

# MAKING SUSTAINABLE ALTERNATIVE FUELS VIABLE IN BRAZIL

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**MINISTÉRIO DAS  
RELAÇÕES EXTERIORES**



# Renewable energy and the role of Brazil's Ministry of Foreign Affairs

1. Facilitate collaboration and exchange in energy market regulation and systems integration, renewable energy policies
2. Support bilateral cooperation in renewable energy, in particular bioenergy and biofuels.
3. Promote the potential of ethanol, advanced biofuels and other forms of low carbon bioenergy → Biofuture Platform
4. Promote regional energy integration, including the negotiation of bilateral and regional agreements
5. Support the expansion of solar and wind power in Brazil

# Bilateral instruments in renewable energy

- Africa: 16
- Asia and Oceania: 16
- Central America: 28
- Europe: 26
- North America: 6
- South America: 71

**TOTAL: 163 bilateral instruments in renewable energy signed by Brazil**

# **Brazil-US Partnership for the Development of Aviation Biofuels (2011)**

- **Endorse the development of sustainable biofuels for aviation as an important means of reducing aviation GHG emissions;**
- **Coordinate efforts towards the establishment of common standards and specifications for aviation biofuels ;**
- **Support the dialogue between the Brazilian Alliance for Aviation Biofuels (ABRABA) and the Commercial Aviation Alternative Fuels Initiative (CAAFI);**
- **Provide for coordination in multilateral fora concerning aviation biofuels in order to prevent international barriers to biofuels trade and development and to ensure that the use of biofuels is promoted as an important contribution for GHG emissions reduction.**



## **20 countries launch the Biofuture Platform at COP22**

Launch event also attended by heads and top-level representatives of FAO, IEA, IRENA, UNIDO, SE4ALL and of private sector organizations such as the WBCSD, UNICA, ABBI.

# Biofuture Member Countries



- Argentina • Brazil • Canada • China • Denmark • Egypt • Finland • France • India • Indonesia • Italy • Morocco • Mozambique • Netherlands • Paraguay • Philippines • Sweden • United Kingdom • United States • Uruguay



# Biofuture Platform – Mandate

- Policy dialogue and collaboration;
- Awareness-raising and communication;
- Analysis and information sharing;
- Promotion of R&D and innovation;
- Promotion of sustainable practices; and
- Investment facilitation.



# Biofuture Platform – Linkages

**MISSION INNOVATION**  
Accelerating the Clean Energy Revolution



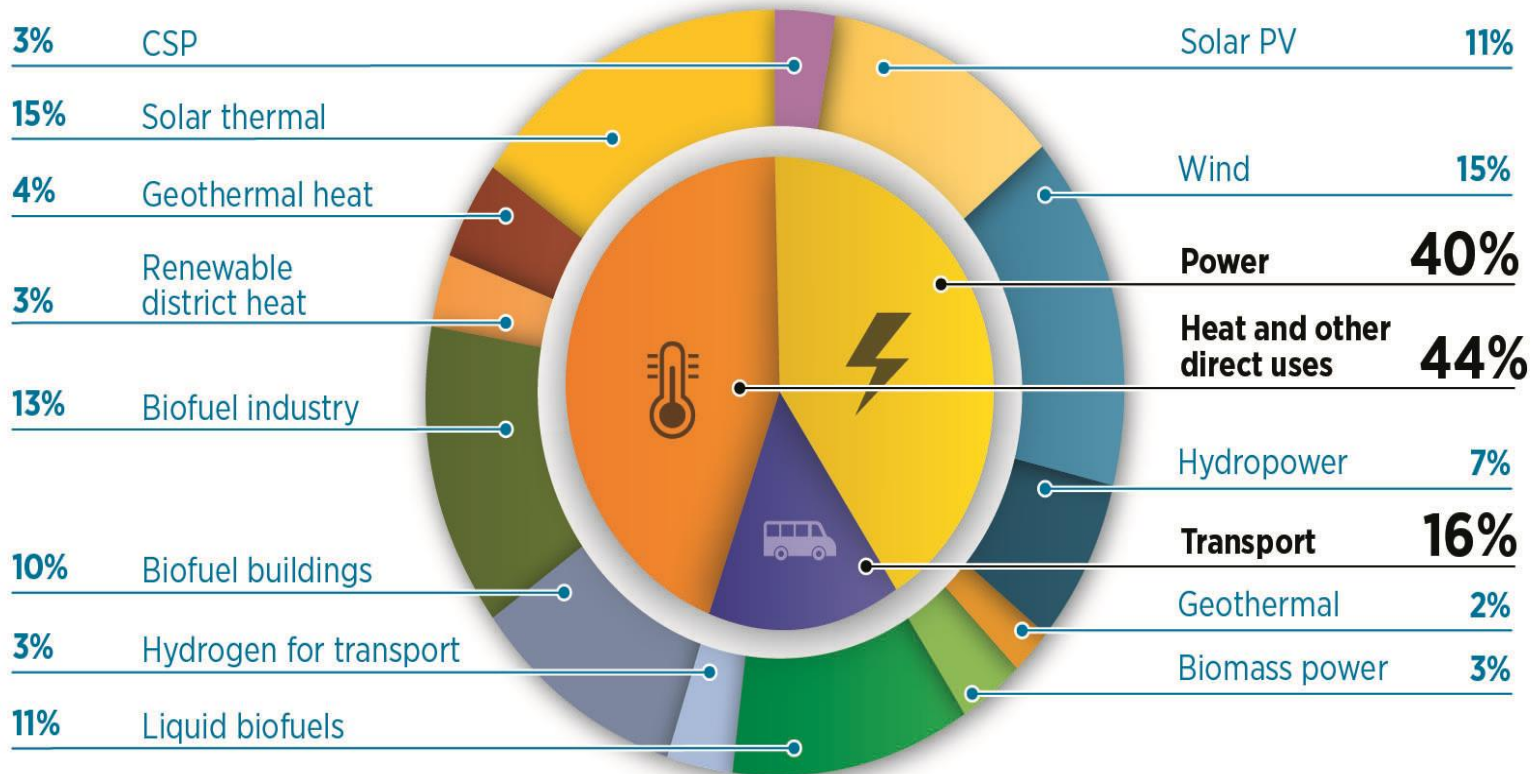


# Perspectives for the energy transition

- To meet the Paris Agreement climate objectives and limit the planet's temperature increases to 2°C degrees, the CO2 emission intensity of the global economy needs to be reduced by 85% over the next 35 years
- Biofuels contribution to the transport sector will have to increase 10 fold if climate change mitigation scenarios are to be met
- Particularly important for heavy freight transport, international shipping and **aviation**

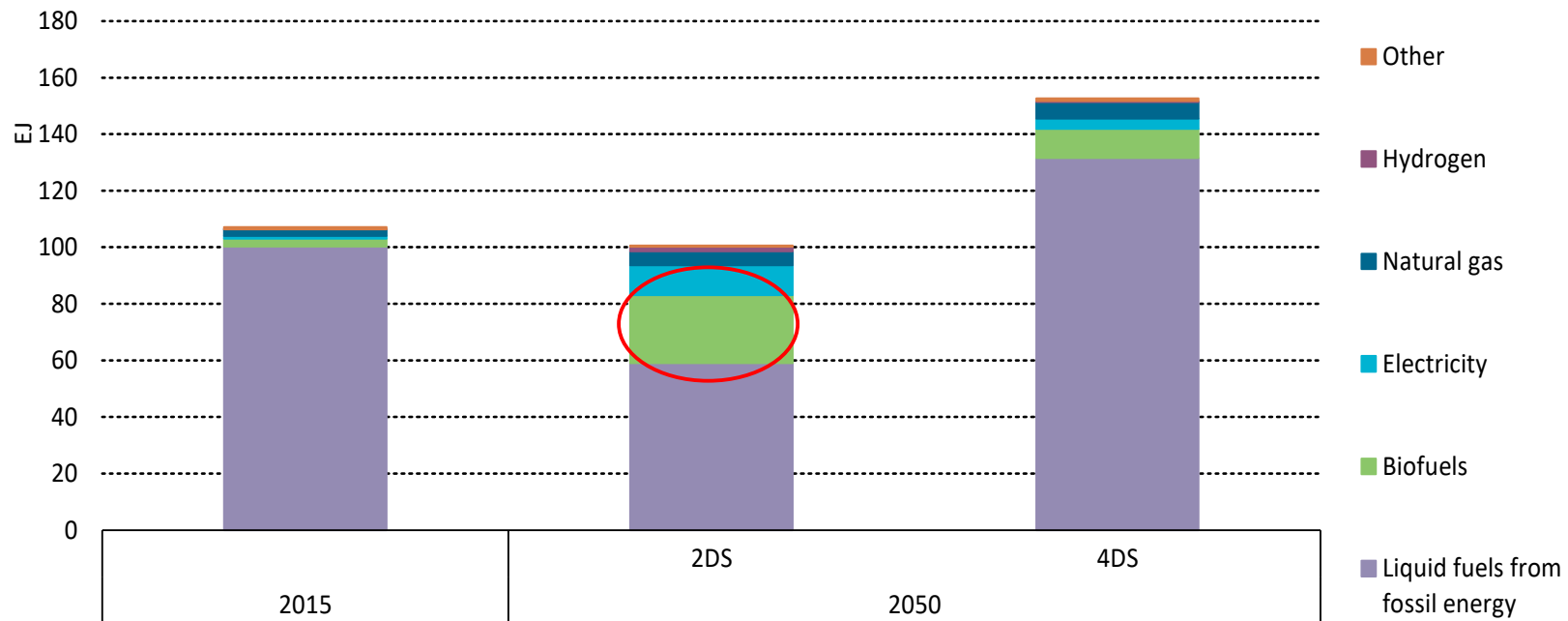
# REmap 2050 (IRENA) Scenario

REmap 2050  
235 EJ



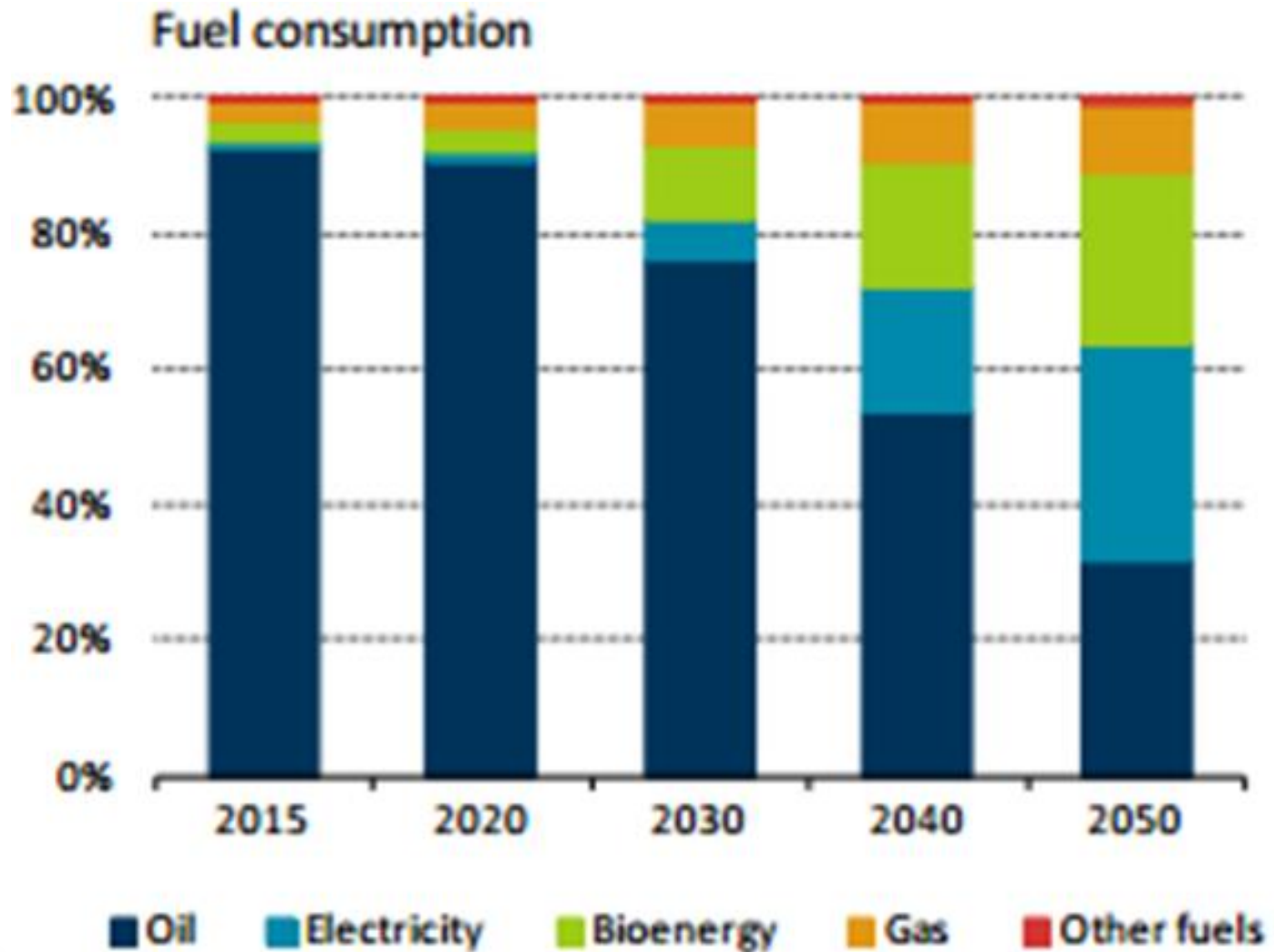
# Biofuels play a very important role in climate change mitigation scenarios

## Transport fuel demand comparison 2015 with 2DS and 4Ds in 2050



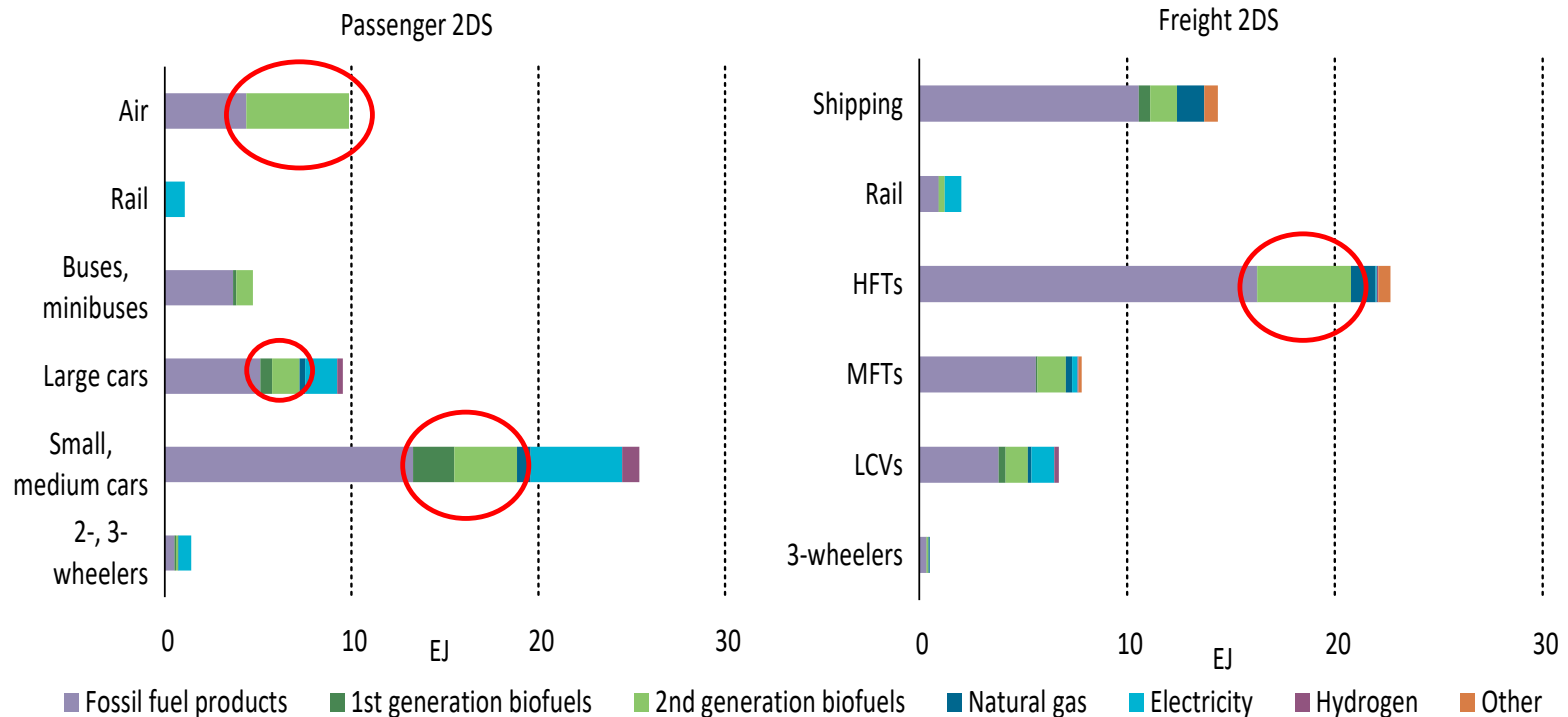
***A significantly increased biofuels share is essential to move towards a 2DS in the transport sector.***

# IEA/IRENA scenario by 2050 - % fuel consumption by source in transportation



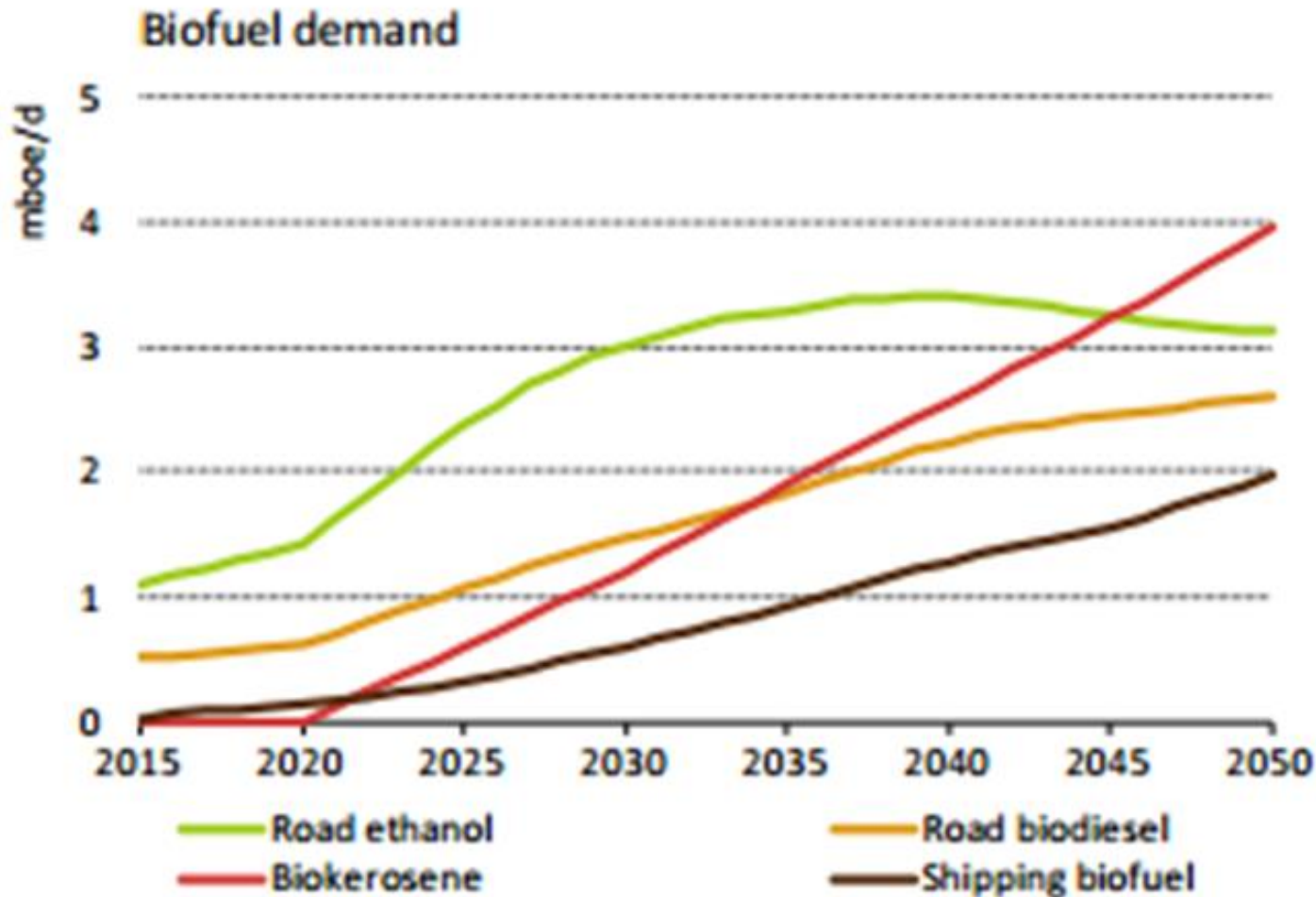
# In this scenario, aviation biofuels to be prominent in the long run

## Fuel shares in 2050 for passenger and freight modes by scenario



**Conventional, and to a greater extent advanced, biofuels make key contributions within the 2DS by 2050. Especially in aviation and heavy duty road freight transport.**

# IEA/IRENA scenario by 2050 – biofuel demand, particularly aviation





**CORSIA and ICAO negotiations: Determining the future of sustainable alternative fuels**

- **ICAO Assembly Resolution A39-3 (October 2016): CORSIA as a global market-based measure to complement a broader basket of measures that includes sustainable alternative fuels**
- **Achieve global aspirational goal of carbon-neutral growth from 2020 onwards**

**CORSIA and ICAO negotiations: Determining the future of sustainable alternative fuels**



- **Aeroplane operators may claim emissions reductions from the use of sustainable aviation fuels (SAF) that meet sustainability criteria**
- **CAEP-AFTF developing recommendations for the recognition of SAF under CORSIA**

**CORSIA and ICAO negotiations: Determining the future of sustainable alternative fuels**

**Main discussions in CAEP-AFTF regarding SAF currently include:**

- 1) Determine CO<sub>2</sub> emissions reduction of different SAF pathways (LCA)**
- 2) Determine ILUC factor**
- 3) Sustainability criteria**

**CORSIA and ICAO negotiations: Determining the future of sustainable alternative fuels**

# Important issues:

- **periodic review of CORSIA every three years from 2022 to assess ICAO's global aspirational goal**
- **ILUC models and eligibility**
- **Future of the market-based measures**
- **Transition from offsetting to SAF**

**CORSIA and ICAO negotiations: Determining the future of sustainable alternative fuels**

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**Thank you!**

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