COLLABORATION FOR THE PROMOTION OF ETHANOL AS TRANSPORT FUEL

GRESS

Achieving Sustainable Mobility



Energy Matrix Sugarcane industry: largest source of renewable energy in Brazil





Source: Balanço Energético Nacional (EPE)

Biofuels and Emissions Avoided

Y







RENOVABIO WILL AVOID 670 MILLION TONS CO2 EMISSIONS IN 10 YEARS



Sugarcane Production





ZERO DEFORESTATION

The Brazilian Biofuels Policy (RenovaBio) excludes production areas located on rural properties where native vegetation has been suppressed after November 2018 (publication date of Resolution ANP 758/2018)²

Nota: **1** – in temperatures bigger than 18°C, the sugarcane will continue the growth until other factor determine growth paralysation and posterior sugar accumulation (AUDE, 1993 – available at https://doi.org/10.1590/S0103-84781993000200022). 2 – Resolution available at https://doi.org/10.1590/S0103-84781993000200022). 2 – Resolution available at https://www.gov.br/anp/pt-br/assuntos/renovabio/renovabio/renovabio/legislacao-do-renovabio

A Relevant position in automotive market

2.7 million

115

thousand

Largest automotive market (light vehicles) (China, USA, Japan, Germany, India, France and Russia) (2019)

Sth

4th

Largest automotive market (heavy vehicles) (China, USA and India) (2019)



94% of light-duty vehicles are flex-fuel.



51% of light commercial vehicles are flex-fuel.

100% of trucks and buses are diesel.





A long tradition to use more than E20



Petrobras - Vehicles tested

Vehicle Code	Phase	MY	Milleage	сс	Transmission (atalyst	Fuel Injection System
L2A	L2	1995/1996	155.983	1.0	manual		yes	electronic carburator
L2B	L2	1995	88.152	1.6	manual		yes	singlepoint injection
L3A	L3	2001	96.556	1.8	automatic		yes	multipoint injection
L3B	L3	1999/2000	142.500	1.0	manual		yes	multipoint injection
L4A	L4	2008	61.111	2.0	automatic		yes	multipoint injection
L5A	L5	2009/2010	45.031	1.6	manual		yes	multipoint injection
L5B	L5	2010	25.195	2.0	automatic		yes	multipoint injection
L6A	L6	2013/2014	3.750	1.6	automatic		yes	turbo with direct injection
L6B	L6	2013/2014	3.314	1.6	automatic		yes	turbo with direct injection
Motorcycle Code		PROMOT Phase	MY		сс	Catalyst	Fue	Injection System
PM1 A		PM1	2002		125	no		carburator
M1 A		M1	2005		150	no		carburator
M2 A		M2	2008		125	no		carburator
M3 A		M3	2009		125	yes	el	ectronic injection
M3 B		M3	2010		300	yes	el	ectronic injection

Fuel Quality Monitoring Program (2021)



KEY NUMBERS

- 75,000 samples collected of E100, E27 and B10;
- 3,327 municipalities monitored;
- 21,000 gas stations visited;
- 675,000 tests conducted;
- **Conformity Index (CI):**
 - E27: 98%
 - E100: 98%
 - B10: 97%









Energetic and Environmental efficiency (gCO2eq/km)



Source: IEA (2019), Weisser (2007), IPCC (2013), INMETRO (2021), Ecoinvent 3.5. Note: Efficiency and emissions levels depend on several parameters. The data presented should be seen as indicative reference values.

India & Brazil Alliance for Bioenergy and Biofuels







India & Brazil Cooperation







Expected results



LAUNCHING OF INDIA-BRAZIL ALLIANCE FOR BIOENERGY AND BIOFUELS



RECOGNITION OF BIONERGY AND BIOFUELS AS PART OF SOLUTION FOR ENERGY TRANSITION.



COOPERATION BETWEEN SUCROENERGETIC AND AUTOMOTIVE SECTORS.



INCREASE OF ENERGY SECURITY, CONSIDERING MARKET INSTABILITY AND O&G GEOPOLITICS.



IMPROVEMENT OF JOBS AND INCOME IN BRAZIL AND INDIA.



Mr Bento Albuquerque former minister of mines and energy consultant



