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# BIOFUELS DEMAND FORECASTS

Issue N° 11  
June 26, 2020

## 2. Europe total



# 1.0 SUMMARY

## Comments about methodology

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### 2. Europe total

#### General

- All figures are expressed in kilo metric tons (KT)
- “BIODIESEL” includes Fame + HVO blends and B100/HVO100 generating tickets
- “ETHANOL” includes ethanol blend, ethanol in ETBE and in E85/ED95 generating tickets
- The “FAME” section includes the pure vegetable oil (relevant for Austria mainly) and “off-road biodiesel” (UK)
- The “HVO” section includes all diesel from biological origin
- All the biomethane used in Europe is assumed to be made from feedstocks listed at the Annex IX Part A of the ILUC Directive, thus accounting against the advanced sub-targets
- Our numbers for LPG and CNG are based on a growing number of sources, including a study by AEGPL Europe (2016) and the European Alternative Fuels Observatory (2018). We keep on integrating new data when available, although national statistics rarely contain a LPG (and even less bio-LPG) figure

#### Feedstocks

- Brown grease is included within “UCO”
- Waste pressings are included within “other minor wastes”
- Triticale and rye are included within “wheat”
- No specific category has been created for Technical Corn Oil since the feedstock has so far been only reported under HVO in Sweden (presumed to be destined for the HVO100 outlet, which feedstock mix do not appear in our numbers)
- Biopropane (residue of HVO production used in the UK) is included within “biomethane”
- The feedstock mix of ethanol is based on (1) historical data when available (mostly Top 15 countries) or, (2) EU average estimation published by Epure

#### Statute of feedstocks

- We choose to classify feedstocks in line with the EU Directives spirit
- This has mainly an impact on the EU-28/EU-30 tables where quantities of some feedstock are reported under DC or under advanced even if they have, in some scarce situations, not been treated as such under the national regulations
- The main examples are PFAD in Italy (treated as DC until June 30, 2018 but with a SC statute on a EU level), POME in Italy in 2019 (reported as advanced, but a large part of it has been used as a “simple” DC feedstocks, outside of the advanced sub-target

## Comments about our methodology

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- In France, starch slurry is not considered as a DC feedstock, but it is several other countries (so reported under DC in our tables)
- Importantly, note that we decided to include “uncategorized” tallow, as reported in big volumes by the Swedish authorities, under a new category “Tallow C3/uncategorized”. This new classification is valid for all the countries.

#### GHG values

- We are in the process to refine our data for GHGs values reported in every country, as this is of great importance in 2020 (FQD target). However, many countries don't report specific carbon intensities of biofuels
- We'll keep on working more specifically for each country in the coming months thanks to cross-check of various sources and market comments

#### Conjunctural features

- The first indications about the magnitude of the fuel demand drop showed fuels contraction comprised between -20% and -70% during the months of March, April and May, with a significant variability depending on the countries
- The demand collapse during the lockdown was followed by an abrupt rebound of the spot activity evocating a U form, however still threatened by the possibility of new sanitary measures that would restrict European mobility later this year
- We intended to build precise scenarios of fuels demand for the main countries, assuming no 2nd wave would occur
- For the main countries, diesel yearly growth rates for 2020 used in the current version of our models are as following: France -8%, Germany -6%, Italy -12%, Spain -10%, UK -5%, Poland -3%, Sweden 0%, Portugal -5%, NL -4% and Belgium -8%
- For the others, the growth rates are comprised between -3% and -5%.
- Apart from Romania during a very short period of time, no concrete reduction of blending mandates occurred in Europe due to the virus outbreak
- The application of the FQD Directive in 2020 national frameworks has implications on biofuels demand only in a very limited number of countries: Germany and Czechia.
- For the others where the Directive has been properly transposed and where the use of biofuels does not cover the 6% GHG reduction, the use of UERs are favoured
- Due to the on-going process of RED2 transposition, the rules to apply in 2021 remain very uncertain in many countries

## Warning

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### Analytic elements about our numbers and the changes operated from the latest issue

Bear in mind that we built our model to answer, for each country, the following question: what volumes of each kind of biofuels are needed to reach the blending mandate given the infrastructure constraints? We continue to work on the supply side with the medium-term objective to integrate more data about capacity and production in our models.

The volumes displayed in our publication are those shown to national institutions to prove compliance. For example, if an obligated distributor shows tickets of RME, but blend physicaly SME, that volume will appear in our numbers under RME. That is because it is simply impossible to track exact physical volumes due to the mass balance system. That said, we believe that when numbers are consolidated on a national level, the spread between tickets and physical reality remains small.

The type of our methodology is bottom-up: we work on national models with very specific data and then consolidate the numbers to have the global European picture.

#### [2019](#)

- An important change concerned the diesel fuel pool in Italy, which we revised significantly up by 3.1 million mt after cross-checks of various sources (with indirect impacts on 2020-2021 also)
- The fossil diesel consumption in the UK was also revised up by 939 KT on new data (with indirect impacts on 2020-2021 also)
- New data for CNG and LPG use in Germany, Italy and Czechia led to an increase of 160 and 406 KT, respectively (with indirect impacts on 2020-2021 also)
- New national data for 2019 helped the improvement of our models, but several key countries like France, Germany or Italy still have not released the full final set of data with the feedstock mixes
- Our number for Fame used under compliance was revised by only 41 KT up, with changes coming from Germany (-42), Spain (-56), the UK (+106), Portugal (-45) and Greece (+64)
- Data from Spain and the UK notably pushed up to revise our UCOME number up again: +130, while the PME figure decreased by 159 KT
- As our UCOME is now recorded at 4 million mt for 2019, we repeat that this number is inspired firstly by the extended official data available for the main countries during the past and current years (reflecting POS shown to the authorities)
- The top 3 users of UCOME (Germany, UK, NL) absorbed 2.65 million mt in 2019
- We perfectly know that the reconciliation with the supply side appears to be tricky but we maintain that this number is close to reality
- Increase of the UCOME flow from China and the constant growth of UCO imports will

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continue to make the extension of the European outlet possible in the coming years

- Our number for HVO was revised 137 KT up, mainly on our move to integrate the Norwegian HVO100 outlet within the compliance pool; no other significant move was reported on the HVO front for 2019

### 2020

- The COVID effect resulted in a drop of fossil diesel by 7.4 million mt, which would have been closer to 10 million mt without the correction on Italy

- This number assuming that a 2nd wave will not occur, it might finally prove even bigger in our next issue

- Due to the setback of B7 blend walls, our forecast for Fame used in EUR-30 this year is seen 600 KT down compared to the previous issue

- RME is the quality with the steepest correction (-326 KT), followed by UCOME (-150 KT)

- The HVO number was revised down (only) by 272 KT with the main corrections made in Italy (-90 KT), Germany (-40) and Spain (-30)

- HVO remains a pillar for 2020 compliance, with an expected demand still recorded close to 4 million mt

- The ethanol segment should also suffer from the gasoline contraction (-390 KT vs latest issue)

- Importantly, despite the fuel pools' destruction, the growth of all three main biofuels are still anticipated to be positive compared to 2019: Fame +4%, HVO +50%, ethanol +5%

- The current version of our model for the EU-28 (including the UK) shows an average overall bio share of 8.35% e.c and a fuel GHG reduction (excluding UERs) of 5.3%

- Without any statistical transfer (an option mentioned by small countries like Luxembourg or Malta but without any publicly released action so far), several MS will miss both the RED target of 10% e.c and the FQD 6% GHG reduction

### 2021

- Forecasting 2021 remains an ultimate challenge as only 9 MS out of 28 have rules already enforced for the next compliance year, the result of the on-going RED2 transposition process that creates a no-man's land on the EU regulatory front

- The content of the National Energy & Climate Plans for 2021-2020, now all released, is for most countries disappointingly poor, only confirming that very few national authorities have a real plan yet

- The extreme volatility of predictions about the size of the fuels pools makes it even trickier

- Generally, we assumed in our models that the diesel and gasoline demand would rebound close to 2019 levels

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MANDATES		2019	2020	2021
Biofuels		-	-	-
Diesel bio substitutes	% e.c	7.9%	8%	NDY
Gasoline bio substitutes	% e.c	8%	8.2%	NDY
Advanced sub-target	% e.c	-	-	-
Obligation GHG		-	-	-

FOSSIL FUELS		2019	2020	2021
Diesel fossil		33 690	30 979	33 449
Gasoline fossil		7 544	6 845	7 458
LPG		80	60	70
CNG		0	0	0

BIODIESEL		2019		2020		2021	
		Fame	HVO	Fame	HVO	Fame	HVO
<b>Single counted</b>		<b>2 541</b>	<b>328</b>	<b>2 372</b>	<b>273</b>	<b>2 594</b>	<b>273</b>
Crop SC	Rapeseed	1 602	0	1 690	78	1 852	78
	Soybeans	554	0	554	0	603	0
	Palm	299	328	0	0	0	0
	Sunflower	70	0	88	0	97	0
By-prod/wastes SC	PFAD	0	0	0	0	0	0
	Tallow C3	16	0	40	195	42	195
	Wastes (issues certif)	0	0	0	0	0	0
<b>Double counted</b>		<b>189</b>	<b>0</b>	<b>145</b>	<b>23</b>	<b>160</b>	<b>23</b>
Annex IX Part B DC	UCO	163	0	128	23	141	23
	Tallow C1/C2	26	0	18	0	19	0
Other wastes DC	Acids oils	0	0	0	0	0	0
	SBE	0	0	0	0	0	0
	Food wastes	0	0	0	0	0	0
	Other minor wastes	0	0	0	0	0	0
<b>Advanced DC</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>16</b>	<b>0</b>	<b>16</b>
Annex IX Part A DC	POME/EPFB	0	0	0	16	0	16
	Tall oil/Forest residues	0	0	0	0	0	0
	Crude Glycerine	0	0	0	0	0	0
	Tire pyrolysis oil	0	0	0	0	0	0
<b>Total</b>	<b>All feedstocks</b>	<b>2 731</b>	<b>328</b>	<b>2 517</b>	<b>312</b>	<b>2 754</b>	<b>312</b>

### 2019

- Official data from the Customs won't be available before the summer
- We kept our figures unchanged from the previous issue

### 2020

- Within the PFAD Case, we confirmed with authorities that the retroactivity to apply will be decided by the Judge, so it appears to be very risky to blend any PFAD before the final decision
- There is still no decision made on the topic
- We assume now that diesel and gasoline pools will reduce by 8% and 9%, respectively, as the rebound of demand from June and Q3 will limit the yearly collapse
- Replacing all the palm-based biofuels is a true challenge and adds uncertainty on our forecast
- Since a massive move to rapeseed based HVO is excluded, tallow C3/uncategorized appears to be the main way to substitute palm HVO

### 2. Europe total

## 1.1 FRANCE

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<b>ETHANOL</b>		<b>2019</b>	<b>2020</b>	<b>2021</b>
<b>Single counted</b>		<b>811</b>	<b>748</b>	<b>830</b>
Crop SC	Corn	358	330	367
	Wheat	273	251	277
	Barley	0	0	0
	Sugarbeet	137	126	141
	Sugarcane	43	40	45
<b>Double counted</b>		<b>0</b>	<b>0</b>	<b>0</b>
Other wastes DC	Starch slurry	0	0	0
	Food wastes	0	0	0
	Whey Permeate	0	0	0
<b>Advanced DC</b>		<b>50</b>	<b>51</b>	<b>57</b>
Annex IX Part A DC	Bagasse	0	0	0
	Grape Marcs/wine lees	50	51	57
	Straw	0	0	0
	Cellulosic	0	0	0
<b>Total</b>	<b>All feedstocks</b>	<b>861</b>	<b>799</b>	<b>887</b>

<b>OTHER BIOFUELS</b>		<b>2019</b>	<b>2020</b>	<b>2021</b>
B100 (not generating tickets)		0	0	0
HVO100 (not generating tickets)		0	0	0
Bionaphta		87	83	80
Biomethanol		0	0	0
Biomethane		0	0	0

<b>COMPLIANCE</b>		<b>2019</b>	<b>2020</b>	<b>2021</b>
Diesel bio share	% e.c	7.90%	7.99%	8.00%
Gasoline bio share	% e.c	7.96%	8.20%	8.20%
Advanced (Annex IX Part A)	% e.c	0.14%	0.23%	0.23%
Overall bio share	% e.c	7.89%	8.01%	8.02%
Crop share	% e.c	6.88%	6.37%	6.43%
Annex IX Part B	% e.c	0.66%	0.67%	0.67%
Diesel GHG reduction	%GHG	4.96%	5.01%	5.02%
Gasoline GHG reduction	%GHG	5.77%	5.94%	5.89%
Fuels GHG reduction excl. UERs	%GHG	4.42%	4.47%	4.48%

### 2021

- There is still no indication about the level of mandates to be enforced in 2021
- Consequently, we applied the same assumptions and level of mandates to the rebound of fuels demand (structural decrease of diesel vs increase of gasoline)
- Although there is little transparency on the actual volumes used as B100 outlet should continue to grow: 100 Kcum assumed in 2021
- This growth has a negative effect on the development of the HVO market, which should grow only if the mandate is revised up

### 2. Europe total