

IEA-Advanced Motor Fuels ANNUAL REPORT 2015



SPAIN

Spain

Introduction

Spain has very little domestic oil and gas production and relies heavily on imports (Figure 1). In 2015, Nigeria remained the biggest oil supplier of crude oil (16.53%), followed by Mexico (14.03%), Russia (12.50%), and Saudi Arabia (10.56%). These four countries represented 53.62% of total Spanish imports in this period.

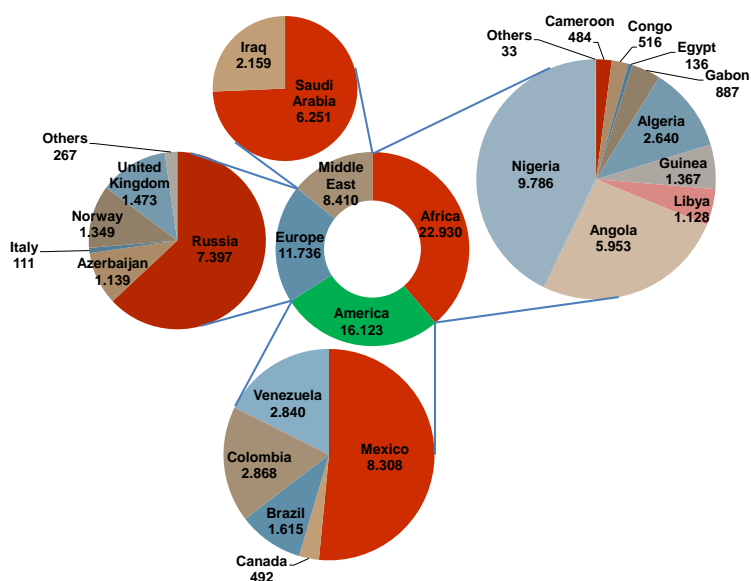


Fig. 1 Oil Imports to Spain from January through November 2015
(Source: CORES)

With regard to the external trade of oil products, by November 2015 (last consolidated available data), total imports amounted to 14,523 kilotons (kt), while exports reached 19,563 kt. Figure 2 shows imports and exports of oil products from January through November 2015.

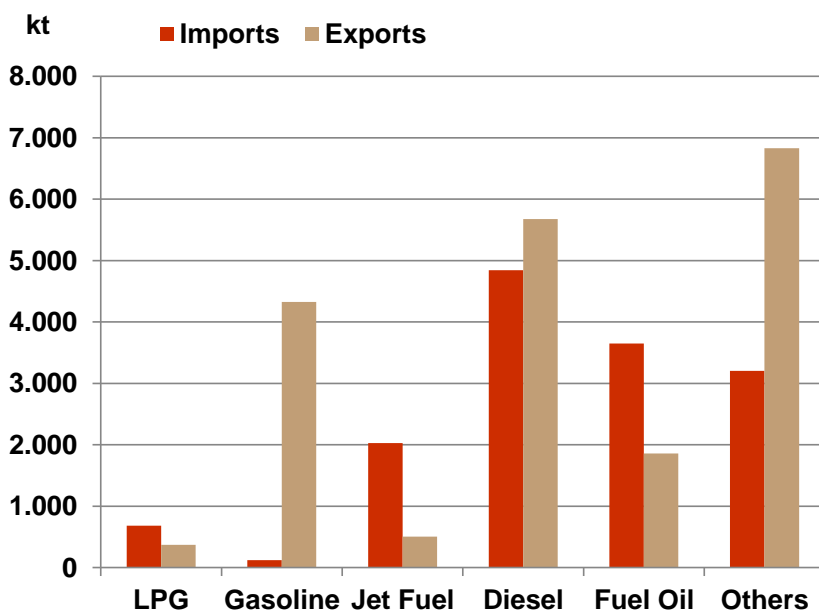


Fig. 2 Imports and Exports of Oil Products in Spain from January through November 2015
(Source: CORES)

Policies and Legislation

The only legal incentive for biofuel consumption in Spain is the blending mandate. Wholesale and retail operators of fuels, as well as consumers of fuels not supplied by wholesale or retail operators, are obligated to sell/consume a minimal quota of biofuels. Each obligated subject has to present a number of certificates to the national certification entity (the National Markets and Competition Commission) to prove compliance. Certificates have a value of 1 metric ton of oil equivalent (toe). In case of noncompliance with the targets, a penalty fee applies. In case of overcompliance (some parties selling or consuming more than they are obligated to), the amounts collected from the penalty fees are redistributed by the certification entity proportionally to the subjects that sold/consumed biofuels exceeding their set quota obligation.

Royal Decree 1085/2015, dated December 4, 2015, on the promotion of biofuels establishes mandatory goals for biofuels for the period 2016–2020. Former legislation on the biofuels obligation stated that, in addition to the general target, specific blending levels of biofuels in diesel and in gasoline

had to be reached by obligated parties. Royal Decree 1085/2015 has repealed such specific mandatory goals.

Table 1 gives the mandatory blending targets (in energy content) for the period 2016–2020.

Table 1 Mandatory Biofuel Blending Targets in Spain for 2016–2020

2016	2017	2018	2019	2020
4.3%	5%	6%	7%	8.5%

Source: Royal Decree 1085/2015, dated December 4, 2015, on the promotion of biofuels

With regard to biofuels sustainability requirements, in 2013, Law 11/2013 established a sine die delay in sustainability implementation. A resolution dated April 29, 2015, by the Secretary of State for Energy, sets the expiration date for the suspension period (January 1, 2016). A transition period, to allow for the progressive adaptation of the verification system until the full scheme is in place, will be applied from now on. During the transition period, the economic agents in the supply chain can comply with sustainability by presenting a Responsible Declaration. Once the transition period is over and the sustainability verification system is fully implemented, a sustainability verification report prepared by a sustainability certification entity will be required.

Incentives for alternative energy sources other than biofuels were approved by means of Royal Decree 1078/2015, dated November 27, 2015. This Royal Decree regulates the direct granting of aid for the purchase of alternative energy vehicles and for the implementation of electric vehicle charging infrastructure (MOVEA).

The Alternative Energy Vehicle Mobility Incentive Plan (MOVEA) is a measure that forms part of Spain's 2014–2020 Alternative Energy Vehicle Incentive Strategy (VEA), designed and implemented by the Ministry of Industry, Energy and Tourism, in collaboration with other entities and Ministries. The goal is to unify various programs and plans intended to support the purchase of the most efficient vehicles developed to date. The Council of Ministers approved the agreement through which it was informed of the plan on June 26, 2015.

The purpose of this Royal Decree is to regulate the guidelines for the direct granting of aid for the purchase of electric, liquefied petroleum gas (LPG), compressed natural gas (CNG), and liquefied natural gas (LNG) vehicles,

and electric motorcycles and bicycles with pedal assistance. Such regulation will foster sustainability in the transport sector, pollutant emissions reduction and air quality improvement, as well as diversification of energy sources in transport and a consequent decrease in energy dependency on oil.

Implementation: Use of Advanced Motor Fuels

Biofuels represent the largest share of alternative transportation fuels in Spain. At the time of preparing this report, the national biofuel certification entity (the National Markets and Competition Commission) had published data for the period January through August 2015. Figures 3, 4, and 5 show the balances for biofuels production, consumption, imports, and exports.

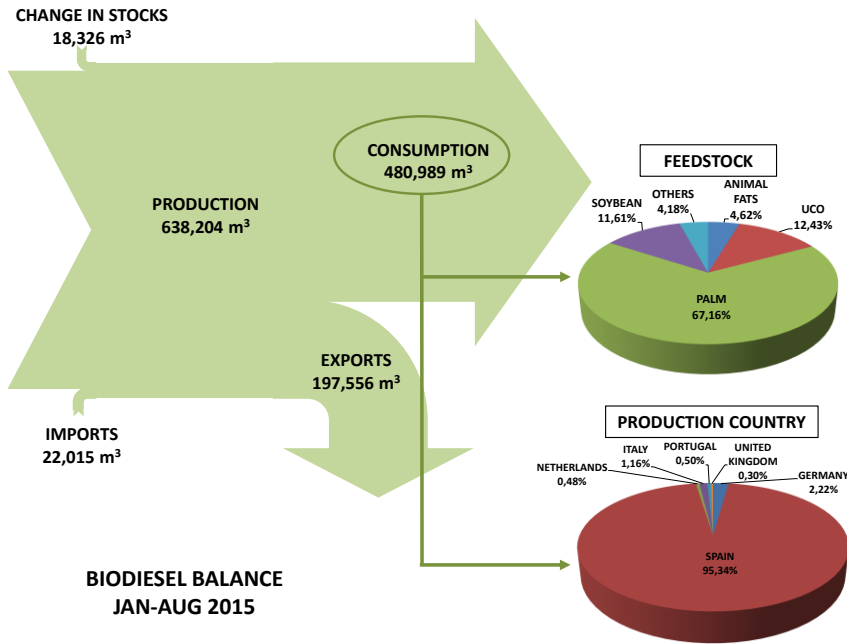


Fig. 3 Biodiesel Balance in Spain in January through August 2015
(Source: CNMC)

3 THE GLOBAL SITUATION

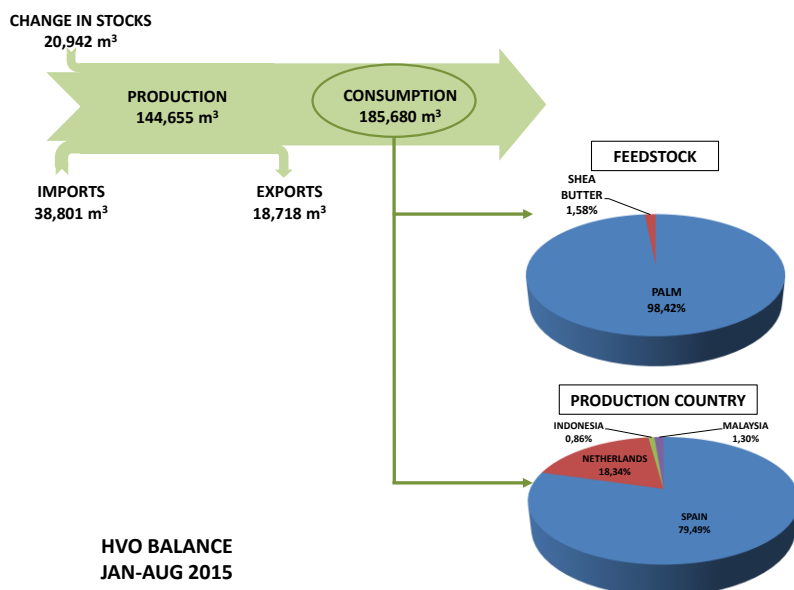


Fig. 4 Hydrotreated Vegetable Oil (HVO) Balance in Spain in January through August 2015
(Source: CNMC)

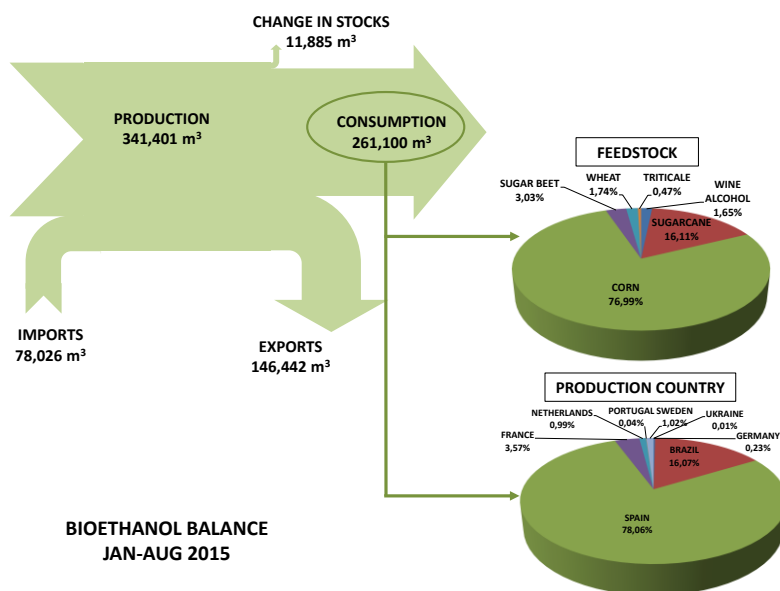


Fig. 5 Bioethanol Balance in Spain in January through August 2015
(Source: CNMC)

LPG and natural gas constitute a small part of the total market. Figure 6 shows the current number of vehicles capable of using these fuels.

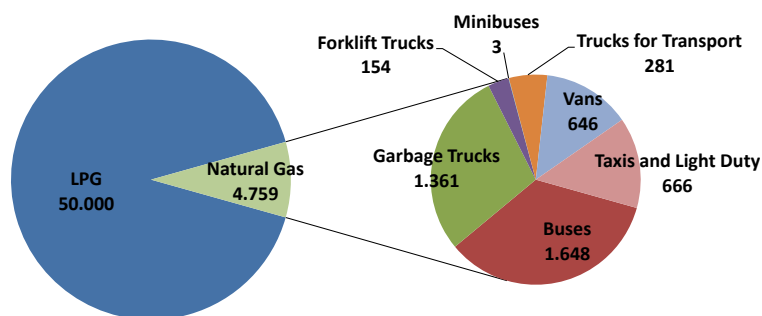


Fig. 6 Number of Vehicles in Spain That Could Use LPG and Natural Gas
(Source: IDAE elaboration on data from AOGLP and GASNAM)

With regard to hydrogen vehicles, only a few pilot projects (not commercialized today) have been developed (cars, micro-cars, and scooters). However, wide research activity is carried out in Spain in relation to hydrogen technologies.

Table 2 shows the number of public filling stations with alternative fuels.

Table 2 Filling Stations for Alternative Fuels in Spain

Alternative Fuels		No. of Filling Stations
Biodiesel blends	B7 or lower	18
	B10	10
	B12	37
	B15	7
	B20	26
	B30	21
	B40	1
Bioethanol blends	E10	1
	E15	3
	E85	9
LPG		495
Natural gas		41
Hydrogen		4

Source: MINETUR (Geoportal), AOGLP, GASNAM, AEH2

Outlook

According to the National Renewable Energy Action Plan, in order to fulfill the committed targets, consumption of biofuels is expected to reach 2,713 kilotonnes of oil equivalent (ktoe) in 2020. Of this, 400 ktoe corresponds to biofuels in gasoline (bioethanol and bio-ETBE [ethyl tertiary-butyl ether]), and 2,313 ktoe corresponds to biofuels in diesel (mainly fatty acid methyl ester [FAME] and hydrotreated vegetable oil [HVO]; HVO achieved a significant market penetration in 2013 and 2014).

Additional References

- AEH2: Spanish Hydrogen Association, www.aeh2.org
- AOGLP: Spanish Association of LPG Operators, www.aoglp.com
- CNMC: National Markets and Competition Commission, www.cnmc.es
- CORES: Corporación de Reservas Estratégicas, www.cores.es
- GASNAM: Spanish Association of Natural Gas for Mobility, www.gasnam.es
- Geoportal (MINETUR): Filling Stations, www.geoportalgasolineras.es
- IDAE: Instituto para la Diversificación y Ahorro de la Energía, www.idae.es
- MINETUR: Ministry of Industry, Energy and Tourism, www.minetur.gob.es

Major Changes

Royal Decree 1085/2015, dated December 4, 2015, on the promotion of biofuels establishes mandatory goals for biofuels for the period 2016–2020.

A resolution dated April 29, 2015, by the Secretary of State for Energy, sets the expiration date for the suspension period for biofuels sustainability requirements (January 1, 2016).

Royal Decree 1078/2015, dated November 27, 2015, regulating the direct granting of aid for the purchase of alternative energy vehicles and for the implementation of electric vehicle charging infrastructure (MOVEA), establishes guidelines for the direct granting of aid for the purchase of LPG, CNG, and LNG vehicles.