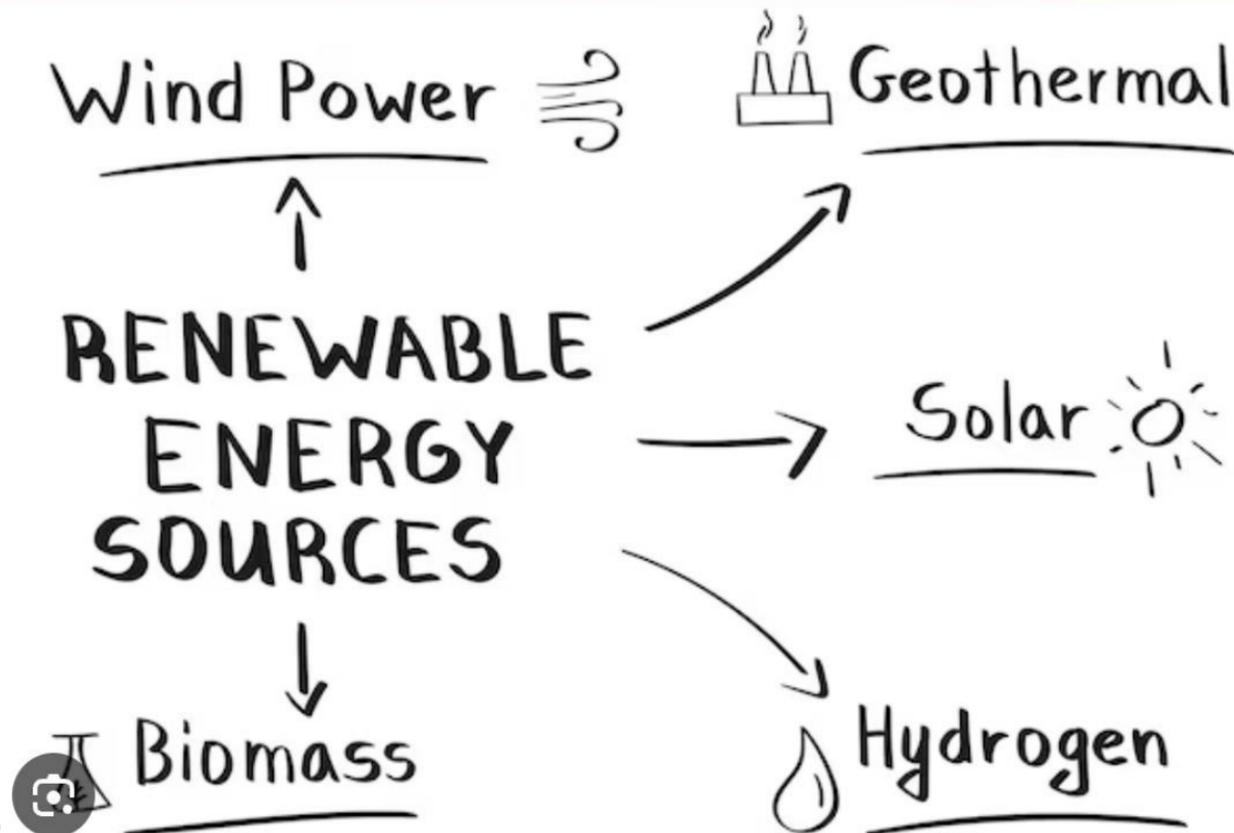
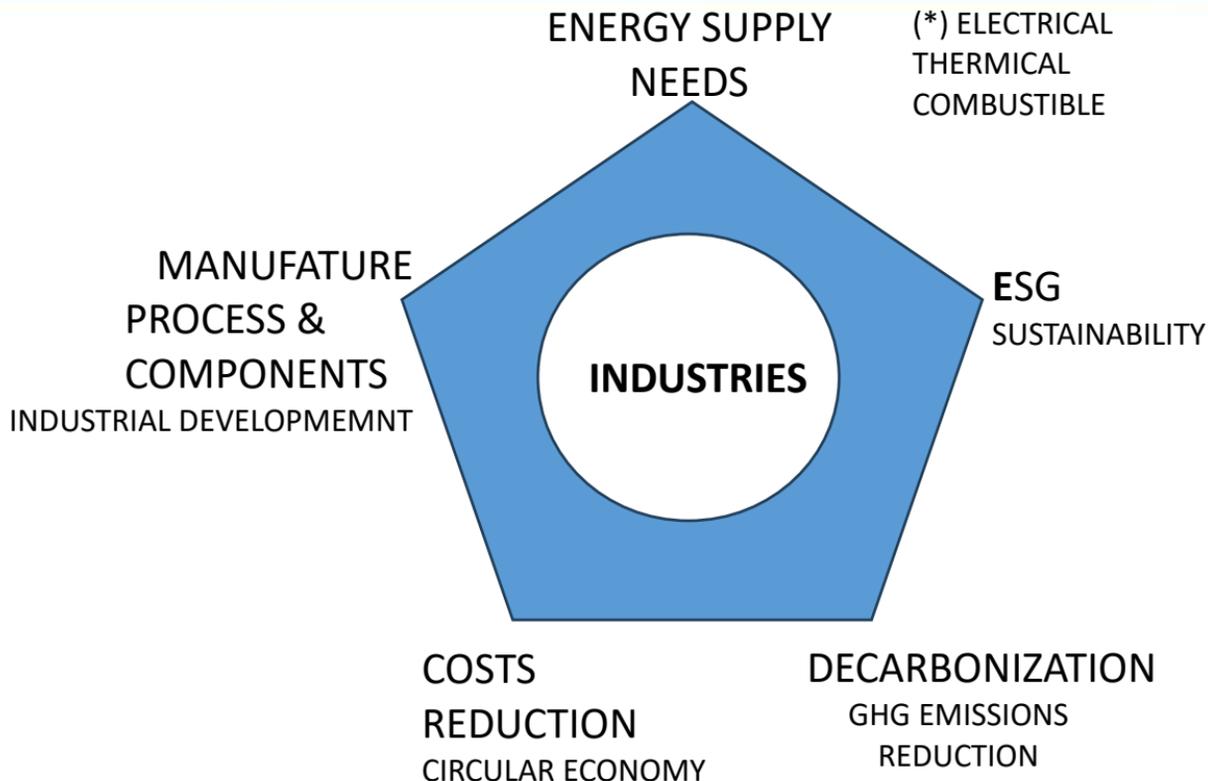


CLEAN ENERGY AND SUSTAINABILITY SYMPOSIUM AUSTRALIA-BRASIL

CURITIBA BRASIL MARCH 18-19, 2024



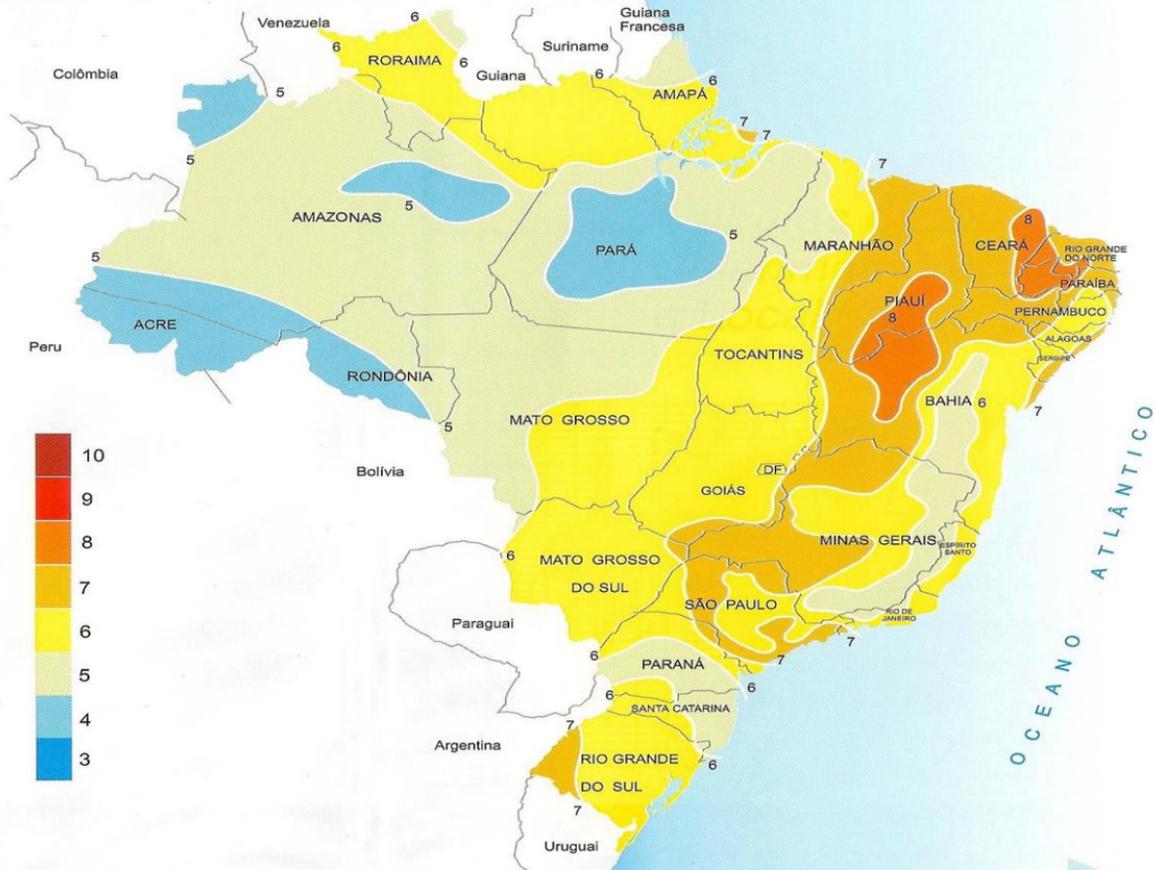




MARKETING SEGMENTATION

BRAZIL – HUGE POTENTIAL FOR RENEWABLES

ATLAS SOLARIMÉTRICO DO BRASIL



Anual

CARTA 4.14

Insolação Diária, Média Anual (horas)

Coordenador do Projeto
Chiquero Tiba

GRUPO FAE - Grupo de Pesquisas em Fontes Alternativas de Energia-DENCT/UFPE
Chiquero Tiba / Naum Fraidtenraich

CHEF - Companhia Hidro Elétrica do São Francisco
Francisco José Maciel Lyra / Ângela M. De Barros Nogueira

CEPEL - Centro de Pesquisa de Energia Elétrica

Consultoria Técnica
Hugo Grossi Gallegos

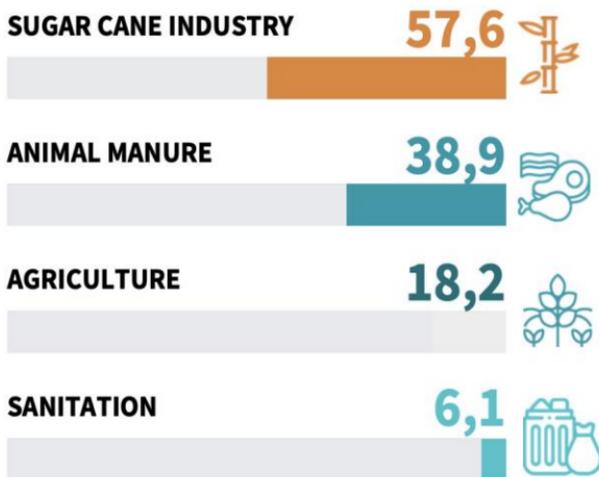
ESCALA GRÁFICA

150 75 0 150 300 450 600 km

BRAZIL: BIOGAS POTENTIAL BEING DEVELOPED

Brazilian potential

Biomethane
(million m³/day)



THE ROLE OF BIOGAS AND BIOMETHANE IN ENERGY TRANSITION

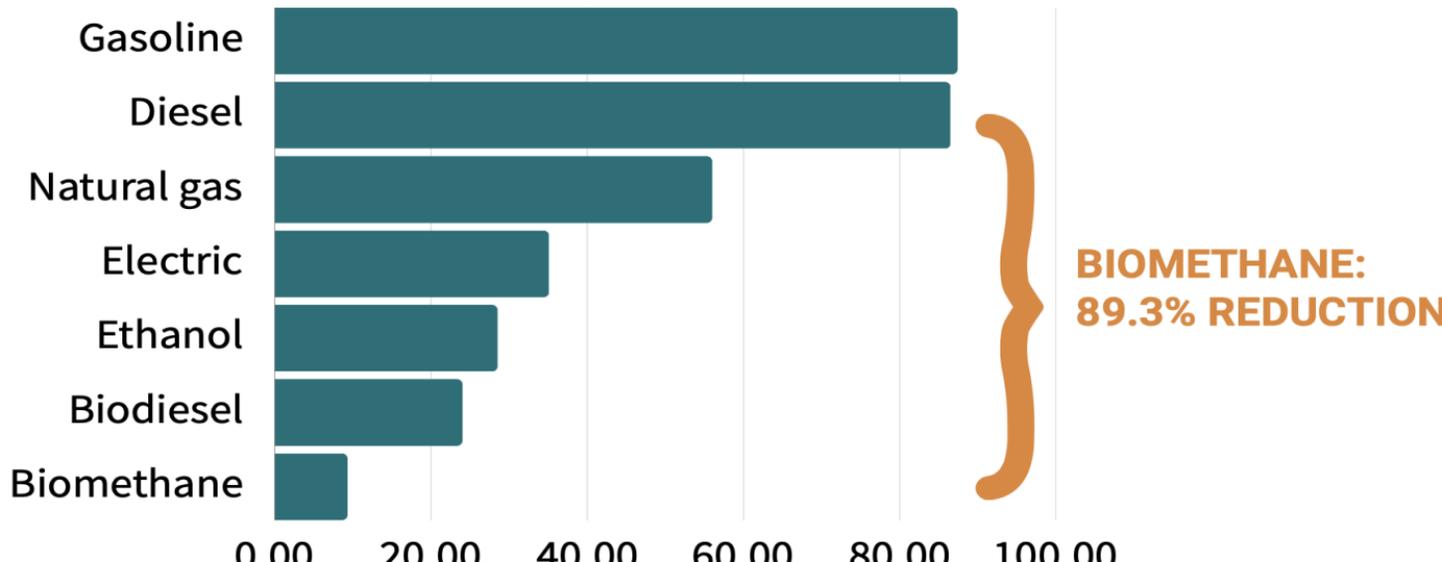


CIRCULAR ECONOMY



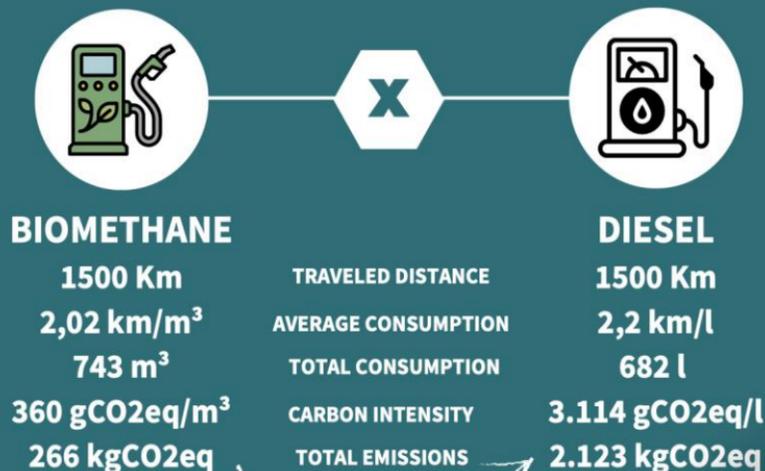
DECARBONIZATION

Carbon intensity (gCO₂eq/MJ)



DECARBONIZATION OF TRANSPORTATION THROUGH BIOMETHANE

Comparison with diesel: Economic competitiveness



87% REDUCTION



ANIMAL PROTEIN PRODUCTION



Virus detectado! Renove seu ANTIVÍRUS.

**CIRCULAR ECONOMY:
TRANSPORTATION OF MILK AND FEED**



Substrate:
Animal manure

Biomethane Volume:
150 m³/day



**ERBR ENERGIAS
RENOVÁVEIS**

Londrina, PR - Brazil



ANIMAL PROTEIN PRODUCTION

FAZENDA PEREIRA – CARAMBEI/PR
60 m³/hora Biometano



ANNUAL REDUCTION OF 630 tCO₂eq

INDUSTRIAL USE: FURNACES AND FORGES FOR METALLURGICAL PRODUCTION AT AESA AUTOMOLAS



GEO BIO GAS&CARBON

Tamboara, PR - Brazil

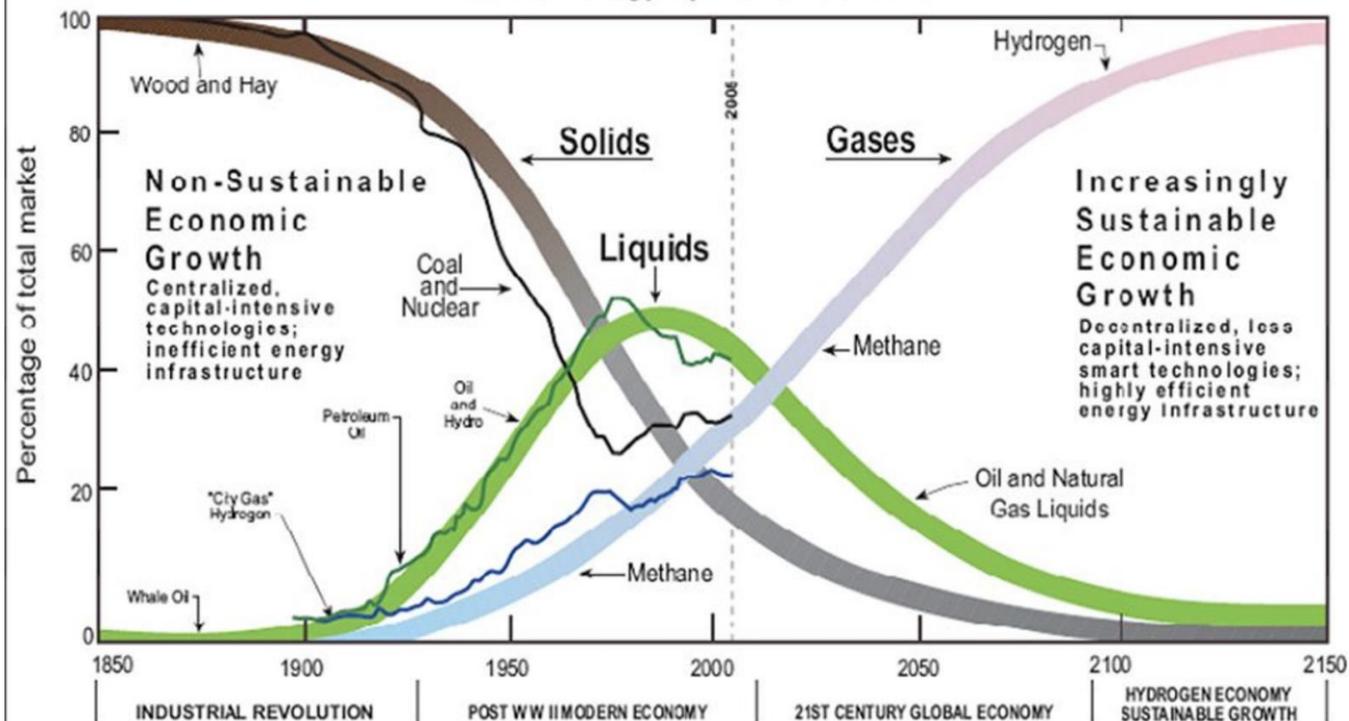


Substrate:
Agroindustry

Biomethane Volume:
1,500 m³/day

Global Energy Waves

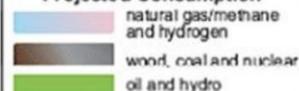
The Age of Energy Gases Global Energy Systems Transition



Actual Consumption



Projected Consumption



Sistema
Fiep

<i>FIEP</i>
<i>SESI</i>
<i>SENAI</i>
<i>IEL</i>

nosso i é de indústria.

THANK YOU VERY MUCH