

# Electricity from Biofuels in Latin American Sugar Mills: Slow Take-off or Lost Chance?

*Enrique Riegelhaupt, Professor of Dasonomy, Faculty of Agricultural Sciences, Universidad Nacional de Entre Rios, Argentina*

Two real and eight study cases for increased CG / expanded EG with:

- \* **Existent boiler and power plants plus condensing turbines**
- \* **Readily Available Fuels: bagasse + CHR + fuelwood from sawmills, land clearings, native forest management, plantations**
- \* **Marginal investment in new generation equipment**
- \* **Maximum utilisation of existent resources (manpower, equipment & installations., transportation means, management )**
- \* **Low efficiency accepted if low cost granted**

**Table 1. Cogeneration and Expanded Generation Profiles in Sugar Mills**

Site COUNTRY	Net Generation		Investment		Direct	Pay-back time
	M W	GWh/yr	Total 10 <sup>6</sup> US\$	Specific \$/MW	Operational Costs (1) \$/MWh	
						Years
AYSA	4.7	18.9	0.052	11	12 ~ 40	0.8
Tres Valles	6.5	26.0	1.380	212	12 ~ 42	1.8
AZUNOSA	24.0	46.8	4.820	201	8 ~ 21	5.9
La Grecia	1.0	3.6	0.240	240	n. d.	1.2
<b>HONDURAS</b>	<b>36.2</b>	<b>95.4</b>	<b>6.492</b>	<b>179</b>		
FNTA 1	5.0	35.3	2.660	532	29	2.6
FNTA 2	15.0	55.3	3.220	214	26	1.5
30 de Noviembre	11.0	86.4	6.500	591	28	2.7
A. Martinez	7.0	53.7	4.020	574	28	2.1
<b>CUBA</b>	<b>38.0</b>	<b>230.7</b>	<b>16.400</b>	<b>477</b>		

(1) includes fuel procurement / transportation / preparation, plus op. & main. of power plant .  
Sources: FAO, 1998 and FAO, 2000, modified.

# Conclusions

- Simple cogeneration and expanded generation schemes are technically and economically feasible, using **available** equipment and biomass fuel sources
- Main barriers are **financial** (scarce capital, high indebtedness) and **institutional** (little interest from public utilities, inadequate Power Purchase Agreements)
- New technology, high investment alternatives need **long maturing and pay-back times**, are usually delayed by complex arrangements