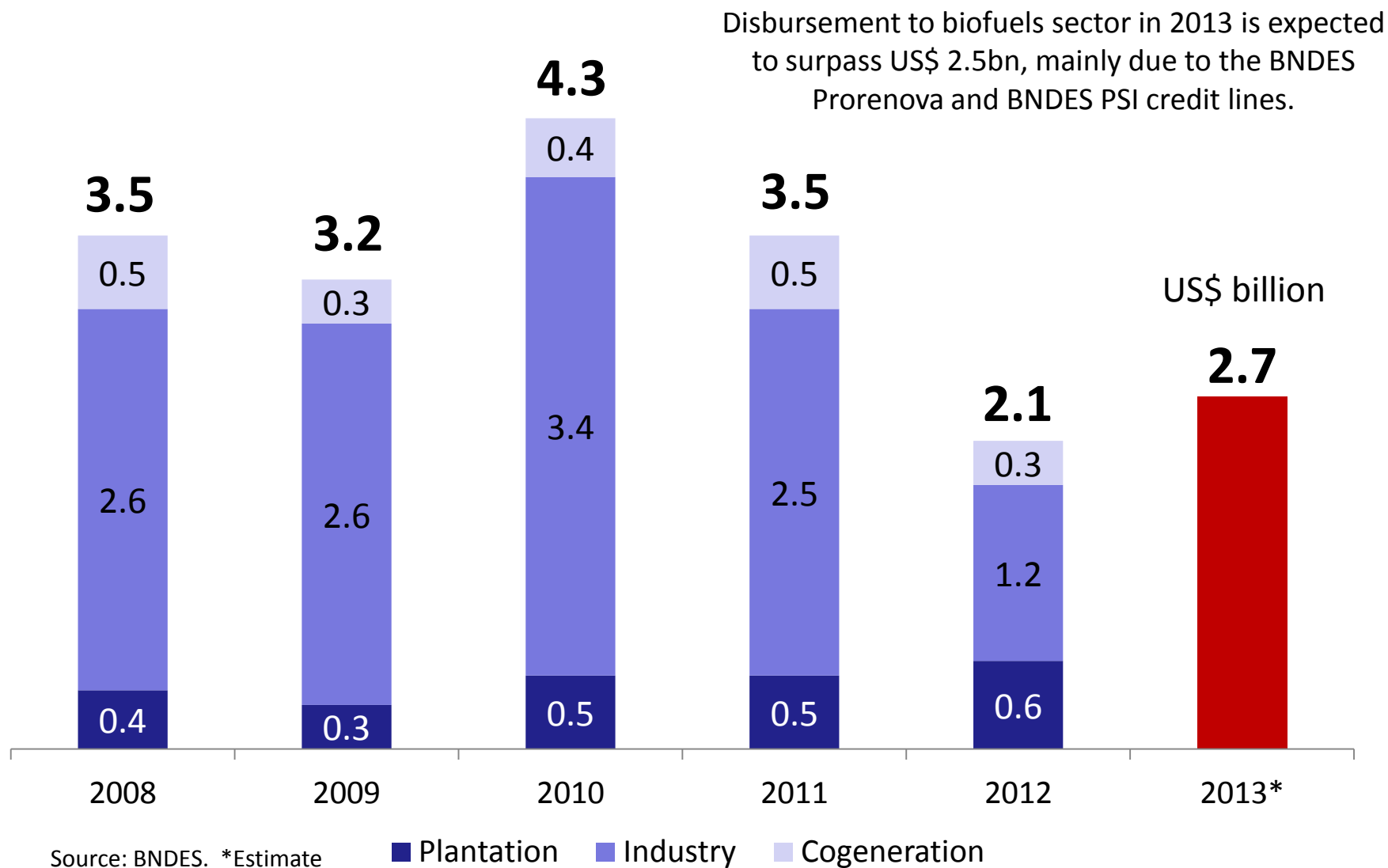
2. Foster R&D and innovation projects

- novel sugarcane by-products and processes through PAISS Program

3. Finance logistic systems to optimize ethanol transportation costs

Total disbursement over the 3-year period (2010-12): **US\$ 9.9bn**

BNDES Disbursement to S&E industry



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Brazilian government to double planned investment to \$988M through 2014 in biobased technologies

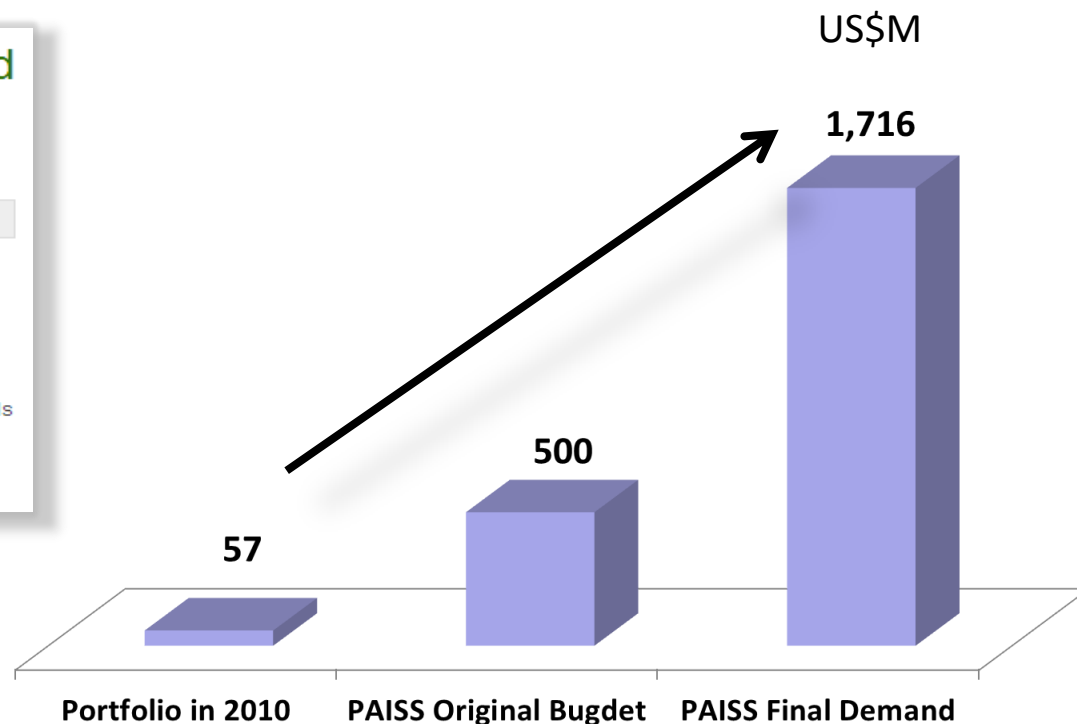
Jim Lane | September 24, 2012

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In Brazil, the Brazilian national development bank, BNDES and the research funding arm, FINEP, announced a plan to double propose investment in biofuels and renewable chemicals and provide up to \$988 million to the sector in 2013 and 2014. Dow Chemical, DuPont and Braskem are among those who have announced projects with a cost of up to \$1.5 billion – and Carlos Cavalcanti, head of biofuels at BNDES, told Business Week at World Biofuels Markets (Brazil) that the agencies are indeed likely to concentrate funding in a few projects, which all focus on developing value-add products from sugarcane.

35 Business Plans approved will result in a potential investment of BRL 3.4 bn (~ USD 1.7 bn), which represents a dramatic increase.



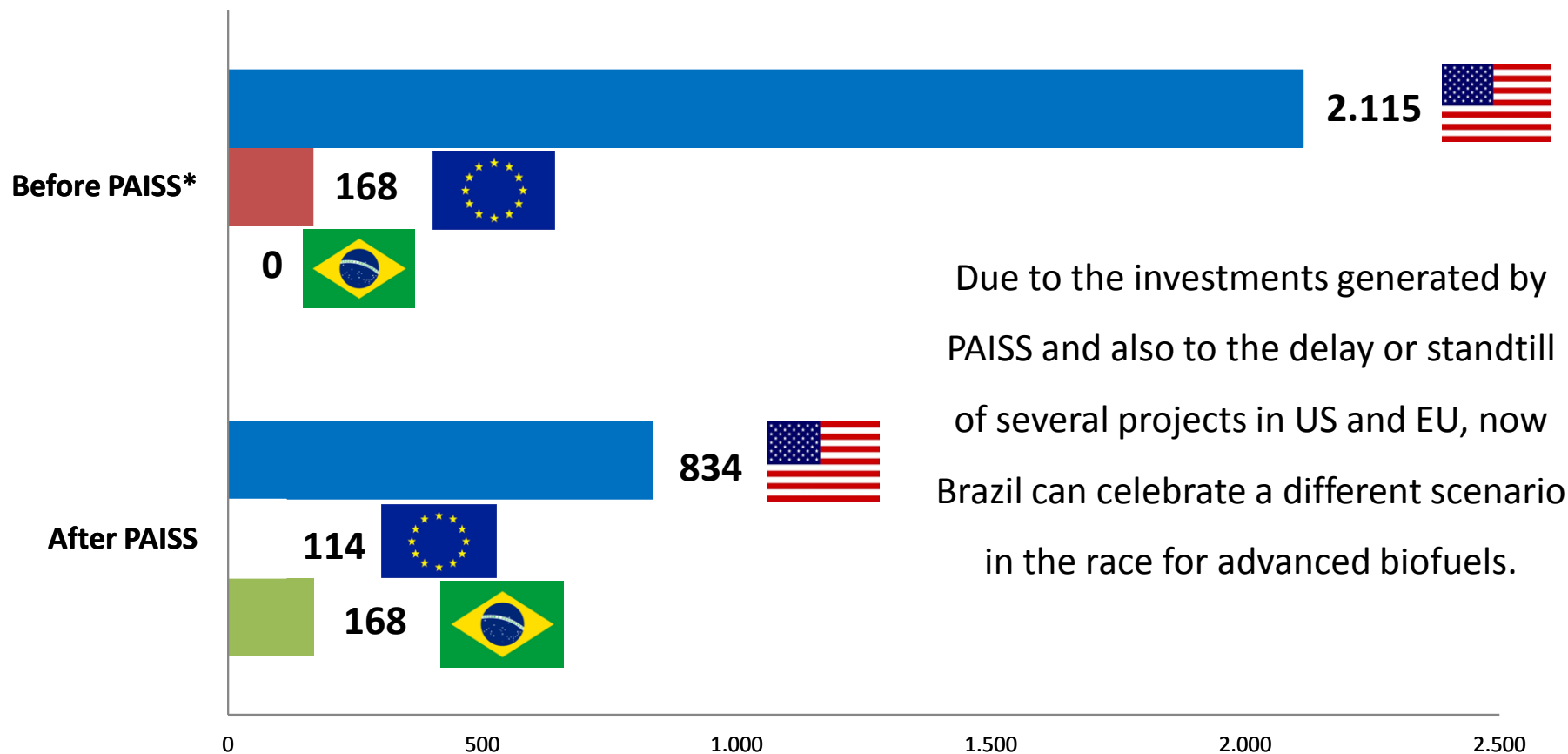
PAISS Approved Projects



Company	Country	Funding	Product	Amount (US\$M)
Centro de Tecnologia Canavieira (CTC)	Brazil	Finep	Butanol, enzymes, cellulosic ethanol, sugarcane straw collection, pelletization and C5 yeasts.	133.4
Centro de Tecnologia Canavieira (CTC)	Brazil	BNDES	Cellulosic ethanol demo plant	35.5
Odebrecht Agroindustrial	Brazil	Finep	Cellulosic ethanol	4.2
VTT	Finland	Finep	Enzymes development	4.9
Dow	USA	Finep	Propanol and propionic acid	1.4
Braskem	Brazil	Finep	Butadiene, isoprene, PEF and green propene	10.0
Braskem	Brazil	Finep	Butadiene, isoprene, PEF and green propene	92.5
Methanum	Brazil	Finep	Biogas	2.4
GranBio	Brazil	BNDES	Cellulosic ethanol	150.2
	"	Finep		63.0
GranBio	Brazil	BNDES ¹	Cellulosic ethanol and bio-based chemicals	300.0
DSM	Netherlands	BNDES	Succinic acid	1.8
	"	Finep		136.0
Metso	Finland	BNDES	Pre-treatment system	9.9
PHB	Brazil	BNDES	Biodegradable plastics	4.6
Solazyme/Bunge	USA	BNDES	Renewable oils	122.5
Petrobras	Brazil	Finep	Gasification: syngas + cellulosic ethanol	127.5
Eli Lilly	USA	Finep	Enzymes development	4.4
Barauna	Brazil	Finep	Fertilizers	0.8
			Total	1,205

¹ GranBio: equity participation through BNDESPar

Estimates of cellulosic ethanol production for 2015 (million liters)*



Due to the investments generated by PAISS and also to the delay or standstill of several projects in US and EU, now Brazil can celebrate a different scenario in the race for advanced biofuels.

Source: FO Licht, Nyko et al (2010) and BNDES.

*Because of the lack of data at that time, estimates Pre-PAISS refer to 2014.

SECTORIAL REPORT

Industrial Division June/2013 nº 25

The BNDES and the sugar-ethanol industry in 2012: innovation as a priority

1. Introduction

The last few years have been difficult for the sugar-ethanol industry due to poor crop yields and reduced investment in new production capacity. Even regular investments were postponed, such as those to renew sugarcane plantations. This lack of investments contributed to reducing the quality and quantity of sugarcane available for milling. As a result of low agricultural productivity, the slowdown in the industry reached high levels in this period. Just as investments in the industry have fallen, the BNDES' disbursements to this segment fell for the second year in a row in 2012.

However, to accelerate technological development in the industry, the BNDES began to prioritize innovation projects, especially after the successful experience with the Innovation Support Plan for the Sugar-Ethanol and Sugar-Chemical Sectors (PAISS). The main results are highlighted in this report.

2. Disbursements

Chart 1 shows the BNDES' disbursements to the sugar-ethanol industry since 2008. The drop between 2011 and 2012 was 40%, which is due to the fact the sector postponed planned investments and to existing projects maturing in the BNDES' portfolio, as had been forecast in the previous edition of this report. As a result of lower disbursements to the sugar-ethanol segment, its share in the BNDES' total disbursements also dropped, reaching 2.7% in 2012, the lowest level in the period.

However, the perspective for 2013 is to resume investments to the sugar-ethanol

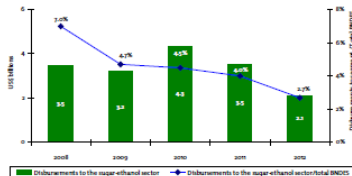
industry. The BNDES' disbursements for this segment are expected to exceed US\$ 2.4 billion in 2013, mainly due to the BNDES' Investment Maintenance Program (BNDES PSI-capital goods) and the BNDES Prorenova, aimed at financing the expansion and renewal of sugarcane

crops, and the beginning of PAISS disbursements.

2.1 Per financing modality

Table 1 compares the BNDES' direct and indirect operations. In the latter,

Chart 1. Evolution of disbursements to the sugar-ethanol sector



Source: The BNDES.

Table 1. Distribution of the BNDES' disbursements per type of operation (in R\$ million)

	2008	2009	2010	2011	2012
Direct	1.4	1.5	1.5	1.7	0.7
Indirect	2.1	1.7	2.9	1.8	1.5
Total	3.5	3.2	4.3	3.5	2.1

Source: The BNDES.

Thank You