



Impact of the use of biofuels on oil refining and fuels specifications

Directorate-General
for Energy



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Background and approach

- In the context of the EU-OPEC energy dialogue, Wood Mackenzie were asked to assess the impacts of latest COM legislation RED & FQD on use of fossil fuels, specifically:
 - » The impact of increased consumption of biofuels on the oil refining process, refining economics and fuel specifications
 - » Prospects for biofuels in bunkering and aviation fuel markets
 - » Impact of biofuels on logistics systems
 - » Impact on refinery energy use, refinery greenhouse gas emissions, oil products and their differentials
 - » Implications for security of oil supply in the EU

- **Three scenarios looked at**

Scenario 1

The RED and FQD are met with a relatively high share of biodiesels and a relatively low ethanol share. The share of renewable electricity and next generation biofuels grows, but only slowly and they remain relatively minor contributors.

Scenario 2

The RED and FQD are met with a relatively high share of ethanol and a relatively low biodiesel share. The share of renewable electricity and next generation biofuels grows, but only slowly and they remain relatively minor contributors.

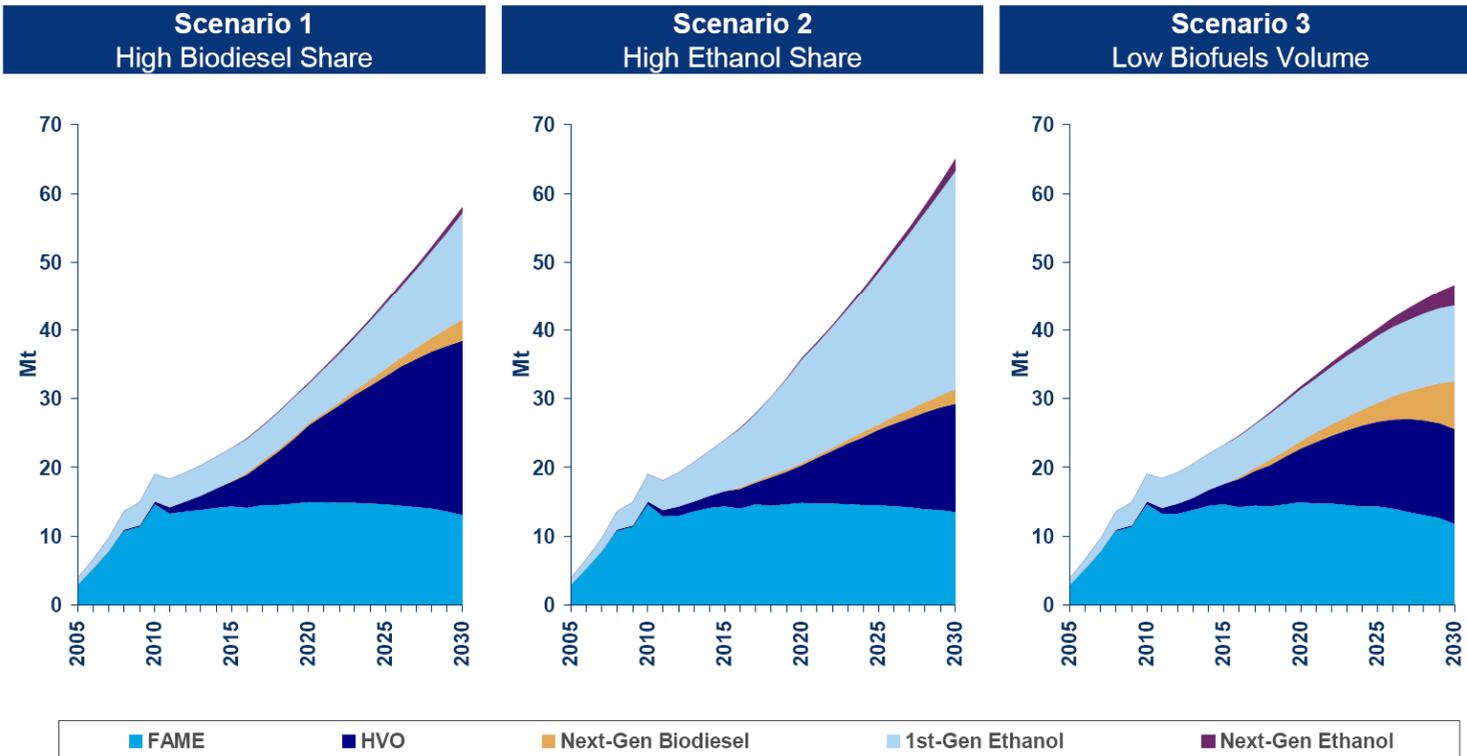
Scenario 3

The RED and FQD are met with a high share of next generation biofuels and renewable electricity. Overall biofuels volumes are consequently relatively low.

Scenarios

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EU Biofuel consumption is highest in Scenario 2

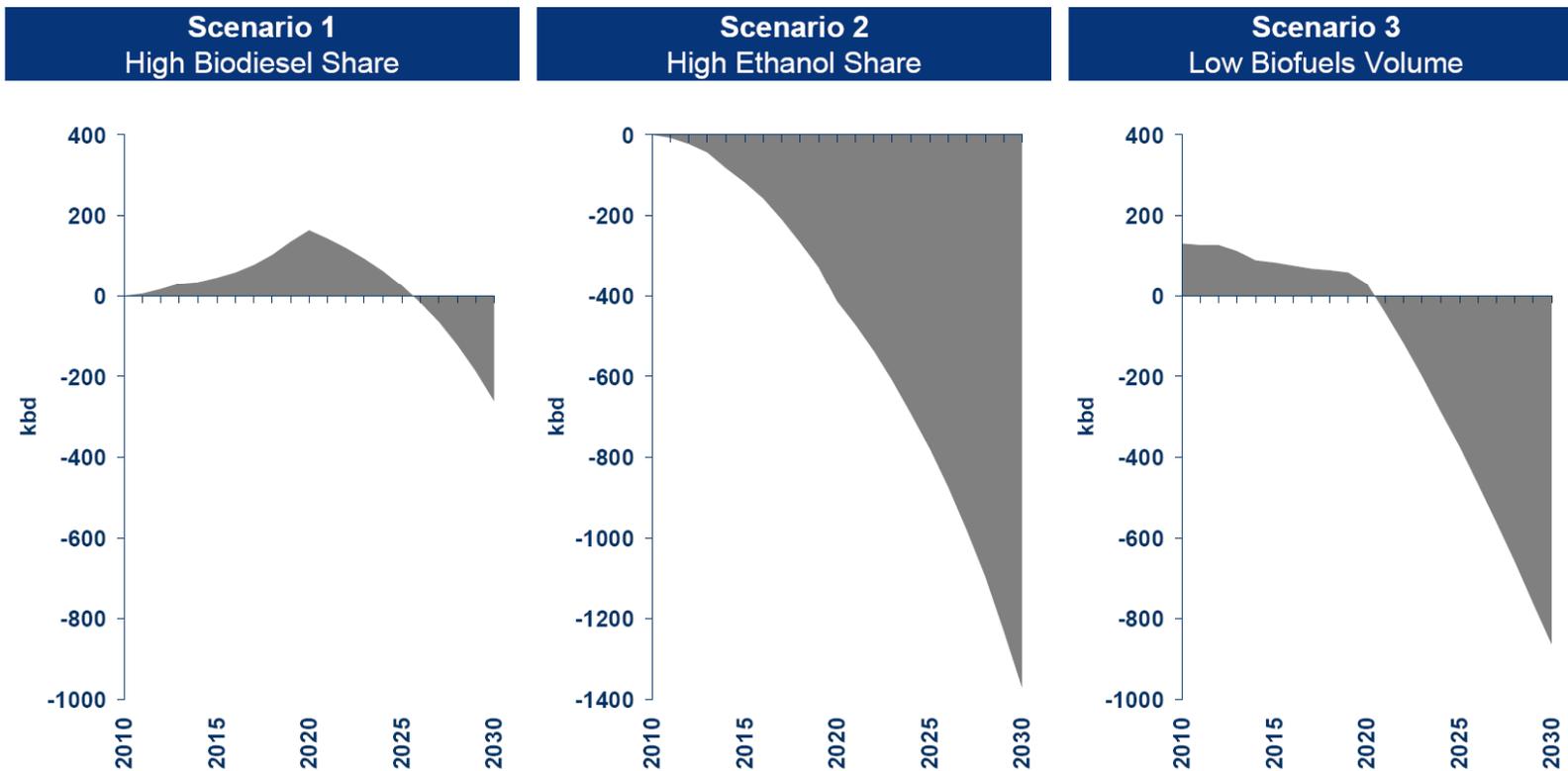


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Results

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EU crude demand is expected to fall the most in Scenario 2



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Conclusions

- **Evolving engine technology is expected to have implications on maximum biofuel blends**
- **The Marine & Aviation sectors are not expected to demand large volumes of biofuels in the medium term**
- **Biofuels, especially ethanol, will present logistic challenges as volumes grow**
- **Ethanol poses a greater threat to EU refiners than biodiesel, due to the large EU gasoline surplus**
- **Demand for crude could fall by close to 300 kbd from increased biofuel use by 2030.**
- **Reduced demand for refined oil products is expected to lead to reduced refinery runs at marginal refiners.**
- **The issue of the impact of biofuels on oil demand will continue to be examined in the years to come in the framework of our Dialogue.**



Thank you for your attention

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