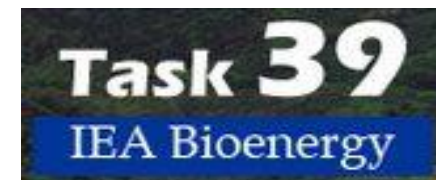


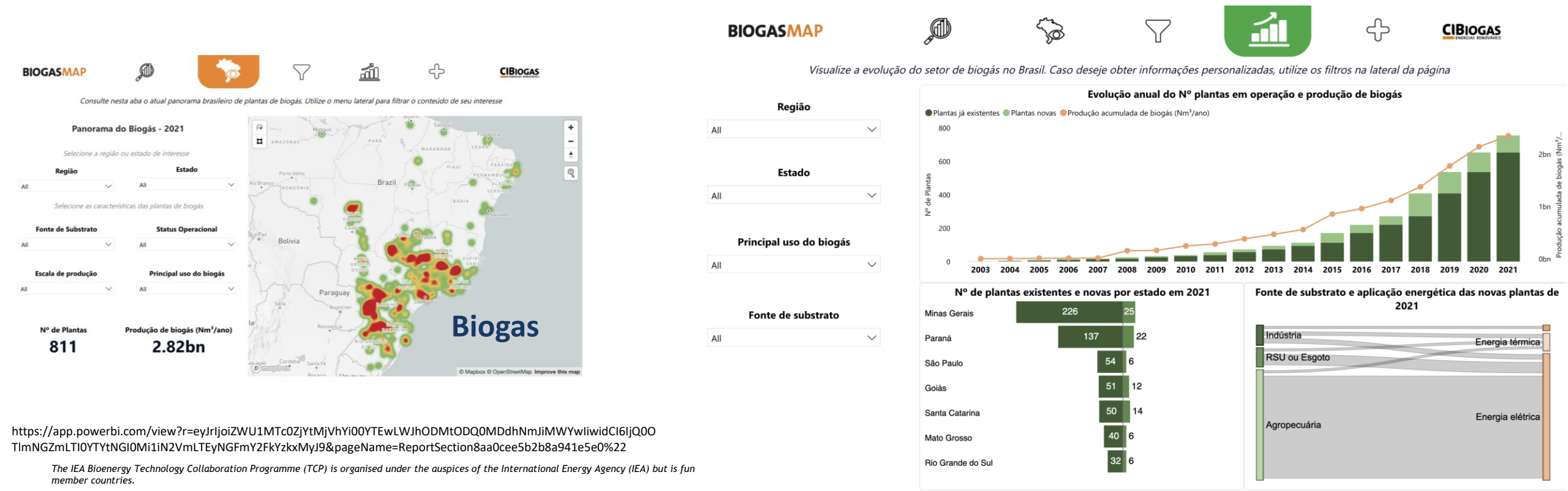
# BRAZIL



FAPESP Bioenergy Research Program BIOEN  
Glauca Mendes Souza, Heitor Cantarella, Luis  
Fernando Cassinelli, Luiz Horta Nogueira, Pablo Silva  
Ortiz and Nicholas Islongo Canabarro  
and Rubens Maciel Filho  
September, 2022



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<https://app.powerbi.com/view?r=eyJrljojZWU1MTc0ZjYtMjVhYi00YTEwLWJhODMtODQ0MDdhNmJiMWYwliwidCI6IjQ0OTlmNGZmLTl0YTtNGl0Mi1iN2VmLTExNGFmY2FkYzkyMyJ9&pageName=ReportSection8aa0cee5b2b8a941e5e0%22>

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Período

Ano: 2021



11,4M

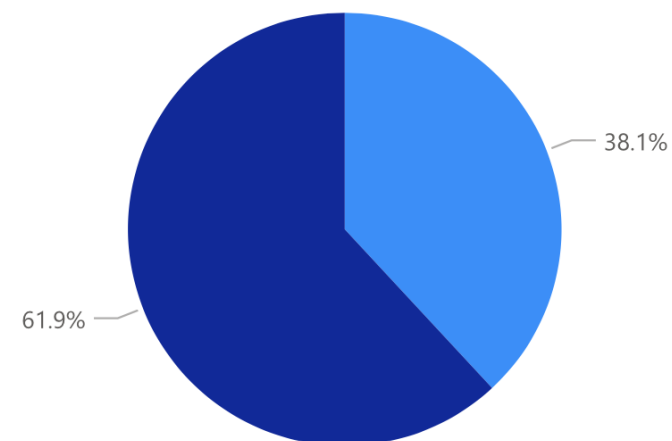
Produção de Etanol Anidro (m³)

18,6M

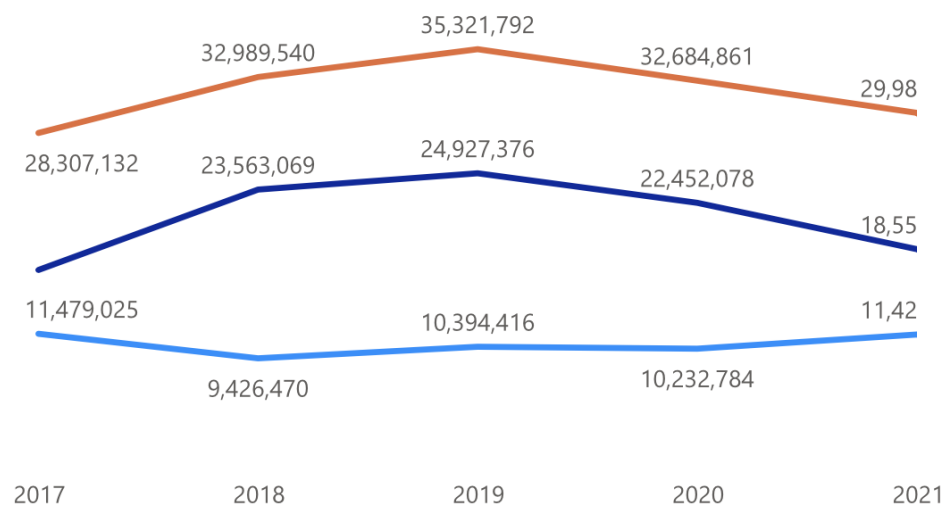
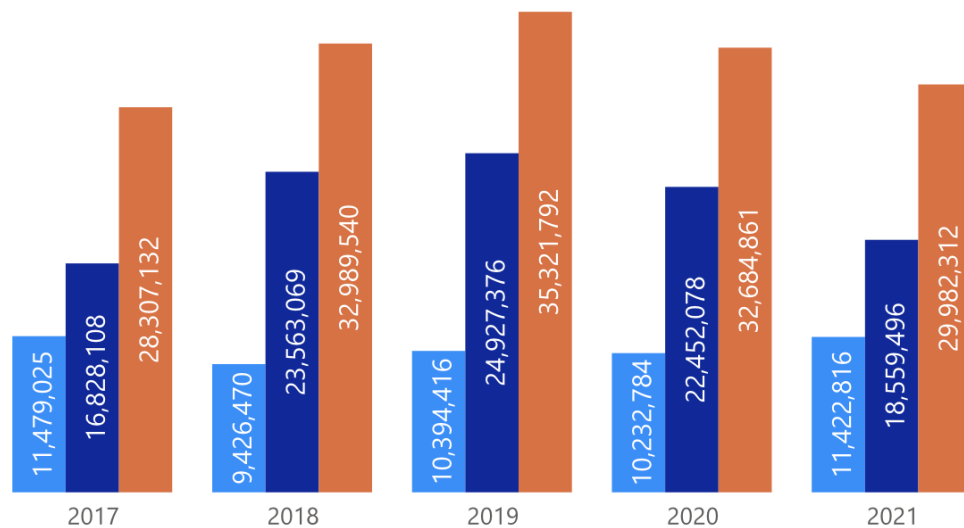
Produção de Etanol Hidratado (m³)

30,0M

Produção Total de Etanol (m³)



● Etanol Anidro (m³) ● Etanol Hidratado (m³)



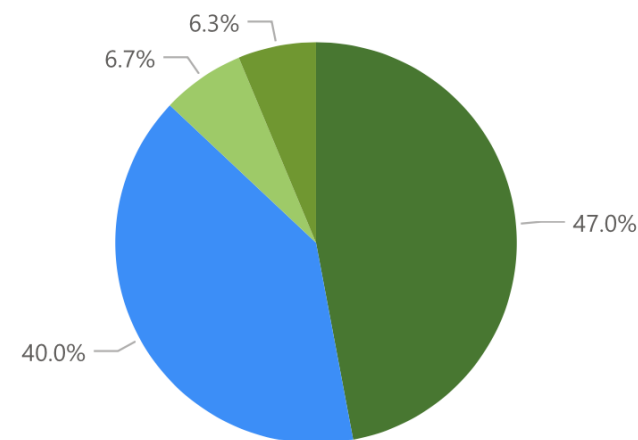
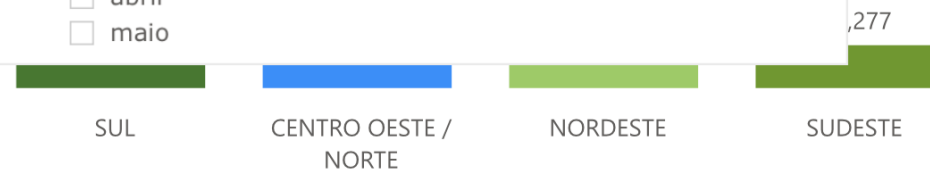
● Etanol Anidro (m³) ● Etanol Hidratado (m³) ● Total de Etanol (m³)



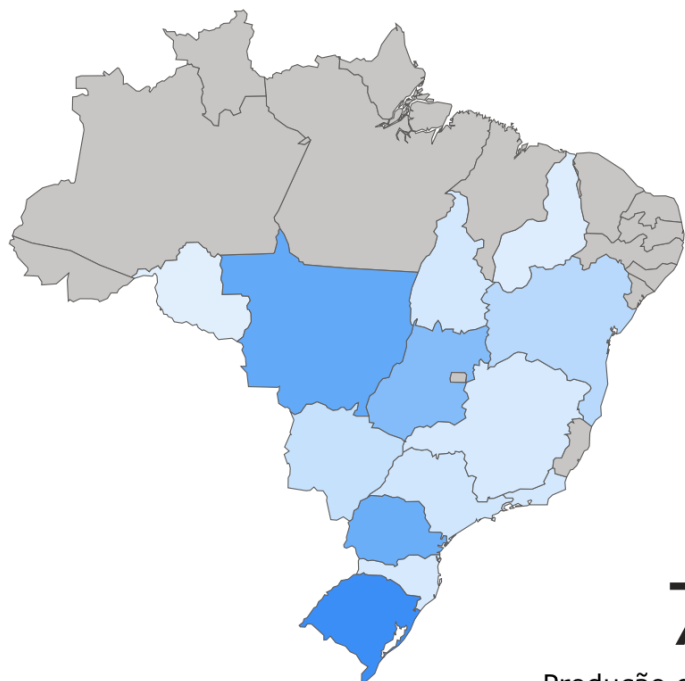
Ano, Mês

2021

- ✓ ☐ 2017
- ✓ ☐ 2018
- ✓ ☐ 2019
- ✓ ☐ 2020
- ✓ ☒ 2021
- ^ ☐ 2022
- ☐ janeiro
- ☐ fevereiro
- ☐ março
- ☐ abril
- ☐ maio

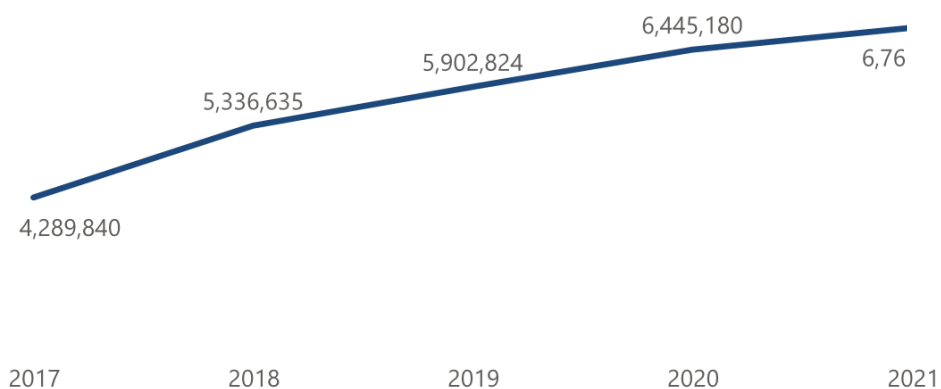


Região ● SUL ● CENTRO OESTE / NORTE ● NORDESTE ● SUDESTE



7M

Produção de Biodiesel (m³)



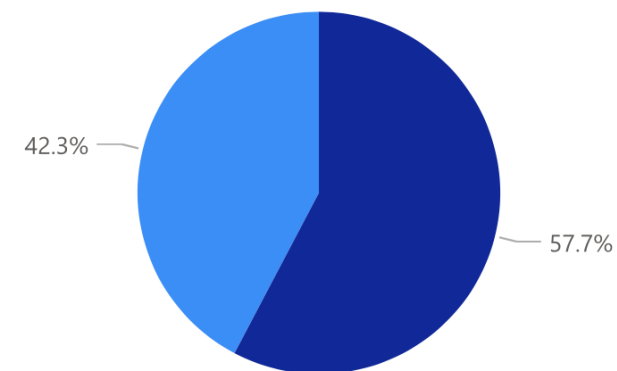
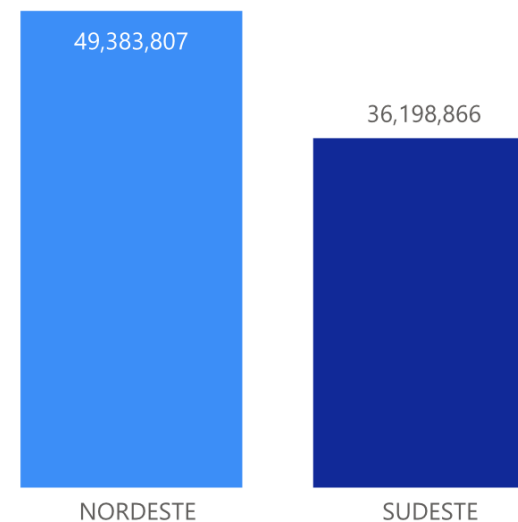
Ano, Mês

Multiple selections



# 86M

Produção de Biometano (m<sup>3</sup>)



Região ● NORDESTE ● SUDESTE

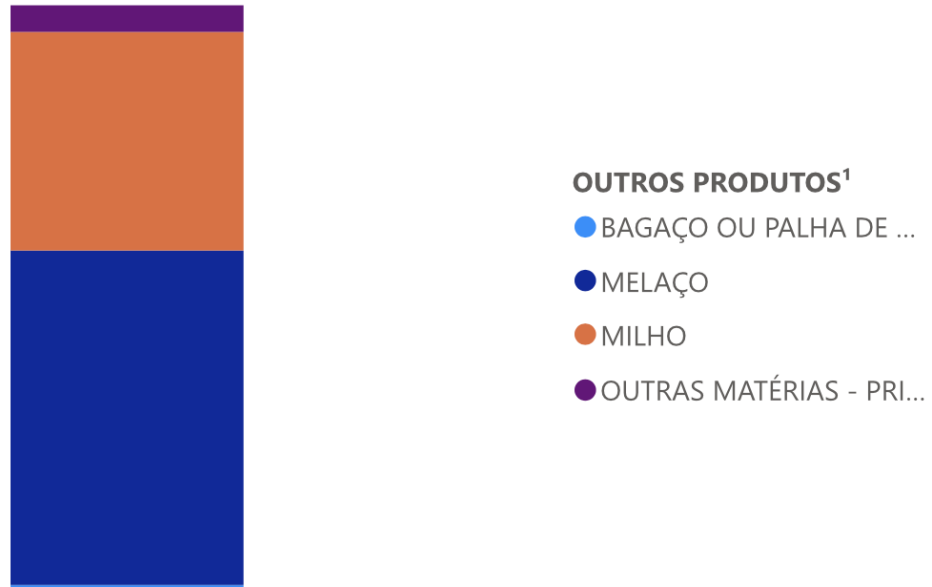
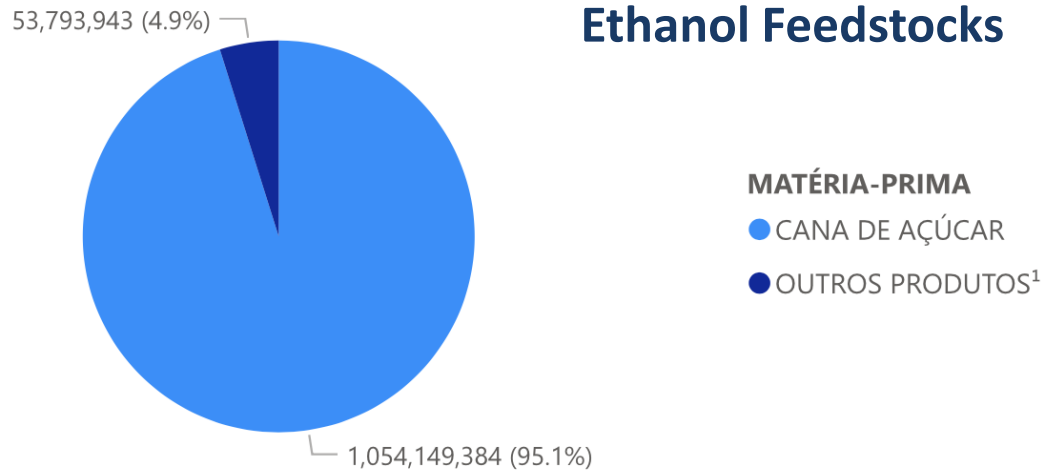


36,143,437  
2020

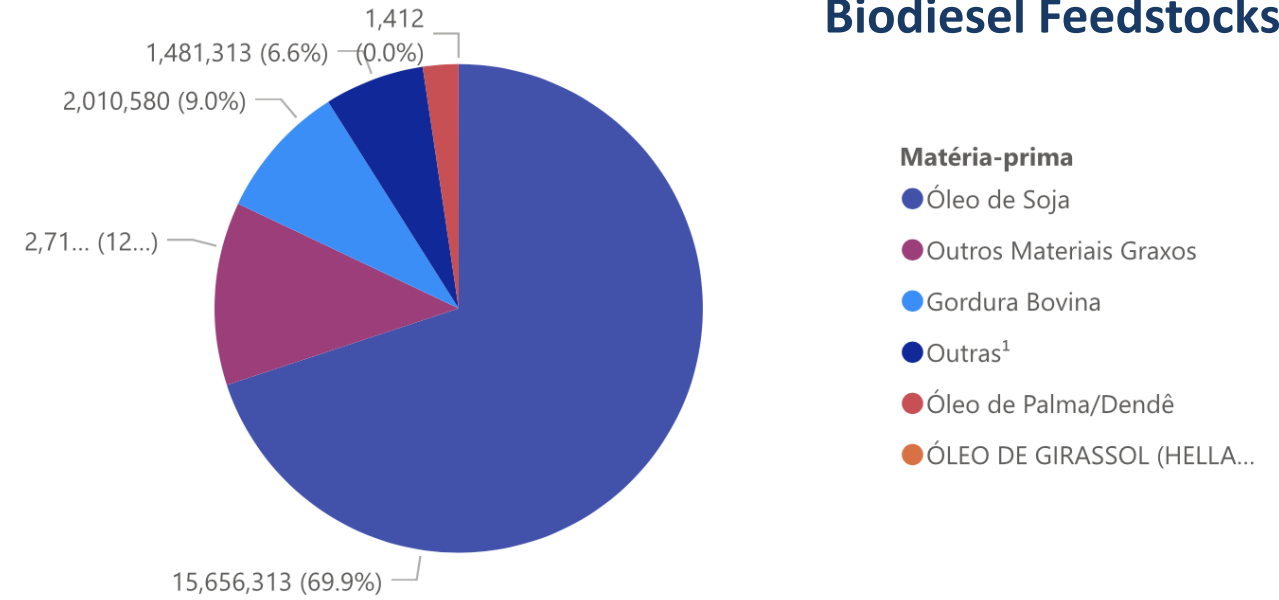
49,439,235

2021

## Ethanol Feedstocks



## Biodiesel Feedstocks



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From Brazil's successful experiences with ethanol, biodiesel and RenovaBio, The Fuel of the Future aims to expand, even more, the use of sustainable and low-carbon fuels with emphasis on the following objectives:

- **integrate public policies** affecting the theme (RenovaBio, National Program for The Production and Use of Biodiesel, Proconve, Rota 2030, Brazilian Vehicle Labeling Program and CONPET;
- propose measures to **improve fuel quality**, with a view to **reducing the average carbon intensity** of the fuel matrix, reducing emissions in all modes of transport and increasing energy efficiency;
- propose a **methodology of complete life cycle analysis** (from well to wheel) in the various modes of transport;
- assess the possibility of bringing reference fuels closer to the fuels actually used;
- propose actions to **provide the consumer with the appropriate information** in order to contribute to the conscious choice of the vehicle and the energy source considering the life cycle of fuels;
- propose studies to create **high-octane gasoline** specification;
- propose studies to enable **ethanol fuel cell** technology;
- evaluate conditions for the introduction of **sustainable aviation kerosene** in the Brazilian energy matrix;
- establish a national strategy for the use of **sustainable fuels in maritime transport** and
- establish conditions for the use of **carbon capture and storage** technology associated with biofuel production.

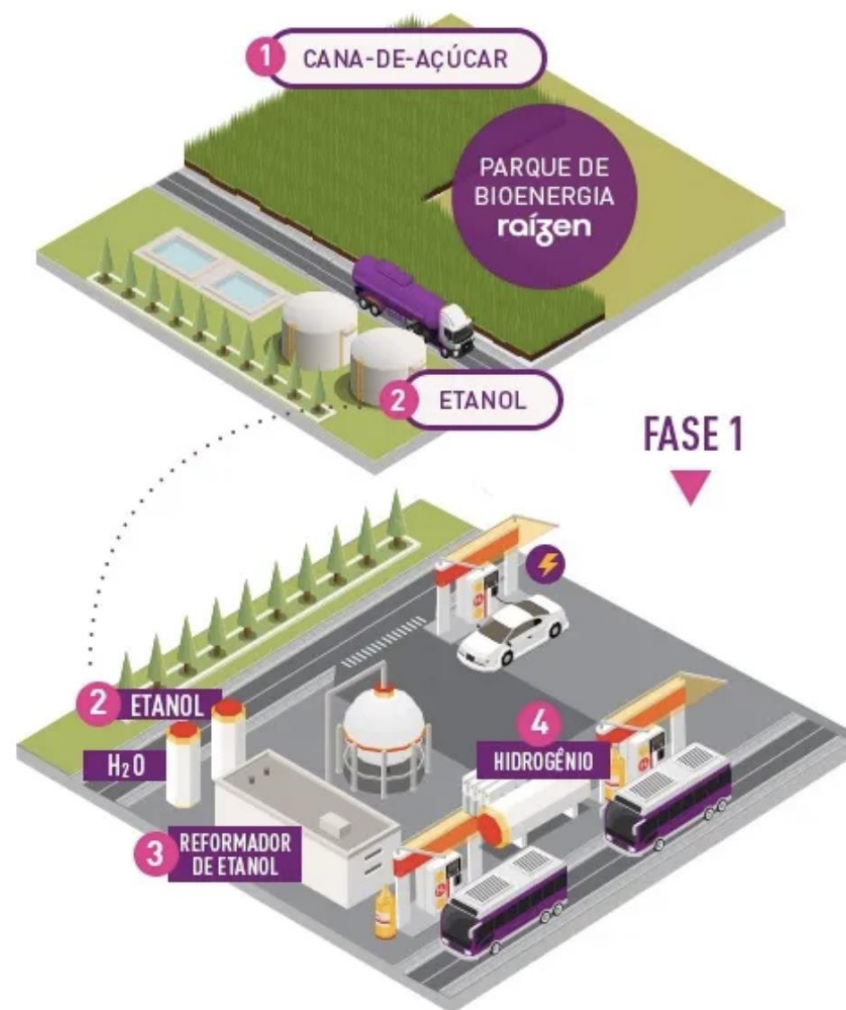
Resolução CNPE nº 07, de 20 de abril de 2021

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Cooperation agreement for the development of two renewable hydrogen production plants from ethanol (capacities of 5 kg/h and 44.5 kg/h)  
Vehicle supply station for fuel cell buses that circulate through the University City

## ESTAÇÃO DE ABASTECIMENTO (HRS)

Cidade Universitária / USP (2023)



## Task 39

IEA Bioenergy

USP, Shell, Raizen, Hytron, SENAI, FAPESP

Erika Yamamoto, Jornal da USP, 2023,  
<https://jornal.usp.br/?p=559072>

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