

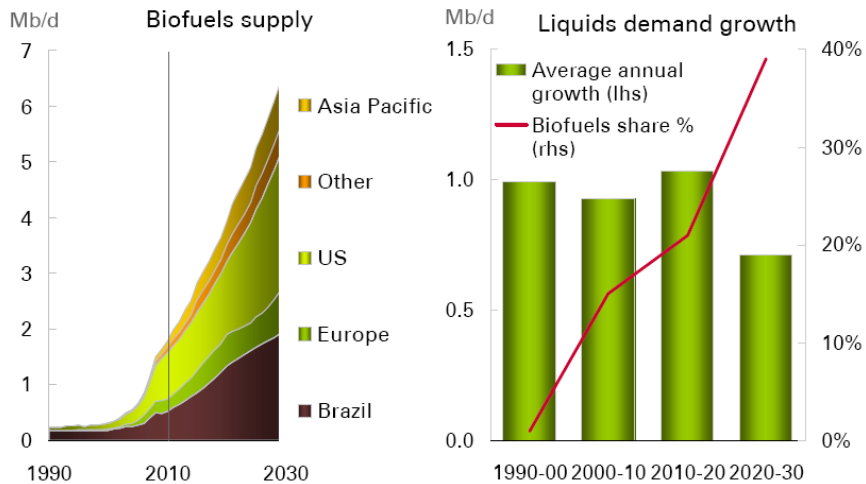


# A viable future for biofuels?

BP Biofuels a growing alternative

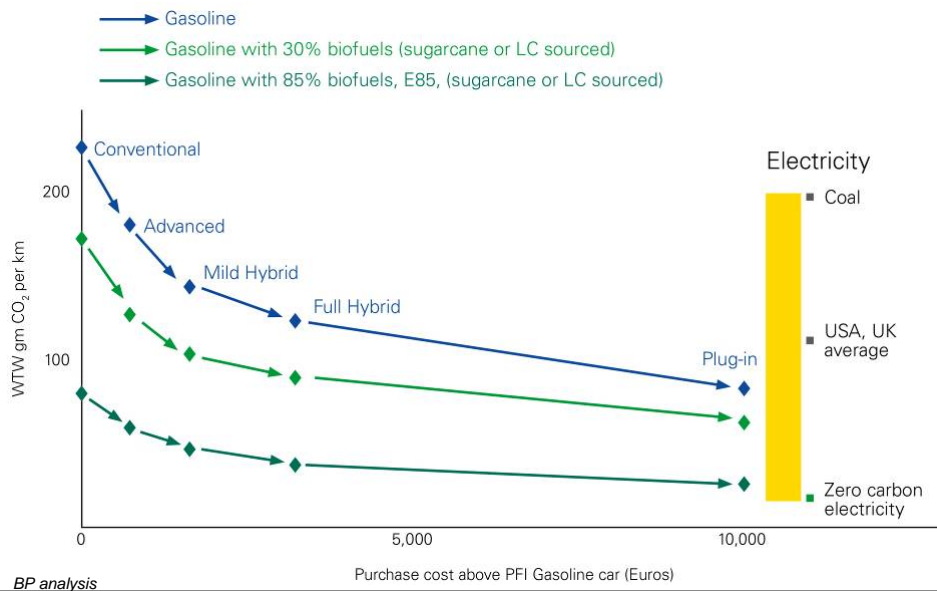
James Primrose  
BP Biofuels Head of Strategy

## Biofuels will meet an increasing share of the fuel market



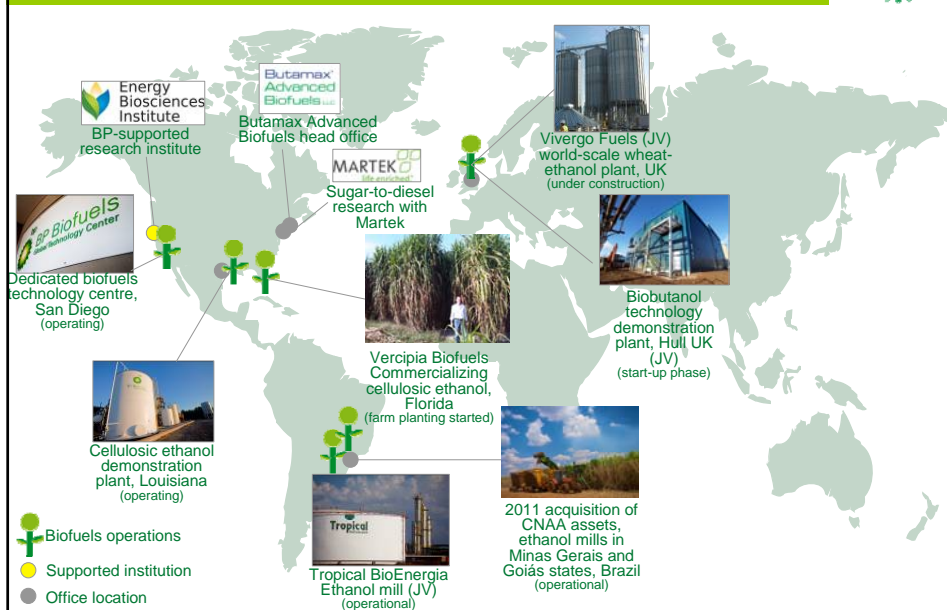
Source: BP Energy Outlook 2030

## Bio-fuelled vehicles make significant contributions to decarbonizing transport, even compared with electric vehicles



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## BP's biofuels investments



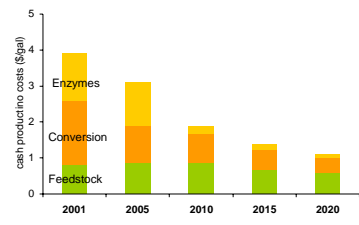
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## Why is BP doing this?

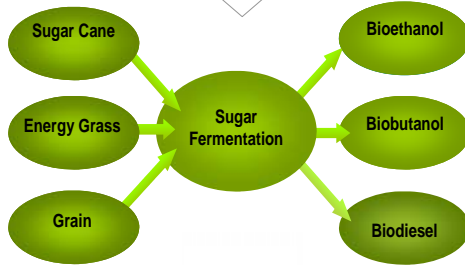
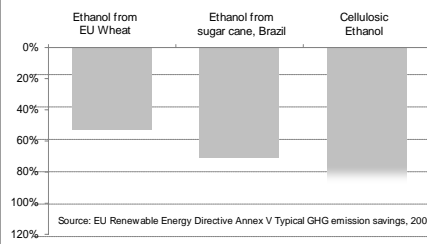


- **Low-cost**
- **Low-carbon**
- **Scalable**
- **Sustainable**

Evolution of cellulosic ethanol production costs



GHG Reductions From Biofuels (vs. gasoline)



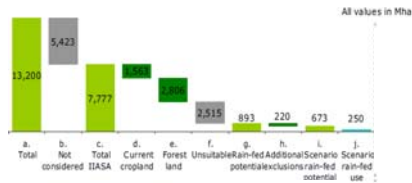
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## The Resource Platform



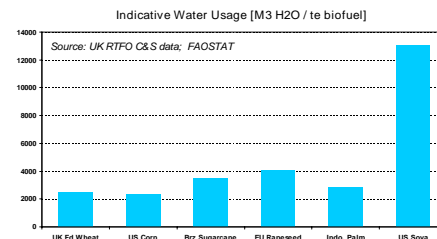
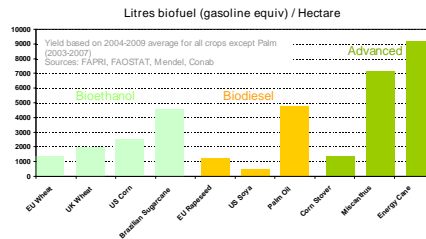
• **Land** : Globally there exists significant marginal, unproductive land to support material bioenergy (fuel & power) production.

• **Yields** : Drive to improve efficient use of land and key inputs.



- a. Total global land mass (excluding Antarctica)
- b. Excluded: protected lands, barren land, urban areas, water bodies
- c. Total land considered in the IASA study
- d. Excluded: current agricultural cropland
- e. Excluded: unprotected forested land
- f. Excluded: not suitable for rain-fed agriculture
- g. Potential for rain-fed agriculture
- h. Excluded: additional land for biodiversity protection, human development, food demand
- i. Energy Scenario potential for energy crops
- j. Energy Scenario: land use for energy crops

Source: The Energy Report, 2011, WWF



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## Conclusion: the role of biofuels



- Low cost, low carbon biofuels have a key role to play in decarbonising the transport sector.
- The most promising advanced biofuel technologies are on the cusp of being deployed at commercial scale and show the potential to be cost competitive within the next 10 years.
- Biofuels done well can be a crucible for the wider agricultural sector in terms of sustainability benefits, both environmental and social.
- Biofuels policy in Europe is still highly fragmented and subject to a high degree of uncertainty.
- Policy uncertainty significantly increases investment risk, forcing investors to demand higher levels of return, ultimately paid for by consumers and/or taxpayers.
- Europe needs to establish a successful and sustainable biofuels sector that can act as a platform for the deployment of advanced biofuel technologies.

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