



Federal Office for
Agriculture and Food



Evaluation and Progress Report 2013

Biomass Electricity Sustainability Ordinance
Biofuel Sustainability Ordinance





Published by

Federal Office for Agriculture and Food
Deichmanns Aue 29
53179 Bonn, Germany

Telephone: +49 (0)228 99 6845 – 2550

Fax: +49 (0)228 6845 – 3040

Email: nachhaltigkeit@ble.de

Internet: www.ble.de

Editor

Federal Office for Agriculture and Food
Unit 221 - Policy Matters of Group 22, Recognition and Accreditation Procedures, Control Procedures Biomass

This evaluation and progress report is protected by copyright. No part of this report may be translated, processed, duplicated or disseminated in any form without the explicit written consent of the Federal Office for Agriculture and Food.

Layout

Federal Office for Agriculture and Food

Picture credits

Federal Office for Agriculture and Food
Image archives of the Federal Programme on Organic Farming
Cover photo:
Fotolia.com

Status as at

31 October 2014



Contents

Preface	4
I. General matters	5
1. Introduction	5
2. Summary of important results in 2013	6
3. Methodology	7
II. BLE responsibilities	9
III. Certification systems, voluntary schemes and national systems of other Member States	11
1. Certification systems recognised by the BLE pursuant to Article 33 Nos. 1 and 2 BioSt-NachV and/or Biokraft-NachV	11
2. Voluntary schemes pursuant to Article 32 No. 3 BioSt-NachV and/or Biokraft-NachV	12
3. National systems of other Member States	12
4. Economic operators	13
IV. Certification bodies	24
1. DE certifications and voluntary controls within the framework of the certification systems recognised by the BLE	26
2. Certifications and controls within the framework of the voluntary schemes recognised by the European Commission	31
V. Transmission of sustainability data to the public database Nabisy	32
VI. Biofuels for which applications were submitted to be counted towards the biofuel quota obligation or to be considered for tax relief	38
1. Origin and raw materials of biofuels	40
2. Quota year 2013 and origin of the raw materials	47
3. Biofuel types	49
4. Greenhouse gas emissions and savings potential of biofuels for which applications were submitted to be counted towards the biofuel quota obligation or to be considered for tax relief	54
VII. Bioliquids registered for remuneration pursuant to the Renewable Energy Sources Act	58
1. Origin and raw materials of vegetable oils	58
2. Bioliquid types	60
3. Greenhouse gas emissions and savings potential of bioliquids registered for remuneration pursuant to the Renewable Energy Sources Act	62
VIII. Installations register	65
IX. Retirement accounts	66
X. Outlook	68
XI. Conversion tables and glossary	69



Preface

Dear Reader,

The Federal Office for Agriculture and Food (BLE) is the competent authority for the compilation of this evaluation and progress report, which is being published for the fourth consecutive year. The report provides information on how the sustainability criteria are implemented in Germany and gives an overview of developments in this field.

One particular development in this reporting year has been the entry into force of the 36th Ordinance for the Implementation of the Federal Immission Control Act – Ordinance for the implementation of the regulations of the biofuel quota (36th BImSchV). According to this ordinance, and subject to certain conditions, it is possible for economic operators to attain double-counting towards the energetic biofuel quota through the use of waste and residual materials.

This report was written for professional experts as well as interested members of the public with the aim of providing a comprehensive overview of the topic.

Dr. Hanns-Christoph Eiden

President
Federal Office for Agriculture and Food
Bonn, 31 October 2014



I. General Matters

1. Introduction

On 5 June 2009, the Directive of the European Parliament and of the Council of 23 April 2009 on the promotion of the use of energy from renewable sources was published in the Official Journal of the European Union. The Directive's aims include increasing the share of energy from renewable sources within the EU, reducing dependency on fossil energy sources and decreasing greenhouse gas emissions. Every Member State is to take relevant measures at national level and to develop instruments which help reach the targets set at European level or even go beyond them.

According to Commission Communication 2010/C 160/01, the Renewable Energy Directive can be transposed as follows:

1. through a national system,
2. by applying a voluntary scheme that the Commission has recognised for the purpose,
or
3. by complying with the terms of a bilateral or multilateral agreement concluded by the European Union with third countries and which the Commission has recognised for the purpose.

On 4 August 2010, the German government adopted the National Renewable Energy Action Plan. In addition, on 28 September 2010, the German government published its energy concept for an environmentally friendly, reliable and affordable energy supply. In order to transpose the Renewable Energy Directive into national law by 5 December 2010, as required by Article 27(1) of the Directive, both the Biomass Electricity Sustainability Ordinance of 23 July 2009 (BioSt-NachV, see glossary at the end) and the Biofuel Sustainability Ordinance (Biokraft-NachV) of 30 September 2009 were published in the Federal Law Gazette. Both sustainability ordinances transpose the Renewable Energy Directive and are part of the measures listed in the national action plan and the German government's energy concept.

By 31 December 2013, the European Commission had published implementing decisions for the recognition of 14 voluntary schemes in the scope of the Renewable Energy Directive. Since then, these voluntary schemes have been active in addition to the certification systems recognised by the BLE and national systems of other Member States in the field of sustainable biomass production.



2. Summary of important results in 2013

For 2013, the following important results can be summarised:

- At the reference date of 31 December 2013, two certification systems and 26 certification bodies had been recognised by the BLE.
- By the end of 2013, the Commission had recognised a total of 14 voluntary schemes.
- The certification bodies recognised by the BLE certified 857 operations worldwide in the reporting year.
- 123,696 TJ of biofuels were the subject of applications to be counted towards the biofuel quota obligation or to be considered for tax relief.
- Double-weighting certificates were issued for 13.5 % of these biofuels.
- About 22 % of biofuels consist of raw materials grown in Germany.
- The most important biomass product was biodiesel.
- Rapeseed was the most important raw material for the production of biodiesel.
- Corn and sugar beet were the most important raw materials for the production of bioethanol.
- The share of biofuels not used for energy generation in Germany was 178,265 TJ.
- Total savings of greenhouse gas emissions of all biofuels amounted to almost 51 % compared to fossil fuels.
- Total savings of greenhouse gas emissions of all bioliquids amounted to almost 94 % compared to fossil fuels.



3. Methodology

This evaluation and progress report describes the existing processes and measures, and analyses the data made available to the BLE. It also includes issues relevant for implementation in Germany, such as the transposition of Directive 2009/28/EC in other Member States and the recognition of voluntary schemes by the European Commission.

The results of the analysis are presented, compared, explained and evaluated from various perspectives.

The evaluation refers to data submitted by economic operators to the BLE in its role as the competent authority according to Article 66 Biokraft-NachV and/or Article 74 BioSt-NachV.

Since 1 January 2011, the national ordinances BioSt-NachV and Biokraft-NachV are to be applied without limitations. This makes it possible to draw comparisons with the years 2011 and 2012.

The revised 36th BImSchV has been in effect since 1 January 2013, which does not allow for comparisons with previous years in this report.

The following information does not permit any conclusions as to the actual number of participants in individual voluntary schemes or in national systems of other Member States.

Economic operators are obliged to enter sustainability data for their deliveries of biofuels into Nabisy, if those data could become relevant for the German market. Amounts entered by way of precaution which are not then used for energy generation in Germany are contained in Nabisy without being attributed to Germany. It is the responsibility of the economic operator to enter and book the data correctly.

The required data are collected in an organised way and documented systematically.

The purpose of this evaluation is to form a basis for optimisation processes.

Where the available data allow, this evaluation will also serve to verify the measures' effectiveness.

Where information regarding the number of Nabisy users or certifications is provided, it should be noted that economic operators who used multiple certification systems simultaneously and/or who acted as producers as well as suppliers were counted more than once. It is therefore incorrect to draw conclusions as to the number of operations participating in the measures.



Targets to be achieved with regard to evaluating the measures' effectiveness are:

- increasing the percentage of “renewable energies” where the supply of fuels and electricity production are concerned,
- decreasing greenhouse gas emissions by using sustainable biomass, and
- developing more efficient procedures and raw materials for the generation of electricity from biomass.

Changes occurring in each respective calendar year are analysed within the framework of the BioSt-NachV and the Biokraft-NachV.

In concrete terms, the areas to be analysed include:

- the effectiveness of the sustainability ordinances with regard to the objectives of the German government,
- and
- potential improvements to be made in implementing the specifications of the Renewable Energy Directive.

Appropriate methods were chosen to collect, measure and evaluate the data.

Initially, the analysis examined and evaluated the product data entered into Nabisy by the economic operators, i.e. all proofs of sustainability with regard to type of fuel, amount, energy content, raw materials used and their origin.

It also examined those proofs for which applications had been submitted to be counted towards the biofuel quota obligation for the respective quota year or to be considered for tax relief, as well as proofs which were entered for remuneration pursuant to the Renewable Energy Sources Act (EEG). These are frequently partial proofs, which have developed from multiple summaries or divisions along the supply chain through to the final recipient. These proofs can be identified by the notations of usage applied by the main customs offices or the network operators.

Because it was not compulsory in the past for economic operators to provide information on the origin of biomass, this information is inevitably inaccurate in summarised partial proofs.

The results for information on origin were therefore set in relation to the data containing the notation of usage on the basis of all proofs of sustainability entered.

Primarily, the focus is on the situation as at 31 December 2013 and on changes in the implementation of the measure during the given (annual) period related to the initial values by way of a statistical comparison. Where possible, evaluations and conclusions are drawn from the annual comparison.

BLE control measures and/or administrative procedures will also be analysed, evaluated and optimised in this connection.



II. BLE responsibilities

The BLE is the competent authority in Germany for the implementation of the sustainability criteria laid down in the Renewable Energy Directive in the area regulated by the sustainability ordinances. Together with the Federal Revenue Administration, the BLE is also responsible for implementing the 36th Ordinance for the implementation of the Federal Immission Control Act (Ordinance for the implementation of the regulations of the biofuel quota, 36th BImSchV).

The BLE's responsibilities include the following:

- in the biofuels sector: making data available for relevant customs offices (biofuels obligation or tax relief)
- in the bioelectricity sector: making data available for network operators (remuneration for power made of renewable fed into the grid),
- in the bioelectricity sector: maintaining a register of all installations which convert bioliquids into electricity,
- administration of data on the sustainability of biofuels and/or liquid biomass through the public web-based database Nabisy and issuance of partial certificates of sustainability at the request of economic operators,
- evaluation of the implementation of the sustainability criteria laid down in the Renewable Energy Directive in Germany and compilation of an annual progress report for the German government,
- the recognition and supervision of certification bodies in accordance with the sustainability ordinances and the 36th BImSchV,
- the recognition and supervision of certification systems in accordance with the sustainability ordinances and the 36th BImSchV,
- the announcement and supervision of certification systems and certification bodies suitable with regard to the double-counting of biofuels according to the 36th BImSchV, and
- providing the public database Nabisy in the frame of double-counting of liquid and gaseous biofuels from waste and residues according to the 36th BImSchV, where double-counting proofs or double-counting partial proofs are to be issued in addition to the proofs sustainability and partial proofs of sustainability.



Within the framework of its responsibilities pursuant to Article 74 BioSt-NachV and/or Article 66 Biokraft-NachV or Article 14(3) of the 36th BImSchV, the BLE also carried out the following measures in 2012 and 2013 to implement the sustainability ordinances and the 36th BImSchV:

- maintenance and development of the BLE website with information and documents in German and English,
- maintenance and development of a continuous system to recognise certification systems and bodies and to monitor compliance with legal requirements,
- maintenance and development of the public database Nabisy for the documentation of biofuels' origin and proofs of sustainability, general issues regarding the documentation and plausibility validation of sustainability requirements, exchange of data with other Member States' databases,
- maintenance and development of the installations register pursuant to Article 61 BioSt-NachV,
- maintenance and development of the register of information pursuant to Article 66 BioSt-NachV and/or Article 60 Biokraft-NachV,
- hosting the meeting of the advisory council for sustainable bioenergy,
- events with certification systems, certification bodies and industry,
- presentations at informative events for multipliers such as associations, certification systems, certification bodies, country representatives and competent authorities of other Member States,
- representation at various special events and trade fairs,
- cooperation with the executive authorities of other Member States within the CA-RES (Concerted Action-Renewable Energy Sources Directive) and REFUREC (Renewable Fuels Regulators Club) committees to coordinate the implementation and
- training of the BLE Control Service staff in the field of sustainable biomass production,
- reviewing the suitability of individual certification systems and certification bodies to become active within the framework of the 36th BImSchV and announcing them in the Federal Gazette, and
- developing specifications for the implementation of the 36th BImSchV.



III. Certification systems, voluntary schemes and national systems of other Member States

The sustainability of biomass production is to be guaranteed and controlled along the entire value chain. This is done within the framework of the certification systems recognised by the BLE, the voluntary schemes recognised by the European Commission or national systems of other Member States.

Certification systems ensure organisationally that the requirements for the production and supply of biomass laid down by the Renewable Energy Directive and the national legislation issued for its transposition are met. They also contain standards which further determine the requirements for evidence of their implementation and for verifying such evidence.

1. Certification systems recognised by the BLE pursuant to Article 33 Nos. 1 and 2 BioSt-NachV and/or Biokraft-NachV

By 31 December 2013 the BLE had received the following number of applications for recognition of certification systems:

Total number of applications lodged by 31 December 2013	4
rejected	1
accepted	3
recognition withdrawn	1
currently recognised by the BLE	2
ISCC System GmbH, Cologne	
REDcert GmbH, Bonn	

Table 1

ISCC System GmbH and REDcert GmbH have also been announced as suitable certification systems in the context of the 36th BImSchV, which came into effect at the end of 2012.

States where economic operators can be certified according to the system requirements of certification systems which are recognized by the BLE:

- all Member States of the European Union, and
- Argentina, Australia, Belarus, Bolivia, Bosnia-Herzegovina, Brazil, Burkina Faso, Cambodia, Cameroon, Canada, Chile, China, Colombia, Costa Rica, Ecuador, Egypt, El Salvador, Ethiopia, Georgia, Ghana, Guatemala, Hong Kong, India, Indonesia, Israel, Ivory Coast, Kazakhstan, Kenya, Laos, Madagascar, Malaysia, Mauritius, Mexico, Moldavia, Mozambique, Nicaragua, Norway, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Republic of Korea, Russia, Serbia, Singapore, South Africa, Sudan, Switzerland, Tanzania, Thailand, Togo, Turkey, Uganda, Ukraine, United Arab Emirates, Uruguay, USA, Uzbekistan, Venezuela and Vietnam.



2 Voluntary schemes pursuant to Article 32 No. 3 BioSt-NachV and/or Biokraft-NachV

According to the first sentence of the second subparagraph of Article 18(4) of Directive 2009/28/EC, the European Commission may decide that voluntary national or international schemes setting standards for the production of biomass products contain accurate data for the purposes of Article 17(2) or demonstrate that consignments of biofuel comply with the sustainability criteria set out in Article 17(3) to (5).

Pursuant to Article 41 of the BioSt-NachV and/or Biokraft-NachV, these voluntary schemes are considered as recognised in Germany if and for as long as they are approved by the Commission of the European Communities. By 31 December 2013, the Commission had approved the following 14 voluntary schemes:

Voluntary schemes	Registered in	Approved on
Consortium 2BS	France	10/08/2011
Greenergy	United Kingdom	10/08/2011
Bonsucro	United Kingdom	10/08/2011
ISCC System GmbH	Germany	10/08/2011
Roundtable on Responsible Soy Association (RTRS)	Argentina	10/08/2011
Abengoa	Spain	10/08/2011
Roundtable for Sustainable Biofuels (RSB)	Switzerland	10/08/2011
ENSUS UK	United Kingdom	14/05/2012
Red Tractor Farm Assurance Combinable Crops & Sugar Beet Scheme	United Kingdom	06/08/2012
Scottish Quality Farm Assured Combinable Crops Limited	United Kingdom	13/08/2012
REDcert GmbH	Germany	15/08/2012
NTA 8080	Netherlands	20/08/2012
Roundtable on Sustainable Palm Oil RED (RSPO)	Malaysia	13/12/2012
Biograce GHG calculation tool		21/06/2013

Table 2

3 National systems of other Member States

National systems of other Member States also ensure organisationally that the requirements regarding the sustainability criteria for the production and supply of biomass laid down in the Renewable Energy Directive are met, and manage the standards which further determine the requirements for evidence of their implementation and for verifying such evidence.

In 2013, data from the Austrian national system were available in Nabisy in addition to data from the national systems of Hungary and Slovenia. Operations based in the territory of Austria are obliged to enter their sustainability data into the Austrian database elNa.



4. Economic operators

Basically, economic operators throughout the value chain in the field of sustainable bioenergy work in accordance with the requirements of a certification system, a voluntary scheme or a national system of another Member State, users exempted (installation operators and parties under the obligation to provide proof).

The following economic operators are to be considered in particular:

Growers

A grower is an agricultural holding which grows and harvests biomass.

First gathering points

Economic operators who first take on the biomass required for the production of bio-liquids or biofuels from the growers for the purpose of trading it on.

Gatherers

Economic operators who first take on the biomass required for the production of bio-fuels in the case of waste and residual materials from the operations or private households which generated the waste and residual materials for the purpose of trading it on.

Conversion operations

Economic operators who process liquid or gaseous biomass up to the quality level required of final use. These might be oil mills, esterification plants, biogas upgrading plants or ethanol plants.

Operations along the production and supply chain that require certification and are connected with the certification systems recognised by the BLE are referred to as interfaces.

A special type of conversion operation is the existing plant. 'Existing plants' in the sense of Article 8(2) BioSt-NachV and/or Biokraft-NachV are plants which started operating for the first time before 23 January 2008 and which upgrade liquid or gaseous biomass to the quality level required to produce electricity or for use as biofuels, or plants that produce biofuels. Until 31 March 2013, it was optional for existing plants to deliver proof of the greenhouse gas emissions generated during growing, transport and use. As far as voluntary schemes are concerned, the term 'existing plant' is used in a broader sense. Here, it is sufficient that there is one existing plant within the supply chain for the existing plant regulation to come into effect.

Suppliers or traders within the supply chain

Suppliers are economic operators between the first gathering point and the conversion operation or between the final interface and the distributor of biofuels or the installation operator who supplies electricity generated from biofuels. If suppliers are



not subject to German customs supervision, they are required to join a certification system recognised by the BLE or a voluntary scheme recognised by the EU.

Installation operators

Anyone using liquid biomass for the purpose of generating electricity in their CHP plant in the sense of the biomass ordinance as amended.

Party under the obligation to provide proof

Parties under the obligation to provide proof are economic operators who, according to the Federal Immission Control Act, are obliged to distribute a certain minimum share of biofuels in the course of the calendar year or who apply for tax relief for biofuels pursuant to the Energy Tax Act.

In Germany, the transposition of Directive 2009/28/EC into national law stipulates an obligation for certain economic operators along the supply chain, the ‘interfaces’, to be certified. The interfaces include the first gathering point as well as all conversion operations. Interfaces receive a certificate which is usually valid for 12 months. Other economic operators are checked at random and then receive a ‘certificate of conformity’ which is comparable to the first type of certificate. There is no such differentiation in connection with the voluntary schemes recognised by the European Commission. All economic operators tested in this context generally receive a certificate.



4.1 Economic operators reported to the BLE

As at 31 December 2013, 2,570 participants along the supply chain producing or trading in biofuels had been registered with the BLE. These are participants in a certification system recognised by the BLE and/or a voluntary scheme recognised by the EU, or are monitored under a national system.

Most of these participants belong to the ISCC DE and REDcert DE certification systems, which are recognised by the BLE. With regard to voluntary schemes and national systems, only those participants are considered which have been registered with the BLE, as the biofuels they produce or trade could be relevant for the German market.

The total number of participants is constantly on the rise. As at 31 December 2013 it had increased by around 9 % compared to the previous year (2,359 participants).

4.2 Participants in the certification systems recognised by the BLE

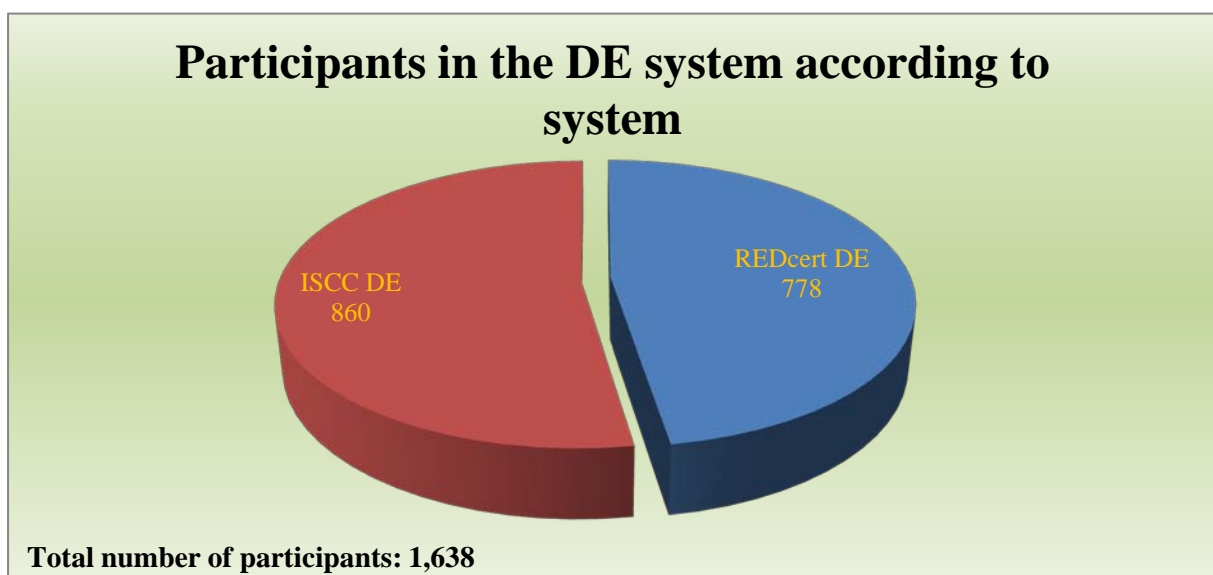


Chart T-1

As in the previous year, the number of participants in certification systems recognised by the BLE continues to decline. Numbers decreased by almost 16 % compared to 2012.

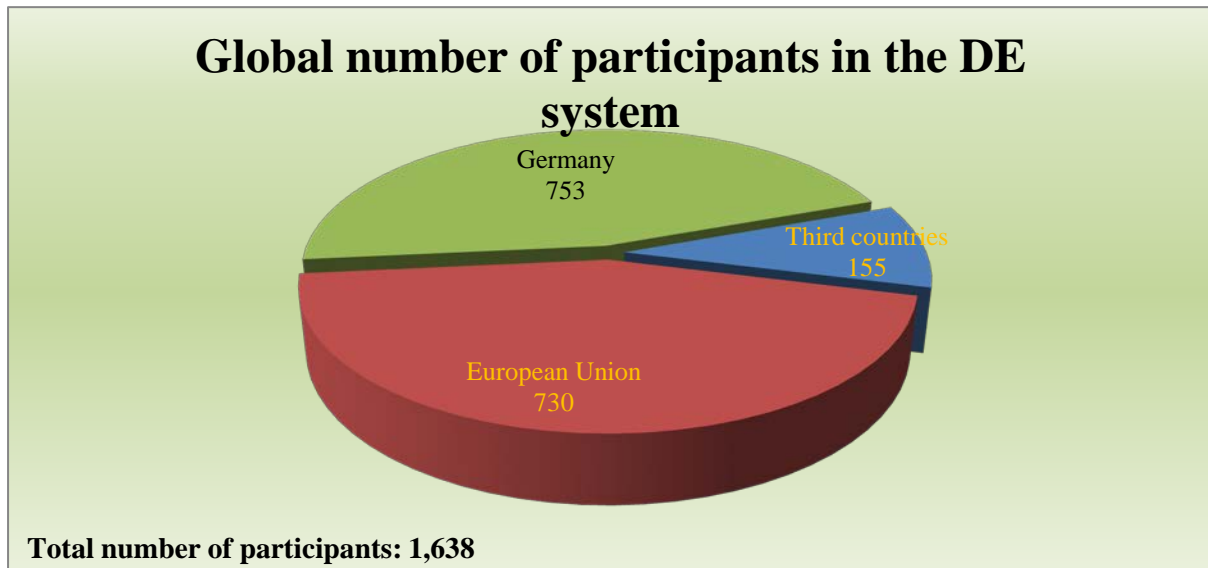


Chart T-2

The participants in the certification systems recognised by the BLE are based mainly in Germany and the European Union.

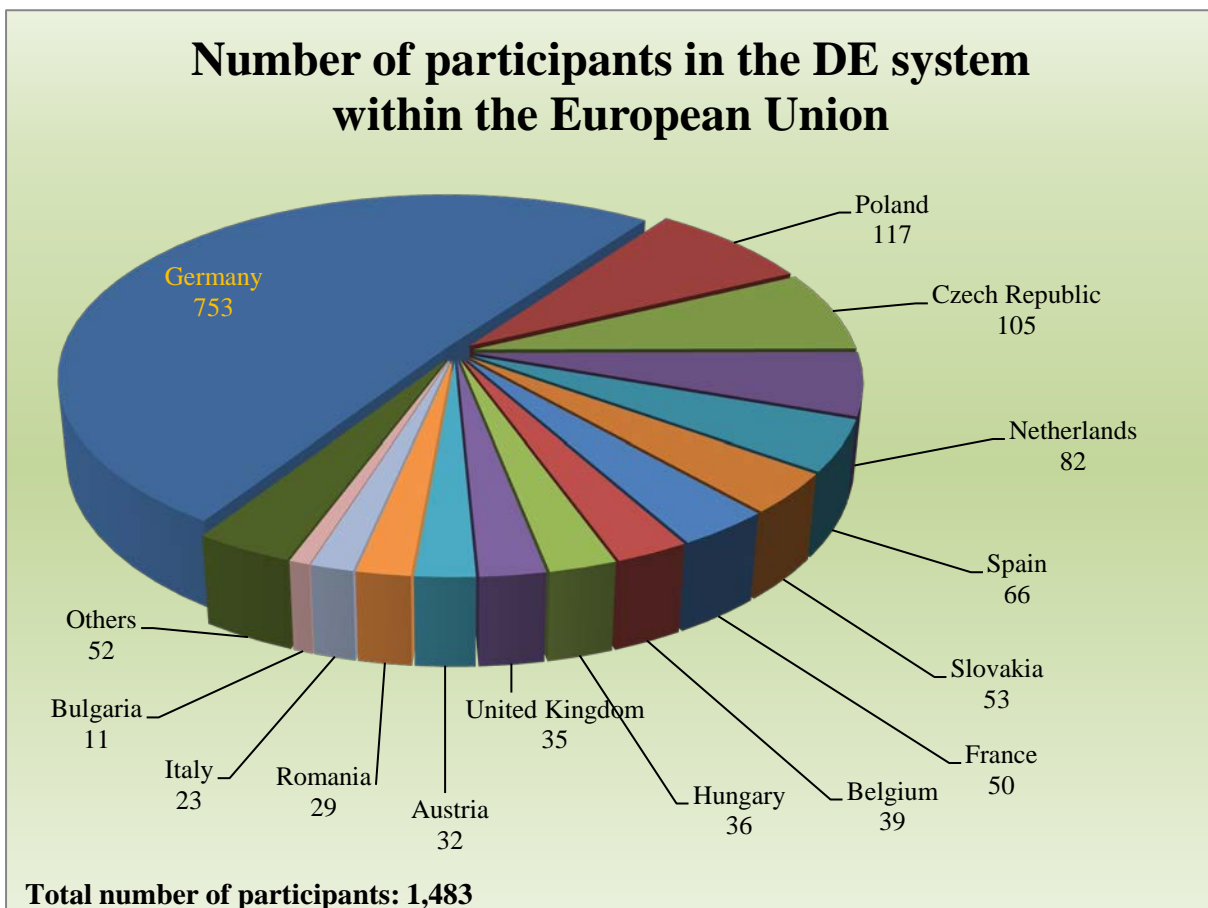


Chart T-3



The decline is also obvious in the total number of participants based in the European Union. Whereas 1,744 participants were registered in 2012, only 1,483 participants were registered as at 31 December 2013, a decrease of almost 15 %.

'Others' includes the following Member States with their respective participants: Lithuania (8), Denmark (7), Slovenia (6), Latvia (5), Finland (5), Sweden (5), Estonia (4), Portugal (3), Luxembourg (3), Greece (3), Ireland (2) and Croatia (1).

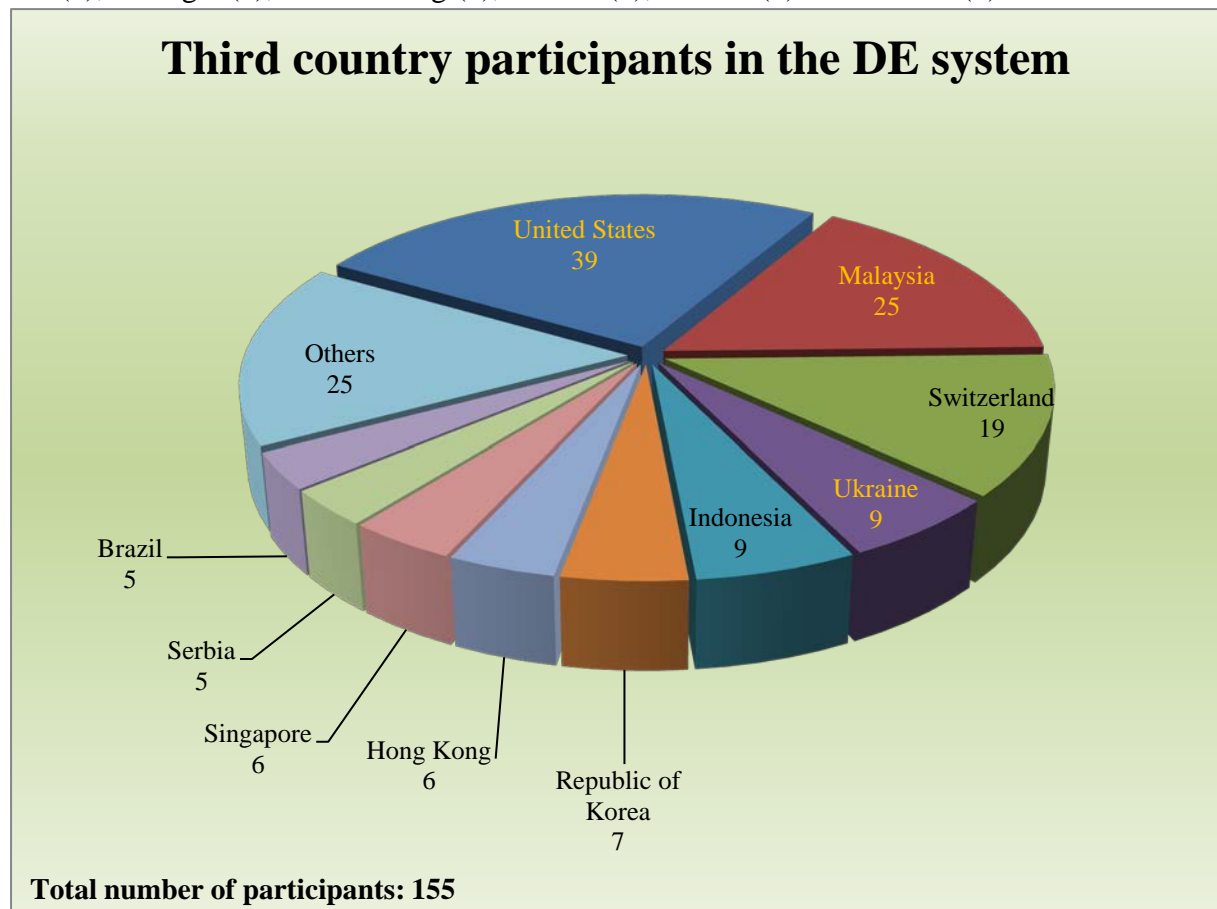


Chart T-4

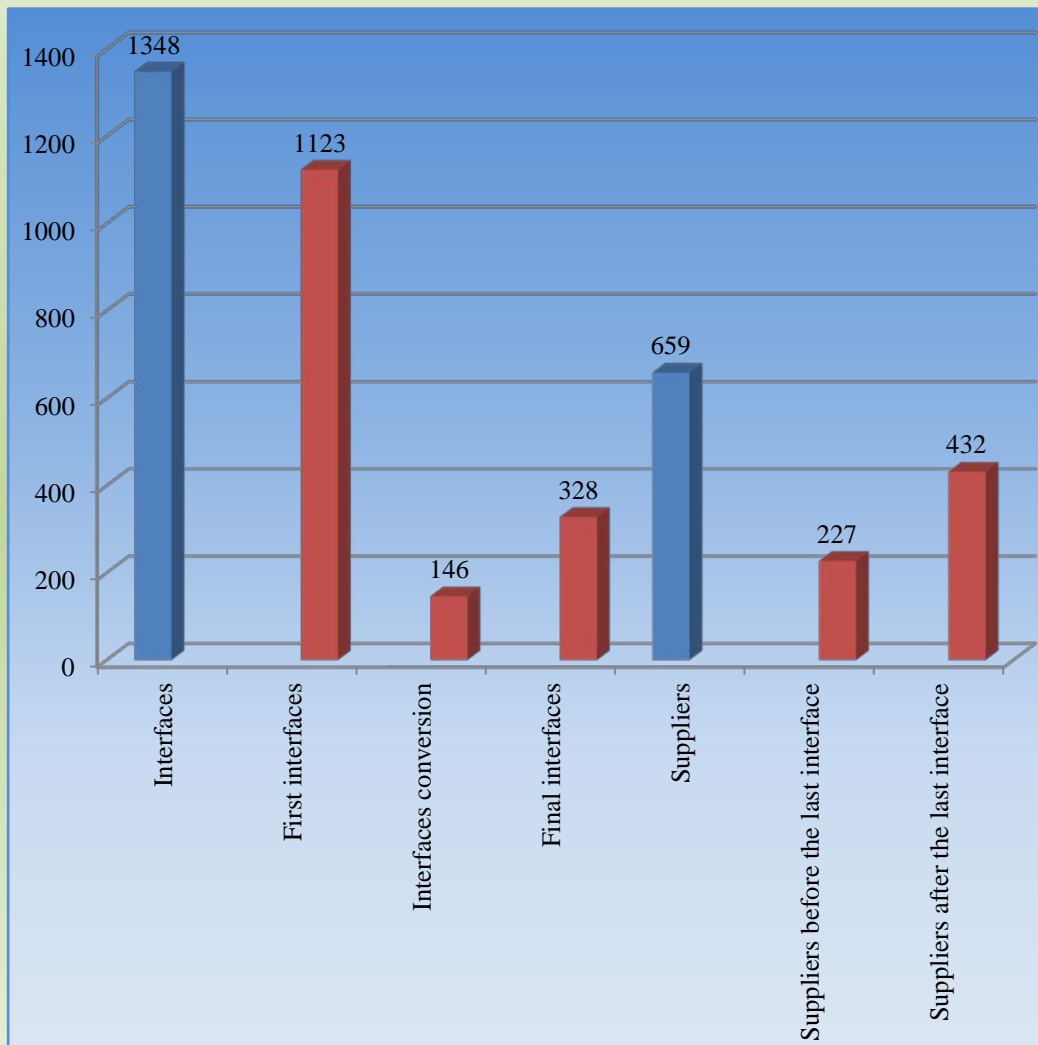
With regard to third country participants, the decline is even more obvious at about 22 %. In 2012, 199 third country participants had been registered.

Once more, the majority of participants are from the United States and Malaysia. As far as the number of participants is concerned, Switzerland moved up from last year's fifth place to third place, relegating Ukraine and Indonesia to fourth and fifth place respectively.

'Others' includes the following third countries with their respective participants: Thailand (4), Argentina (3), Costa Rica (3), Turkey (3), United Arab Emirates (2), Norway (2), India (1), Peru (1), Paraguay (1), Israel (1), Philippines (1), Guatemala (1), Bosnia-Herzegovina (1) and Australia (1).



Participants in the DE system according to function



Total number of participants: 1,638

Chart T-5

While the number of participating interfaces has declined by almost 22 % compared to the previous year (2012: 1,726), the number of suppliers (2012: 408) has increased by approx. 62 %. Note that individual operations may have more than one function. Such operations are included several times in Chart T-5.



4.3 Economic operators as users of voluntary schemes recognised by the European Commission or national systems of other Member States

According to the first sentence of the second subparagraph of Article 18(4) of Directive 2009/28/EC, the European Commission may decide that voluntary national or international schemes setting standards for the production of biomass products contain accurate data for the purposes of Article 17(2) or demonstrate that consignments of biofuel comply with the sustainability criteria set out in Article 17(3) to (5).

In the context of the sustainability ordinances, these voluntary schemes are informally recognised by Germany alongside its national certification systems. The same applies for the national systems of individual Member States of the European Union regarding the transposition of Directive 2009/28/EC.

Data of participants in voluntary schemes and national systems of other Member States were included in the report only insofar as they had been reported to the BLE. Participants in voluntary schemes who do not wish to become active on the German market are generally not reported to the BLE.

Participants in voluntary schemes recognised by the European Commission

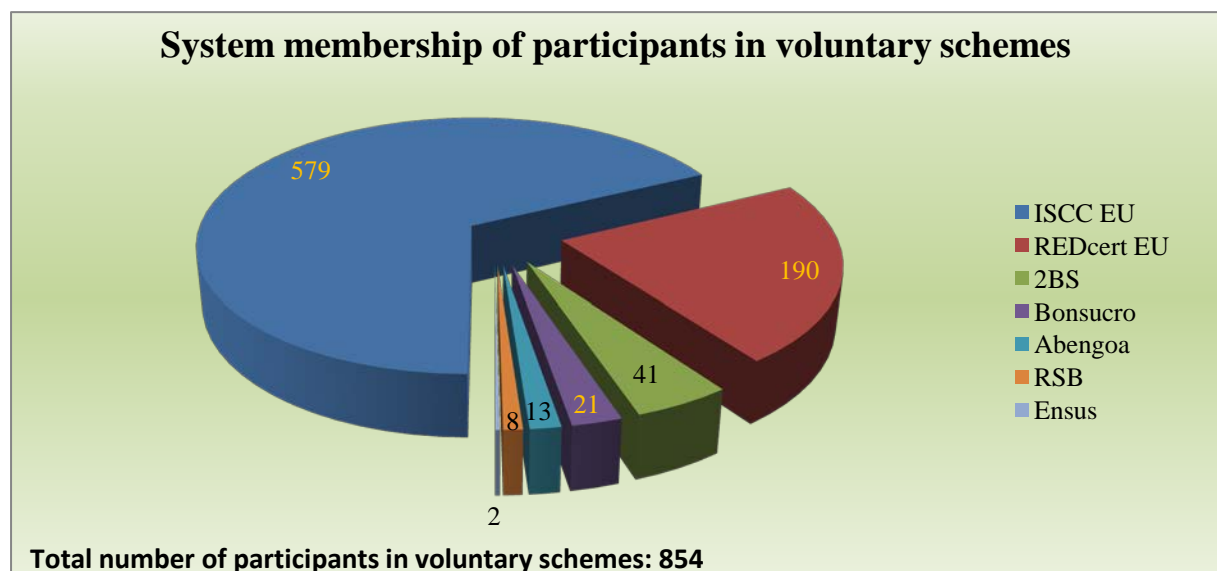


Chart T-6

Compared to the previous year, the number of participants in voluntary schemes recognised by the European Commission has more than doubled.

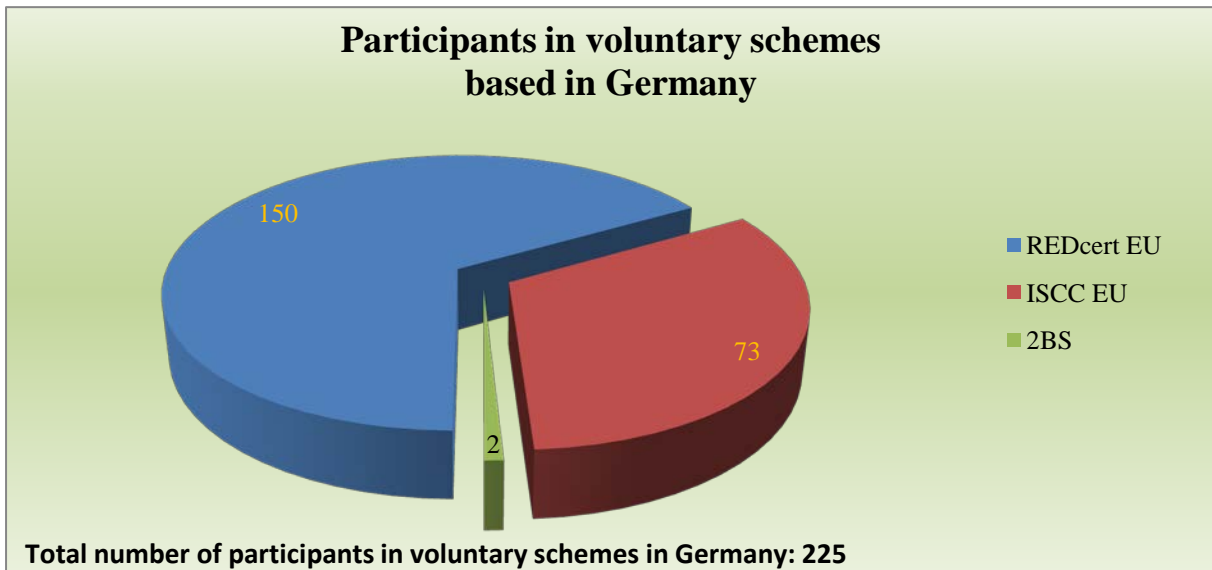


Chart T-7

The number of participants in voluntary schemes based in Germany has also risen, by about 100 per cent. All three certification systems involved increased their share almost equally.

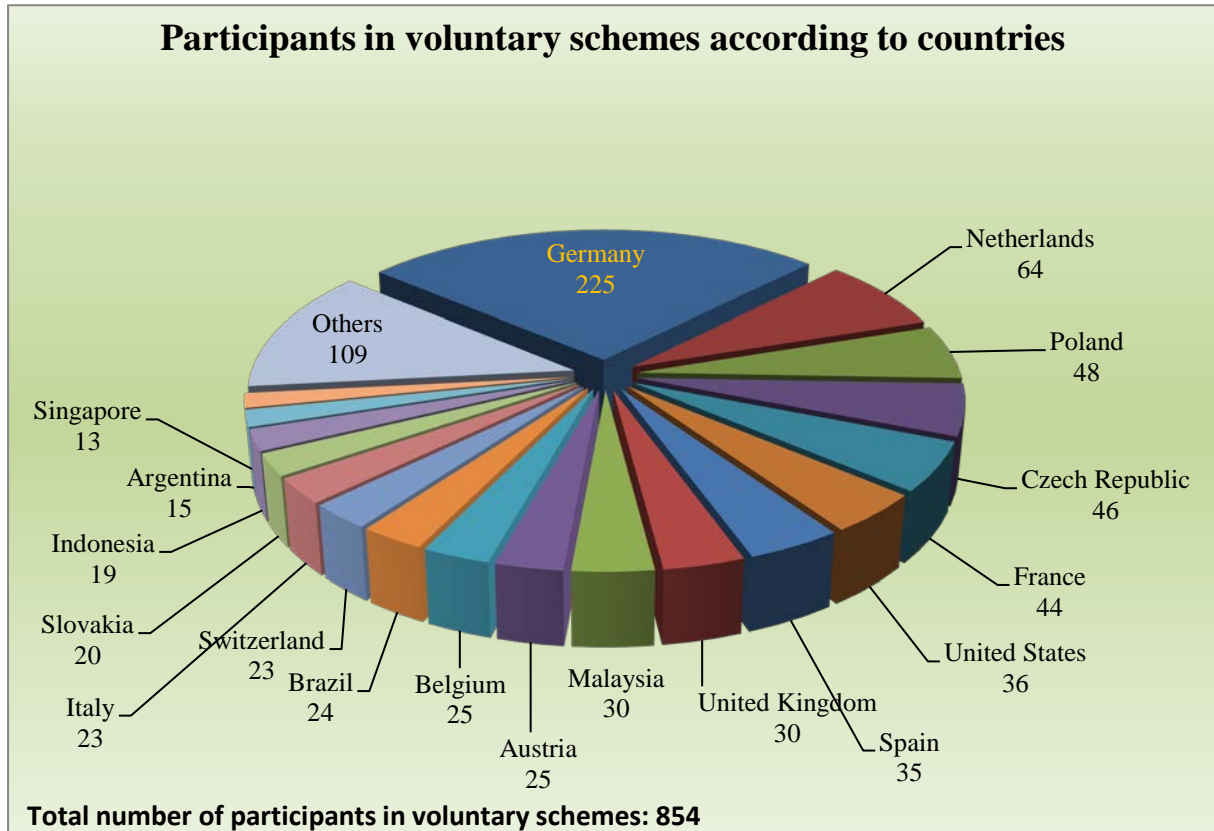


Chart T-8

Participants based in Germany also account for the largest share where voluntary schemes are concerned. This share has at least doubled compared to the previous year, as has the share of participants based in the Netherlands. The percentage of participants based in Poland even increased threefold, putting Poland in third place, which had been held by the United States in the previous year.

'Others' includes the following countries:

- Hungary and Romania (9 each);
- Denmark (7);
- Peru (6);
- Bulgaria (5);
- Lithuania, Slovenia, Republic of Korea, Sweden, India, People's Republic of China and Finland (4 each);
- Ireland, Belarus, Turkey, Hong Kong, Guatemala and Norway (3 each);
- Republic of China, Sierra Leone, Latvia, Greece, Costa Rica, Canada, Croatia and Mauritius (2 each);
- Nicaragua, Aruba, Bosnia-Herzegovina, Russian Federation, Ukraine, Thailand, Luxembourg, Paraguay, Japan, Tunisia and Monaco (1 each)



4.4 Suppliers under German customs office supervision

If suppliers are under German customs office supervision in terms of Article 17(3) No. 2 Biokraft-NachV, they are not required to participate in a certification system recognised by the BLE or a voluntary scheme recognised by the European Commission. A prerequisite is that the suppliers' mass balance system is regularly subjected to controls carried out by the main customs offices for reasons of taxation in accordance with the Energy Tax Act or for the monitoring of the biofuel quota obligation in accordance with the Federal Immission Control Act, and that suppliers document the receipt and forwarding of biofuels in the electronic Nabisy database including place and date as well as the information on the sustainability certificate.

In the application process for Nabisy access, the BLE asks the main customs office responsible for the supplier's place of business to confirm that the applicant is actually under customs office supervision. Once this confirmation is provided, the economic operator is given access to the database.

As at 31 December 2013, 292 suppliers under customs office supervision were registered in Nabisy.

4.5 Participants in national systems of other Member States

Some of the participants registered in Nabisy are part of national systems of other Member States. In 2013, new data from Austria's national system were added. 73 participants were registered by this system, while Hungary's national system registered three new participants. Slovenia's national system did not enter any new data in 2013. However, the relatively small number of reports does not mean that biofuels, bioliquids, or their raw materials from these Member States are not relevant for the German market. Rather, it is due to the fact that some Member States were late in transposing Directive 2009/28/EC. For that reason, interested economic operators from other Member States usually joined the certification systems recognised by the BLE or the voluntary schemes recognised by the European Commission.



4.6 Changes in the number of potential Nabisy users

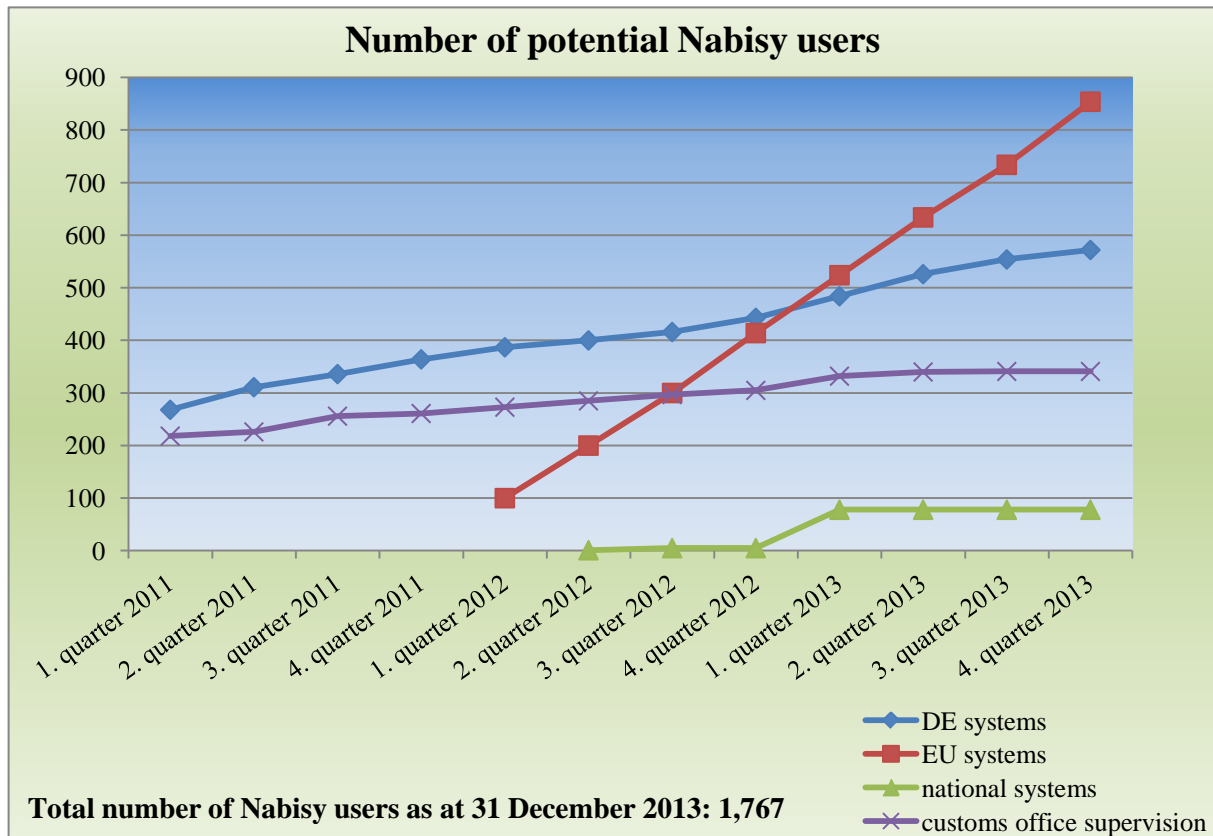


Chart T-9

Even though the number of participants in the certification systems recognised by the BLE declined in 2013, the share of participants who have the option of using Nabisy continues to increase. The number of Nabisy users reported by the voluntary schemes is also rising and, since the first quarter of 2013, has been larger than the share of Nabisy users of the DE systems.

The Member States were required to transpose the Renewable Energy Directive into national law. The respective ordinances were notified. In order to receive a certification pursuant to the 36th BImSchV and to profit from double-countability, an economic operator needs to participate in one of the certification systems recognised by the BLE.

Economic operators who trade internationally and would like to make use of double-counting towards the biofuel quota in Germany are therefore required to join a certification system recognised by the BLE and a voluntary scheme.



IV. Certification bodies

Certification bodies are independent natural or legal persons who issue certificates to economic operators along the supply chain and who monitor all operations along the supply chain with regard to fulfilment of the requirements laid down in the Renewable Energy Directive and in national legislation adopted for its implementation. Certificates certify that the specific requirements of the Renewable Energy Directive for the production of sustainable biofuels or bioliquids are met. In Germany, the BLE is responsible for the recognition and supervision of certification bodies within the context of sustainable biomass production. This applies irrespective of whether the certification bodies become active in connection with the certification systems recognised by the BLE or with voluntary schemes.

For interfaces issuing a double-counting proof within the framework of the 36th BImSchV for biofuels from waste and residual materials and for the upstream interfaces, the certificate required according to Article 10(1) of the 36th BImSchV must have been issued by a certification body recognised in accordance with Article 42(1) of the Biokraft-NachV. The certification body must also be able to ensure that the requirements of Article 7 of the 36th BImSchV are met. The BLE announces the certification bodies suitable for the scope of the 36th BImSchV in the Federal Gazette and supervises them. Pursuant to Article 42 Nos. 1 and 2 and Article 43 in connection with Article 56 BioSt-NachV and/or Biokraft-NachV, the following number of applications for the recognition of certification bodies were lodged with the BLE by 31 December 2013:

Number of applications for recognition as certification body	45
rejected	6
accepted	39
recognition withdrawn or void due to inactivity of the certification body	13
Number of certification bodies recognised as at 31 December 2013	26

Table 3



Of the 26 recognised certification bodies listed in Table 3, 21 were also recognised for activities in connection with the voluntary schemes recognised by the European Commission as at 31 December 2013. 22 certification bodies were also announced as being suited for activities within the framework of the 36th BImSchV in the Federal Gazette. These are:

Recognised certification bodies	Recognised on	Suited pursuant to 36th BImSchV Announced on
SGS Germany GmbH, Germany	23/08/2010	27/12/2012
DQS GmbH, Germany	23/08/2010	23/07/2013
TÜV SÜD GmbH, Germany	23/08/2010	27/12/2012
GUT Zertifizierungsgesellschaft mbH, Germany	23/08/2010	27/12/2012
Global-Creative-Energy GmbH, Germany	30/08/2010	27/12/2012
Peterson Control Union Deutschland GmbH, Germany	30/08/2010	27/12/2012
Agrizert Zertifizierungs GmbH, Germany	29/09/2010	27/12/2012
IFTA AG, Germany	01/12/2010	27/12/2012
DEKRA Certification GmbH, Germany	01/12/2010	27/12/2012
ABCERT AG, Germany	09/12/2010	27/12/2012
LACON GmbH, Germany	15/12/2010	not applied
ÖHMI Euro Cert GmbH, Germany	20/12/2010	27/12/2012
QAL Umweltgutachter GmbH, Germany	20/12/2010	27/12/2012
Agro Vet GmbH, Austria	21/12/2010	27/12/2012
ACG Agrar-Control GmbH, Germany	05/01/2011	not applied
TÜV Rheinland Cert GmbH, Germany	06/01/2011	27/12/2012
ASG cert GmbH, Germany	14/03/2011	27/12/2012
Bureau Veritas Certification Germany GmbH, Germany	14/03/2011	27/12/2012
LKSmbH, Germany	21/04/2011	27/12/2012
TÜV Thüringen e. V., Germany	21/04/2011	not applied
TÜV Nord Cert GmbH, Germany	25/09/2011	27/12/2012
proTerra GmbH, Germany	27/09/2011	27/12/2012
DVGW Cert GmbH, Germany	09/05/2012	27/12/2012
ELUcert GmbH, Germany	22/10/2012	27/12/2012
SC@PE international Ltd.	06/12/2013	not applied
Intertek Certification GmbH	13/02/2013	13/02/2013

Table 4



1. DE certifications and voluntary controls within the framework of the certification systems recognised by the BLE

In Germany, the transposition of Directive 2009/28/EC into national law stipulates an obligation for certain economic operators along the supply chain for the production of biofuels, the so-called interfaces, to be certified. The interfaces include the first gathering points as well as all conversion operations. In addition, assessments of conformity and random controls required by law are carried out along the production and supply chain.

Total number of operations certified by DE certification bodies in 2013	857
in Germany	479
within the EU excluding Germany	340
in third countries	38

Table 5

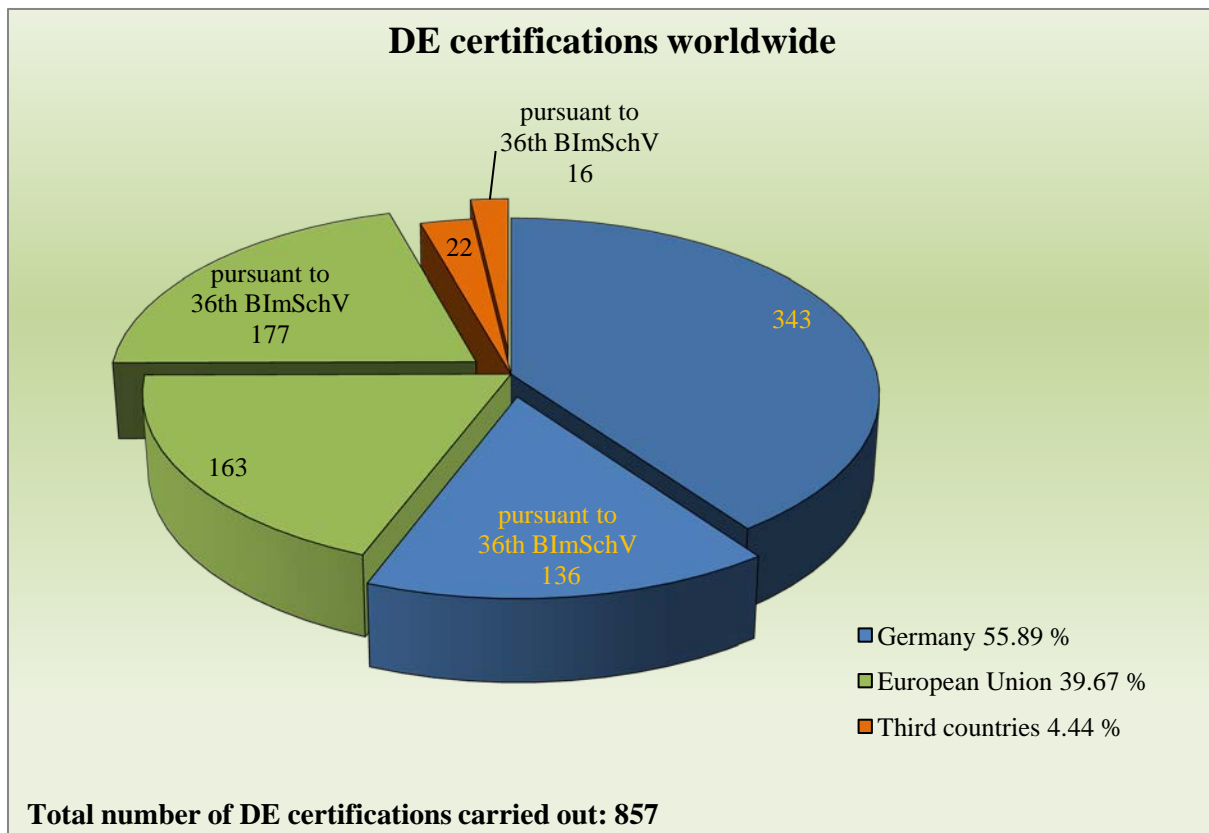


Chart Z-1



As in previous years, the bulk of annual certifications in Germany, about 56 %, were carried out by certification bodies acting according to the requirements of the certification systems recognised by the BLE (REDcert-DE and ISCC-DE). Other EU Member States and third countries account for around 40 % and 4 % respectively.

The number of certifications continues to decline, falling by almost 32 % compared to 2012. At the same time, the number of certifications carried out according to the requirements of the EU systems is increasing.

DE certifications according to the 36th BImSchV were carried out for the first time in 2013. More than a third of the total number of certifications were carried out in accordance with this ordinance (see Chart Z-1).



1.1 DE certifications carried out within the European Union

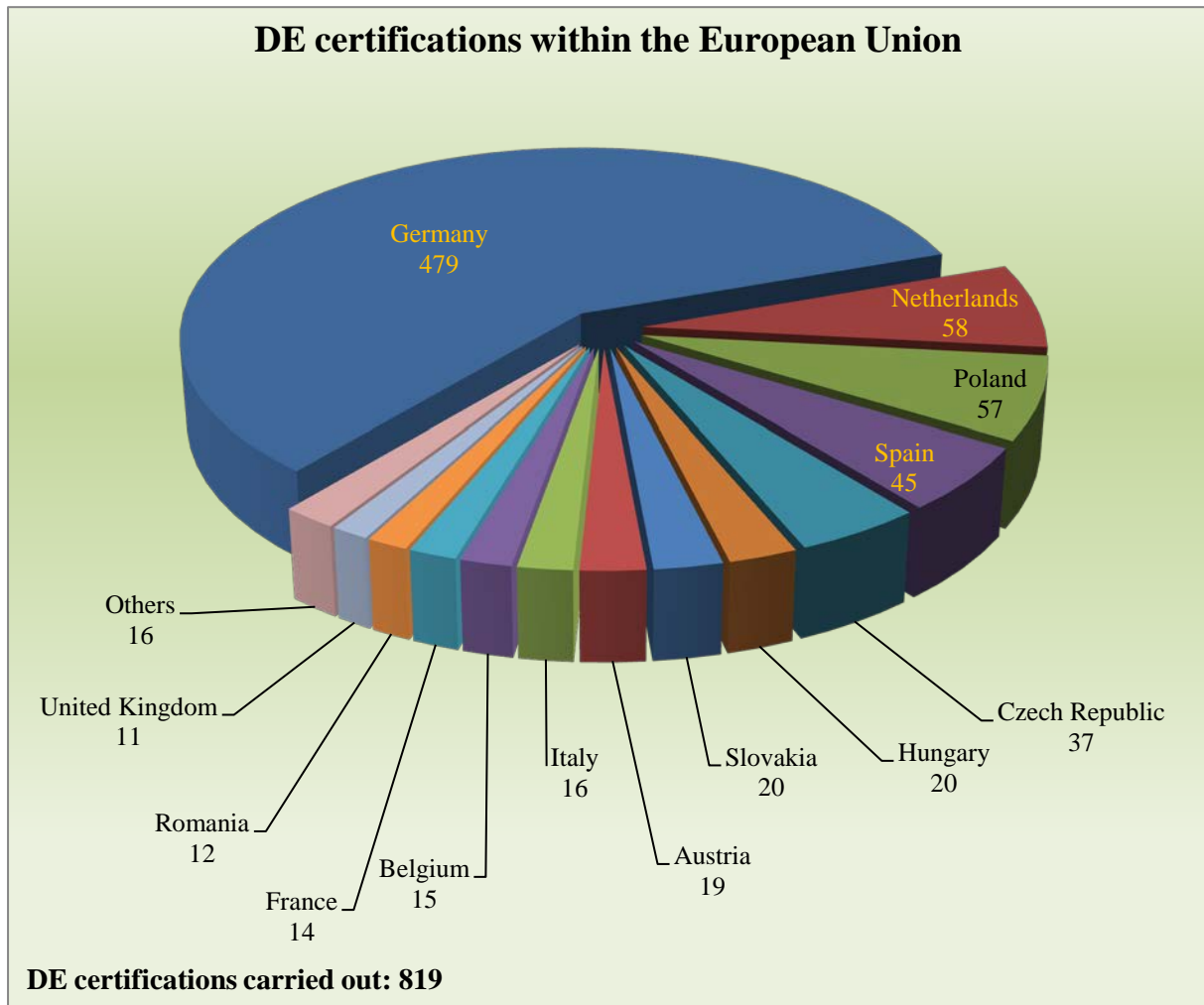


Chart Z-2

Whereas 1,173 certifications were carried out by DE certification bodies within the European Union in 2012, only 819 certifications were carried out in 2013. Besides Germany, the largest numbers of DE certifications were carried out in the Netherlands, Poland, Spain and the Czech Republic.

'Others' lists the countries carrying out less than ten certifications per reporting year. These include Bulgaria, Slovenia, Finland, Estonia, Lithuania, Denmark and Sweden.



1.2 DE certifications carried out within third countries

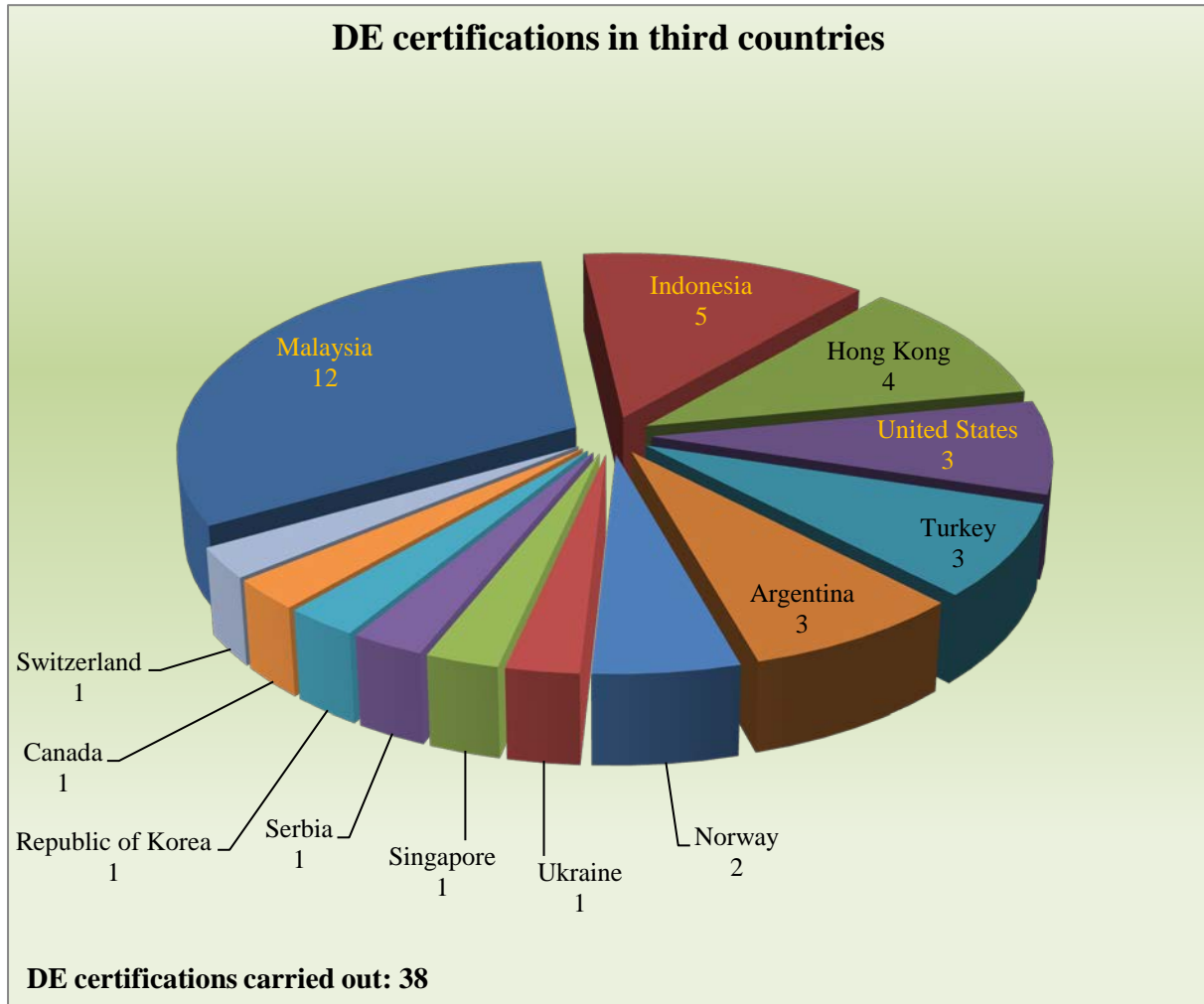


Chart Z-3

The decline in third countries is even more distinctive: only half as many DE certifications were carried out as in the previous year.



1.3 Withdrawn DE certificates

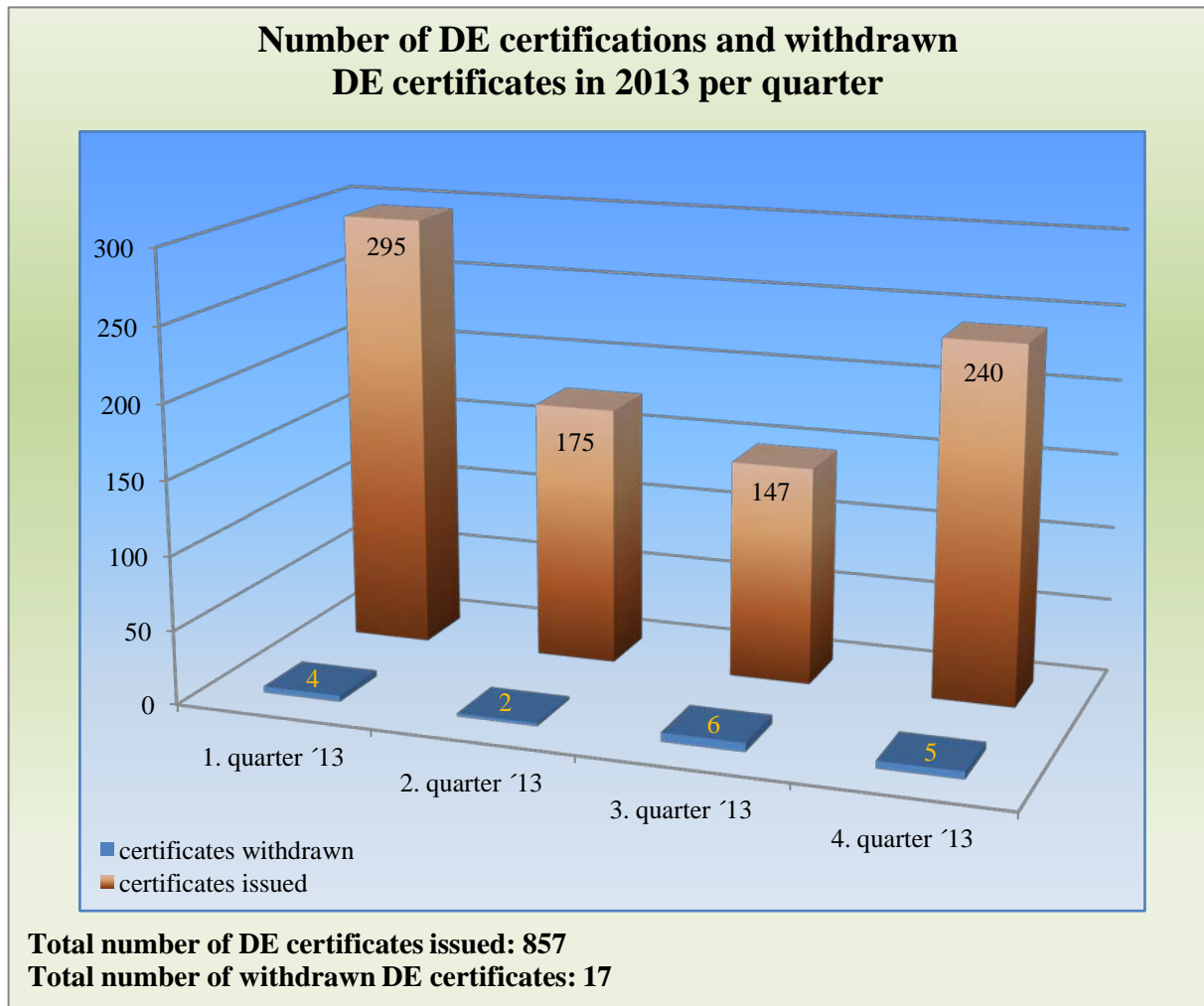


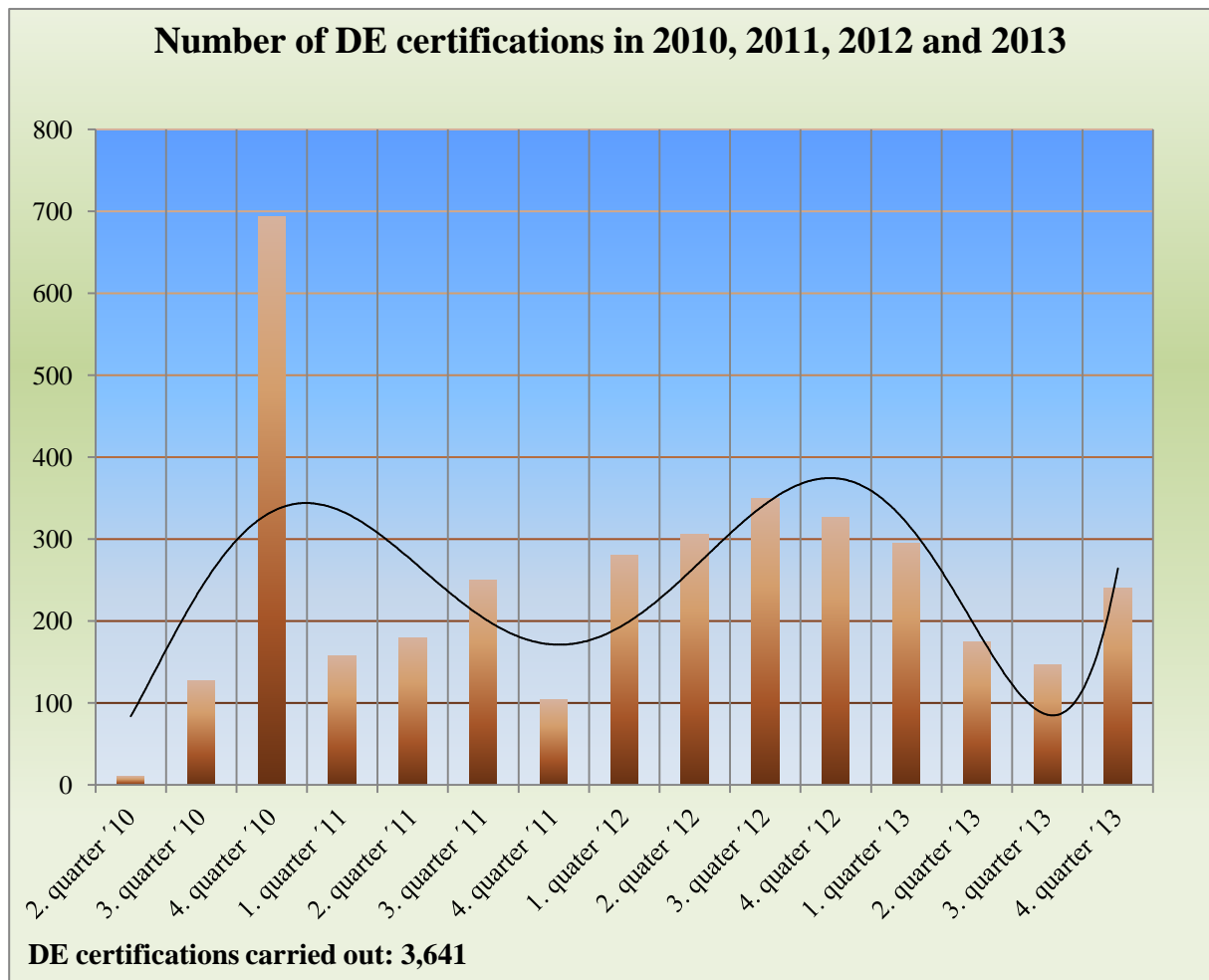
Chart Z-4

In 2013, a total of 857 DE certificates were issued, 17 of which were subsequently withdrawn.



1.4 Changes in DE certifications from 2010 to 2013

Chart Z-5



2. Certifications and controls within the framework of the voluntary schemes recognised by the European Commission

The BLE is responsible for the recognition and supervision of certification bodies based in or operating a branch in Germany.

Wherever these certification bodies carry out certifications according to the requirements of EU systems and where the certification decision is taken in Germany, these certificates need to be reported to the BLE as well. BLE auditors monitor certification bodies all over the world, provided that the countries concerned have permitted the BLE to carry out monitoring audits on their territory.

The audits concern both the requirements of the DE systems and the EU systems.



V. Transmission of sustainability data to the public database Nabisy

According to Commission Decision 2011/13/EU of 12 January 2011, economic operators have to submit certain kinds of information for each supply of biofuels or bioliquids to the Member States.

In Germany, biofuel producers must supply information to the BLE, as the competent authority, proving that biofuels or bioliquids relevant for the German market meet the sustainability criteria. The economic operators must enter this information into the web-based public database Nabisy for every supply of biofuels or bioliquids. Proofs of sustainability or partial proofs of sustainability contain the data entered into Nabisy on the fulfilment of the sustainability criteria and are to be handed on along the supply chain.

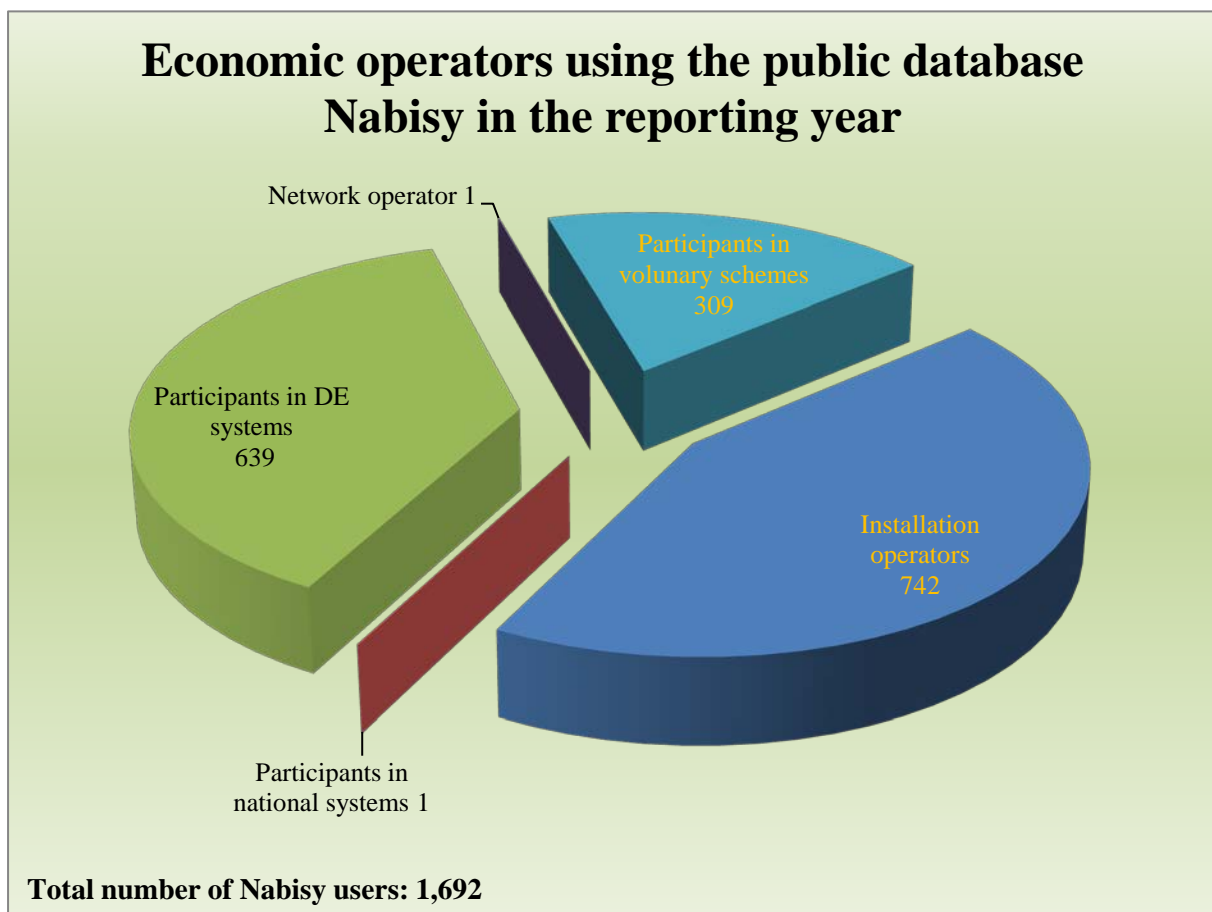


Chart Nabisy-1

The public database Nabisy was used by 1,692 economic operators in the reporting year. The largest share is accounted for by CHP operators using liquid biomass for the generation of electricity.

In the field of biofuels, presenting proofs of sustainability or partial proofs of sustainability to the customs authority is a prerequisite for counting biofuels towards the biofuel blending obligation. In the field of bioelectricity, installation operators are



entitled to remuneration pursuant to the Renewable Energy Sources Act and the renewable resources bonus (if applicable) only if they demonstrate compliance with the requirements of sustainable biomass by proofs of sustainability registered in Nabisy.

Proofs of Sustainability are issued by certified economic operators who upgrade liquid or gaseous biomass to the quality level required for use as a biofuel, or by those who produce biofuels from biomass (issuing bodies). According to the sustainability ordinances, these economic operators are referred to as the final interface. The voluntary schemes do not use this terminology. This report therefore uses the term 'economic operator issuing the proof of sustainability.

A proof of sustainability identifies a certain amount of biofuel as sustainable. If biofuels are traded in the supply chain through to the party under obligation to deliver proof or the installation operator, the respective amounts are divided or combined as required. In order to document this accordingly, it is necessary to subdivide a proof of sustainability or to combine it with other proofs. This is how partial sustainability proofs are generated.

Since 1 January 2013 it has been possible to issue a proof of sustainability in combination with a double-counting proof. The double-counting proof will be created by Nabisy automatically if all requirements are met and the issuing economic operator selects this option.

Model forms for the proof of sustainability, double-counting proof, partial proof of sustainability and double-counting partial proof are presented in the following pages.



Proof of Sustainability

For bioliquids pursuant to Arts. 15 et seqq. of the Biomass electricity sustainability ordinance (Biomassestrom-Nachhaltigkeitsverordnung (BioSt-NachV)), or for biofuels pursuant to Arts. 15 et seqq. of the biofuels sustainability ordinance (Biokraftstoff-Nachhaltigkeitsverordnung (Biokraft-NachV))

Number of the proof of sustainability:

Note of delivery:

Interface:	Recipient:	Certification system:

1. General information on biomass / biofuels:

Type, potential parts: Country of cultivation / Country of origin*:
Quantity (t oder m³): Energy content (MJ):

The bioliquids / biofuels have been produced from residues or by-products, with by-products not arising from agriculture, forestry, fisheries or aquaculture. yes no

Advice: If Yes has been indicated, no further particulars are required for 2.

2. Sustainable production of biomass and / or sustainable production of biofuels pursuant to Arts. 4 – 7 BioSt-NachV/Biokraft-NachV:

The biomass complies with the requirements pursuant to Arts. 4 – 7 BioSt-NachV / Biokraft-NachV. yes no

3. Greenhouse gas savings pursuant to Art. 8 BioSt-NachV / Biokraft-NachV:

The greenhouse gas emissions savings potential has been complied with as follows:

- Greenhouse gas emissions (g CO ₂ eq/MJ):	Comparator for fossil fuels (g CO ₂ eq/MJ):
- Compliance with the savings potential when used	<input type="checkbox"/> for electricity generation <input type="checkbox"/> as fuels
- Compliance with the greenhouse gas savings when used in the following countries (e.g. Germany, EU):	<input type="checkbox"/> for combined electricity / heat generation <input type="checkbox"/> for heat generation

Calculation of the greenhouse gas savings has been carried out wholly or partially on the basis of standard values according to Annex 2 BioSt-NachV / Biokraft-NachV. yes no

The biomass originates from an exemption granted interface pursuant to Art. 8 para. 2 BioSt-NachV and Art. 8 para. 2 Biokraft-NachV respectively.

The proof of sustainability is valid without signature. The interface is responsible for accuracy of the proof. Identification of the proof takes place by means of its non-recurring number.

Place and Date of issuance:

Delivery / shipment based on a mass balance system pursuant to Art. 17 BioSt-NachV / Biokraft-NachV**:

- Delivery / shipment has been documented in a mass balance system.
 - Documentation has been carried out according to the requirements of the following certification system:
 - Documentation is carried out pursuant to Art. 17 para. 3 Biokraft-NachV.
 - Documentation has been carried out by means of the following electronic database:
 - Documentation has been carried out in the following different way:

Last supplier (name, address):

* **Advice:** In the case ~~where~~ **where** the proof of sustainability contains materials ~~as included~~ **as included** from multiple countries of cultivation



Double Counting Proof

Pursuant to Art. 9 of the Ordinance on the protection from harmful environmental impacts caused by air pollution, noise, concussion and similar harmful effects (36th Federal Immission Control Ordinance - 36. BImSchV)

Number:

Number of delivery document:

Interface:	Proof Recipient:	Certification System:
(name, address, registration number)	(name, address)	(name, registration number)

1. Information on biofuels

Denotation of biofuel:

Double counting capable amount (t or m³ 15°C):

2. The biofuel was produced from:

1. Waste as defined in Art. 7 section 1 No. 1 of the 36th BImSchV

Type of waste:

2. Residues as defined in Art. 7 section 1 No. 2 of the 36th BImSchV

Type of residue:

3. cellulosic non-food-material as defined in Art. 7 section 1 No. 3 of the 36th BImSchV

Type of Biomass:

Percentage of double counting capable biofuel, which was produced from cellulose: %
Percentage of double counting capable biofuel, which was produced from hemicellulose: %

4. lignocellulosic material as defined in Art. 7 section 1 No. 4 of the 36th BImSchV

Type of Biomass:

Percentage of double counting capable biofuel, which was produced from cellulose: %
Percentage of double counting capable biofuel, which was produced from hemicellulose: %
Percentage of double counting capable biofuel, which was produced from lignin: %

Date of production of the biofuels:

The double counting proof is valid without signature. For the accuracy of the proof is the issuing interface responsible. The identification of the proof is effected via a unique number. The double counting proof can only be accepted in conjunction with the accompanying proof of sustainability pursuant to Arts. 4 to 8 Biokraft-NachV.

Place and date of issuance:



Partial Proof of Sustainability

For bioliquids pursuant to Arts. 15 et seq. of the Biomass electricity sustainability ordinance (Biomassestrom-Nachhaltigkeitsverordnung (BioSt-NachV)), or for biofuels pursuant to Arts. 15 et seq. of the biofuels sustainability ordinance (Biokraftstoff-Nachhaltigkeitsverordnung (Biokraft-NachV))

Number of the partial proof of sustainability: DE-B-BLE-BM-39-213-10000057-NTNw-10001595

Number of the proof divided into partial proofs: DE-B-BLE-BM-39-213-10000057-NTNw-10001593

Supplier: BLE

Interface:

DE-B-BLE-BM-39-SSt-00000057

Recipient:

Lieferant / trader 54, Münsterstadt,
DE-B-BLE-BM-39-SSt-00000054

Certification system:

Nabisy-Test-System, null, DE-B-BLE-BM-39

1. General information on biomass / biofuels:

Type, potential parts: 100.00% Pflanzenöl

Country of cultivation / Country of origin: AT

Quantity (t/kWh/m³): 25 m³

Energy content (MJ): 850,000

The bioliquids / biofuels have been produced from residues or by-products, with by-products not arising from agriculture, forestry, fisheries or aquaculture. yes no

2. Sustainable production of biomass and/or sustainable production of biofuels pursuant to Arts. 4-7 BioSt-NachV/ Biokraft-NachV:

The biomass complies with the requirements pursuant to Arts. 4-7 BioSt-NachV/ Biokraft-NachV. yes no

3. Greenhouse gas savings pursuant to Art. 8 BioSt-NachV/ Biokraft-NachV:

The greenhouse gas emissions savings potential has been complied with as follows:

- Greenhouse gas emissions (g CO₂eq/MJ): 36.0 Comparator for fossil fuels (g CO₂eq/MJ): 77.0

- Compliance with the savings potential when used for electricity generation as fuels for combined electricity/heat generation for heat generation

- Compliance with the greenhouse gas savings when used in the following countries/regions (e.g. Germany; EU): Weltweit

The biomass originates from an exemption granted interface pursuant to Art. 8 para. 2 BioSt-NachV and Art.8 par. 2 Biokraft-NachV respectively.

The proof of sustainability is valid without signature. The interface is responsible for accuracy of the proof. Identification of the proof takes place by means of its non-recurring number.

Place and date of issuance: Bonn, 03.07.2014

Delivery/shipment based on a mass balance system pursuant to Art. 17 BioSt-NachV/ Biokraft-NachV**:

Delivery/shipment has been documented in a mass balance system.

Documentation has been carried out by means of the database of the BLE:

Documentation has been carried out according to the requirements of the following certification system:

Documentation is carried out pursuant to Art. 17 para. 3 Biokraft-NachV.

Documentation has been carried out by means of the following electronic database:

Last supplier (name, address): Ölk, Fulda



Double Counting Partial Proof

Pursuant to Art. 9 of the Ordinance on the protection from harmful environmental impacts caused by air pollution, noise, concussion and similar harmful effects (36th Federal Immission Control Ordinance - 36. BImSchV)

Number of the partial proof:

Number of the basic proof:

Number of delivery document:

Interface:	Partial Proof Recipient:	Certification System:
(name, address, registration number)	(name, address)	(name, registration number)

1. Information on biofuels

Denotation of biofuel:

Double counting capable amount (t or m³ 15°C):

2. The biofuel was produced from:

1. Waste as defined in Art. 7 section 1 No. 1 of the 36th BImSchV

Type of waste:

2. Residues as defined in Art. 7 section 1 No. 2 of the 36th BImSchV

Type of residue:

3. cellulosic non-food-material as defined in Art. 7 section 1 No. 3 of the 36th BImSchV

Type of biomass:

Percentage of double counting capable biofuel, which was produced from cellulose: %

Percentage of double counting capable biofuel, which was produced from hemicellulose: %

4. lignocellulosic material as defined in Art. 7 section 1 No. 4 of the 36th BImSchV

Type of biomass:

Percentage of double counting capable biofuel, which was produced from cellulose: %

Percentage of double counting capable biofuel, which was produced from hemicellulose: %

Percentage of double counting capable biofuel, which was produced from lignin: %

The double counting proof is valid without signature. For the accuracy of the proof is the issuing interface responsible. The identification of the proof is effected via a unique number. The double counting proof can only be accepted in conjunction with the accompanying proof of sustainability pursuant to Arts. 4 to 8 Biokraft-NachV.

Place and date of issuance:



VI. Biofuels for which applications were submitted to be counted towards the biofuel quota obligation or to be considered for tax relief

The amounts of biofuels introduced to the market for which applications were submitted to be counted towards the biofuel quota obligation or to be considered for tax relief are illustrated below. The data are based on the notations of the Federal Revenue Administration in Nabisy. It should be pointed out that only the applied amounts and energy contents can be stated. The BLE cannot make any statements as to whether tax relief was actually granted for all the amounts and energy contents presented here.

The data regarding the biofuel quota obligation and tax relief were presented together.

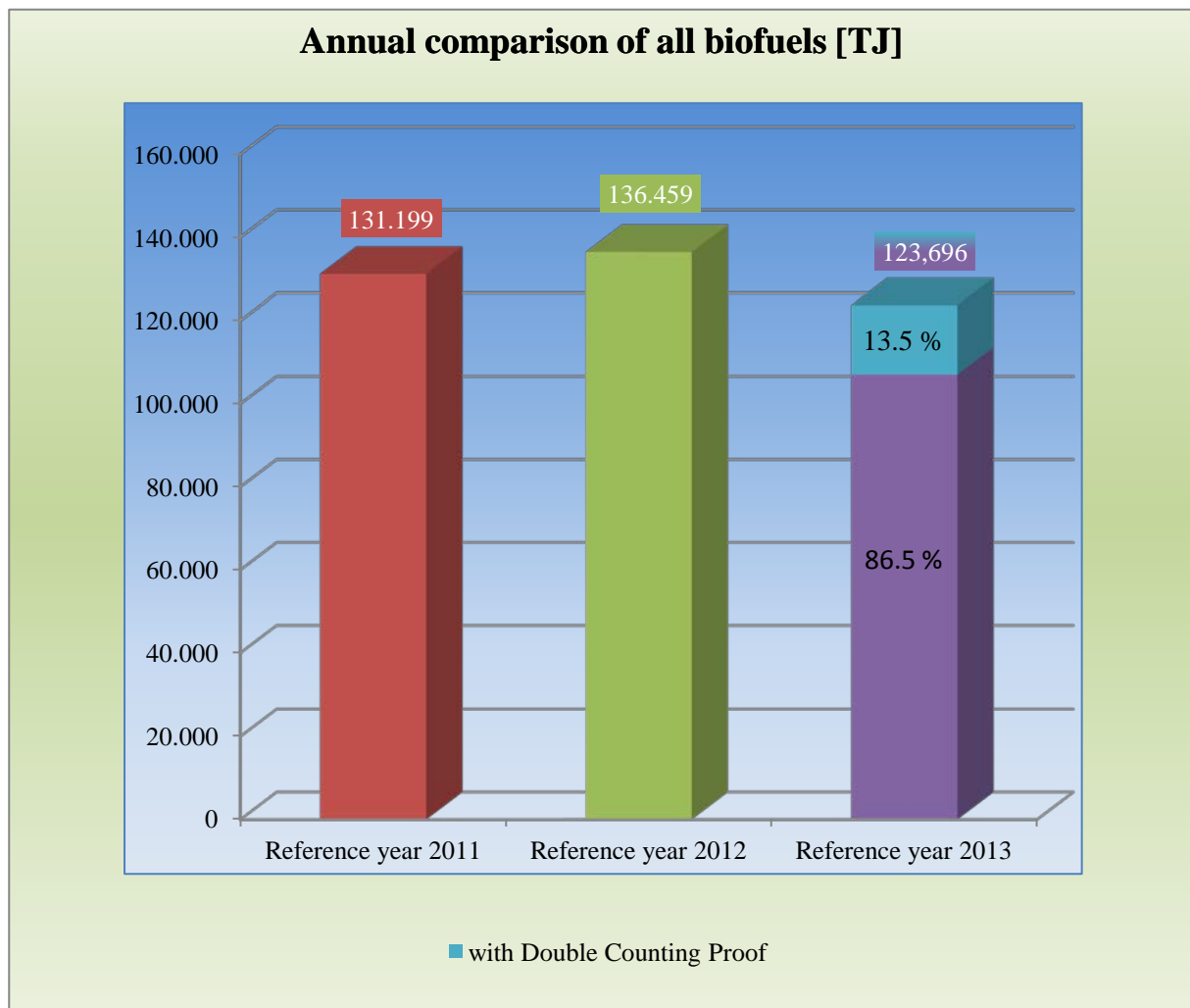


Chart Q-1

Chart Q-1 presents and compares the crediting applications for 2011, 2012 and 2013.

Although there was still an increase in the amount of biofuels in 2012 compared to the previous year, the amounts decreased in 2013. The decrease in 2013 is probably attributable to the fact that more biofuels available for double-weighting were introduced to the market after the revision of the 36th BImSchV. Tax relief, which used to be an alternative, is becoming ever less significant.

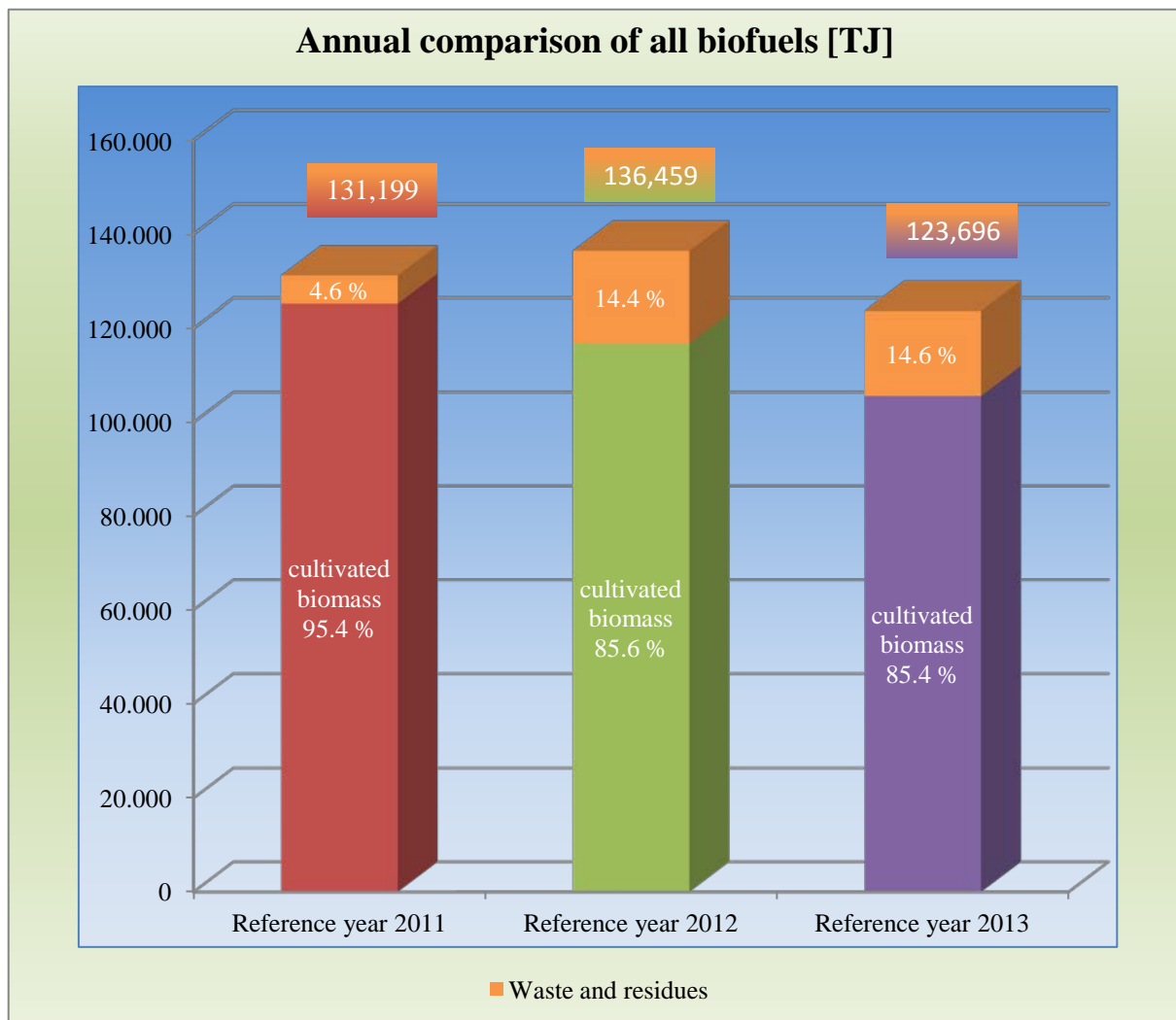


Chart Q-2

The share of waste and residual materials has been increasing since 2011. Double-counting proofs were issued for almost the entire amount of biofuels made of waste and residual materials in 2013 (see Chart Q-1).



1. Origin and raw materials of biofuels

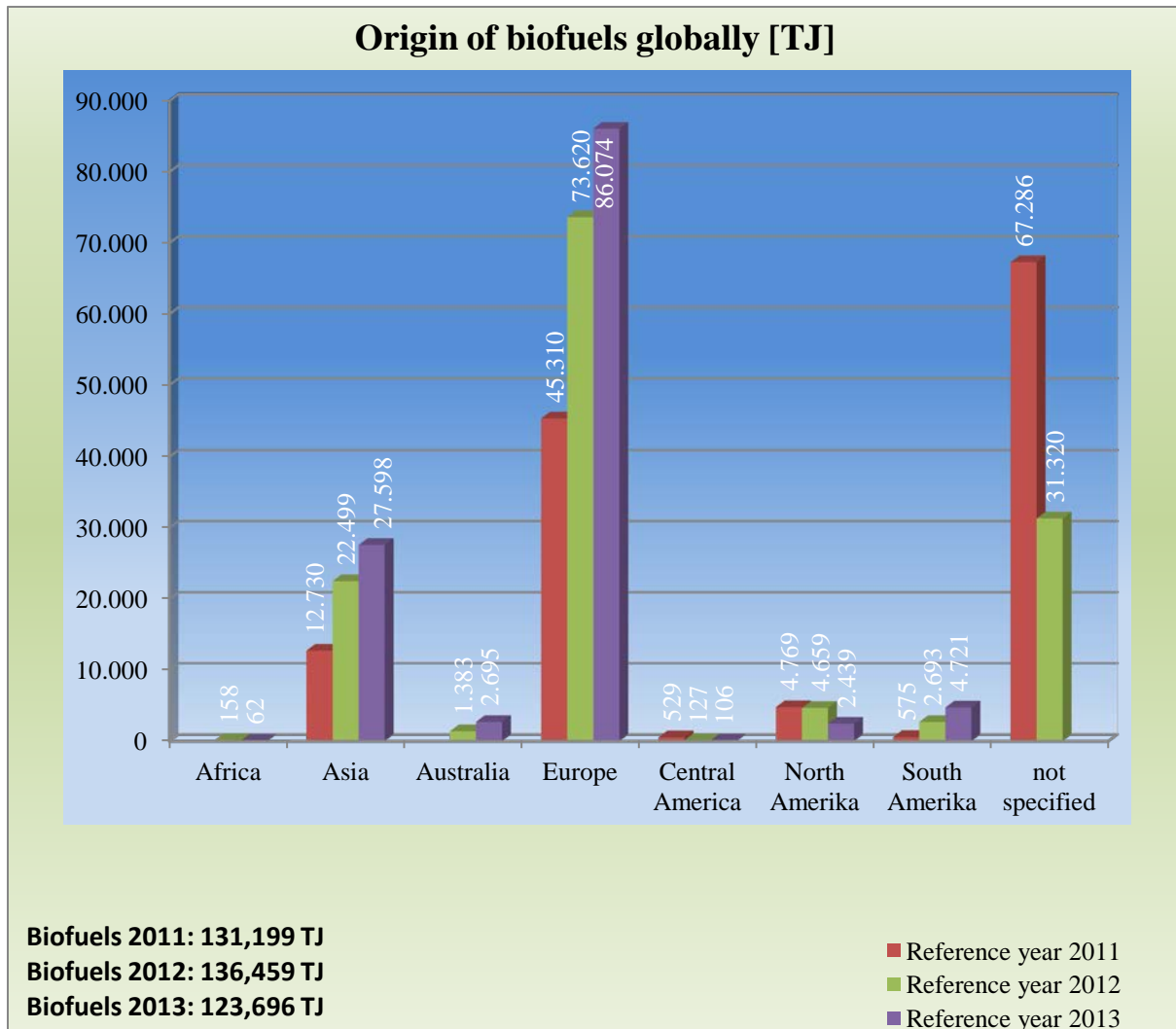


Chart Q-3

Viewed on the basis of the recorded proofs, the raw materials of the biofuels which were brought onto the German market mainly originated in Europe, followed by Asia, North America and South America. In 2011 and 2012 there still was an option not to enter details on the origin of biomass, but this option was no longer available in 2013.

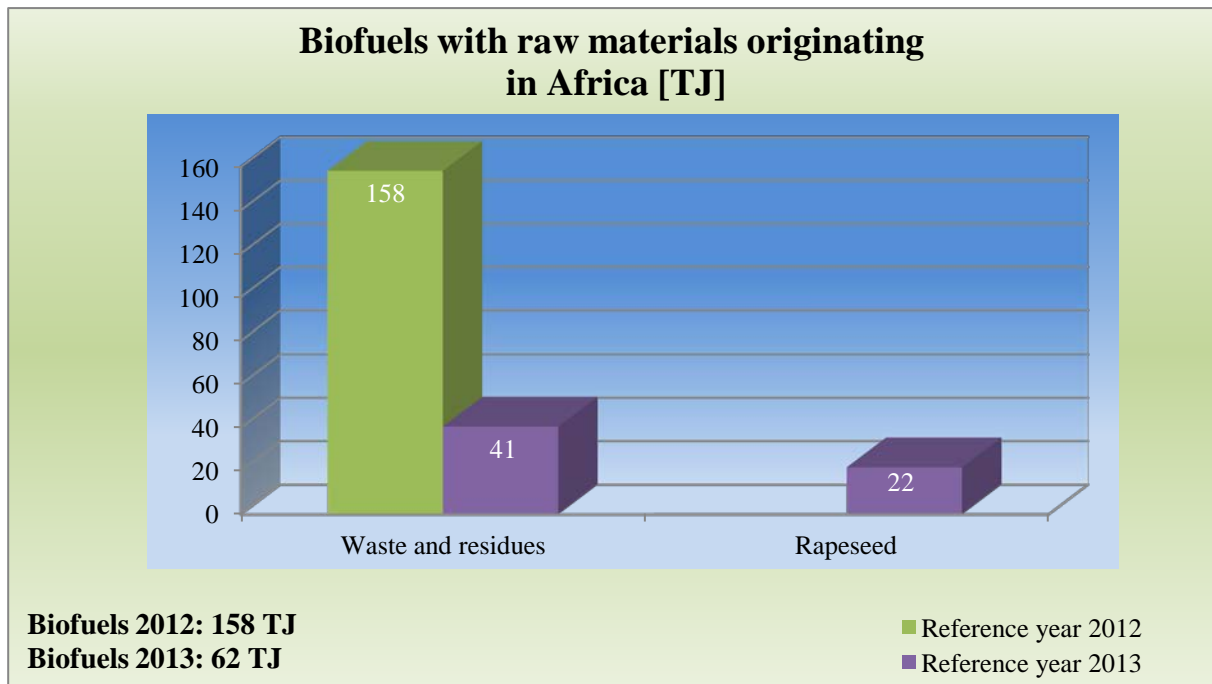


Chart Q-4

2012 was the first year in which the German market saw the introduction of biofuels with raw materials originating in Africa. These had mainly been produced from waste and residues.

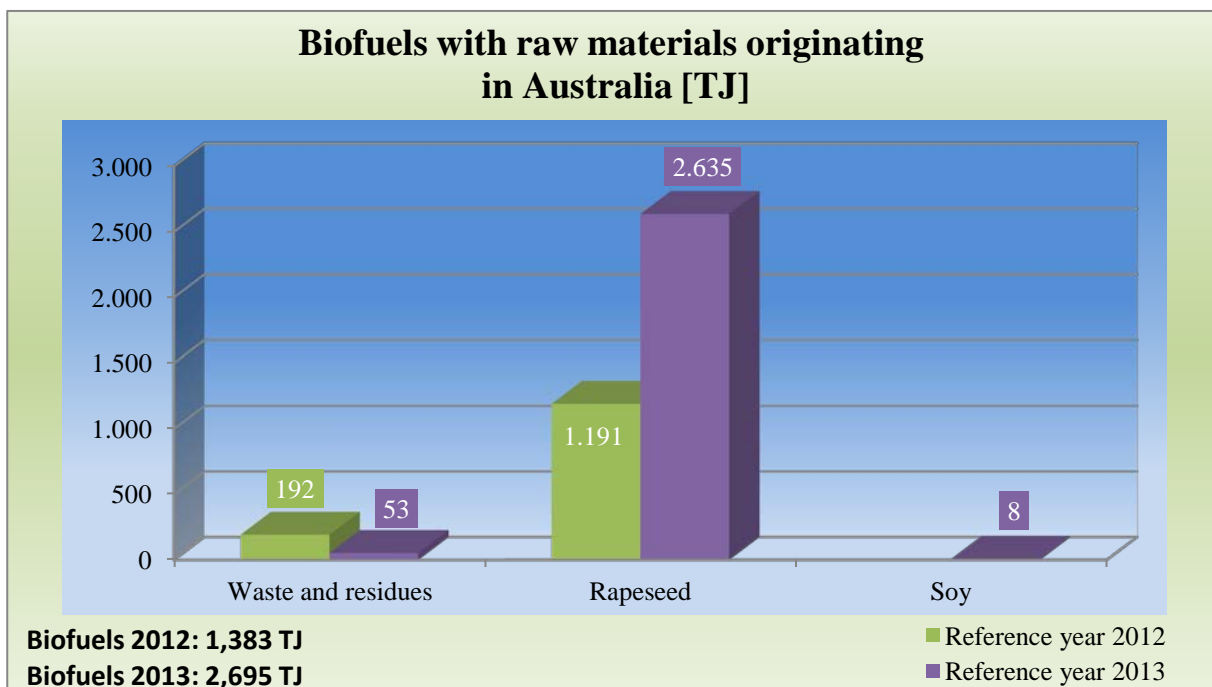


Chart Q-5

Biofuels originating in Australia were mainly made from rapeseed.

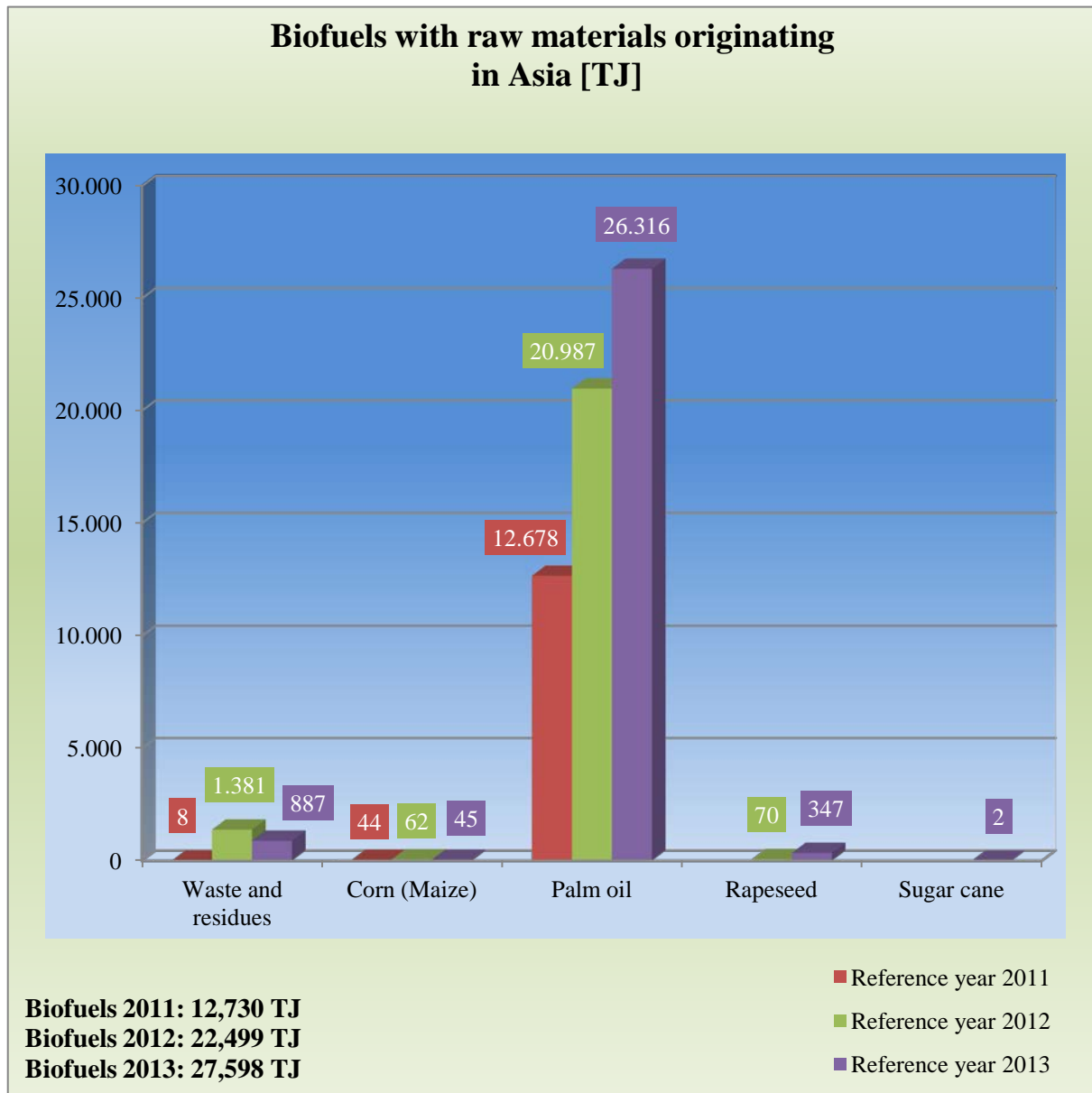


Chart Q-6

Among the raw materials for the production of biofuels originating in Asia, palm oil has the premium share. Biofuels from waste and residues are of minor importance. The share of other cultivated biomass was not significant, viewed in relation to the total amount.

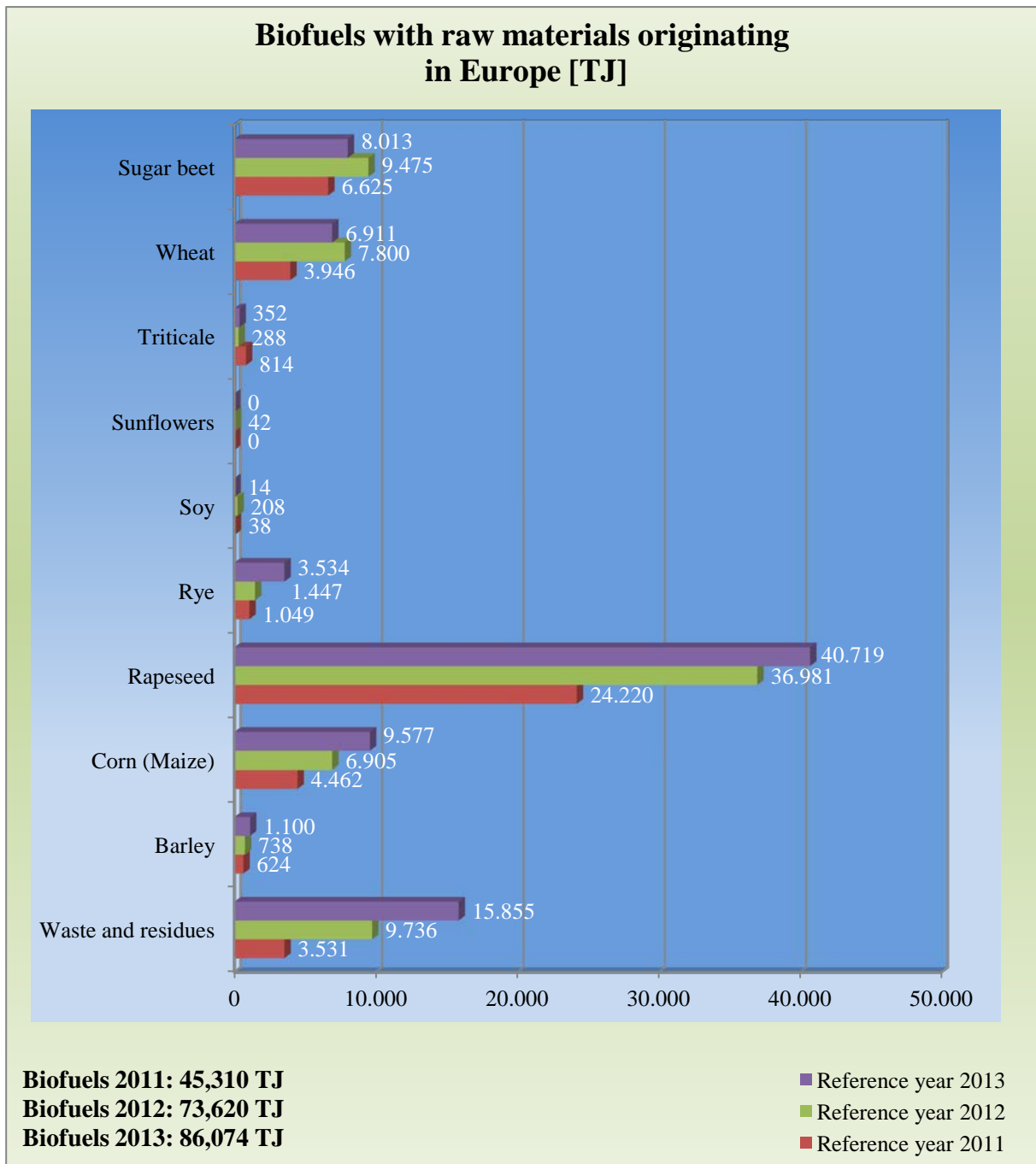


Chart Q-7

For all reference years, the most important raw material from Europe was rapeseed. There has been a remarkable increase in the use of waste and residues. Corn (Maize), sugar beet and wheat continue to be important raw materials.

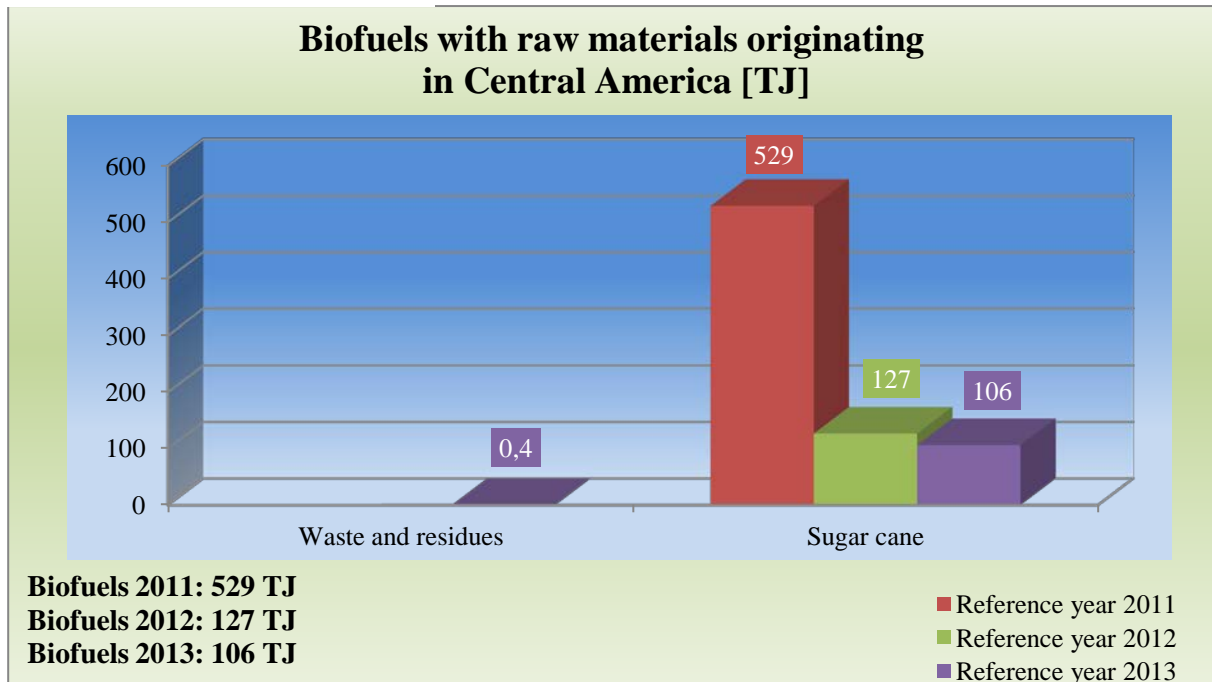


Chart Q-8

Sugar cane was the most important raw material for the production of biofuels originating in Central America.

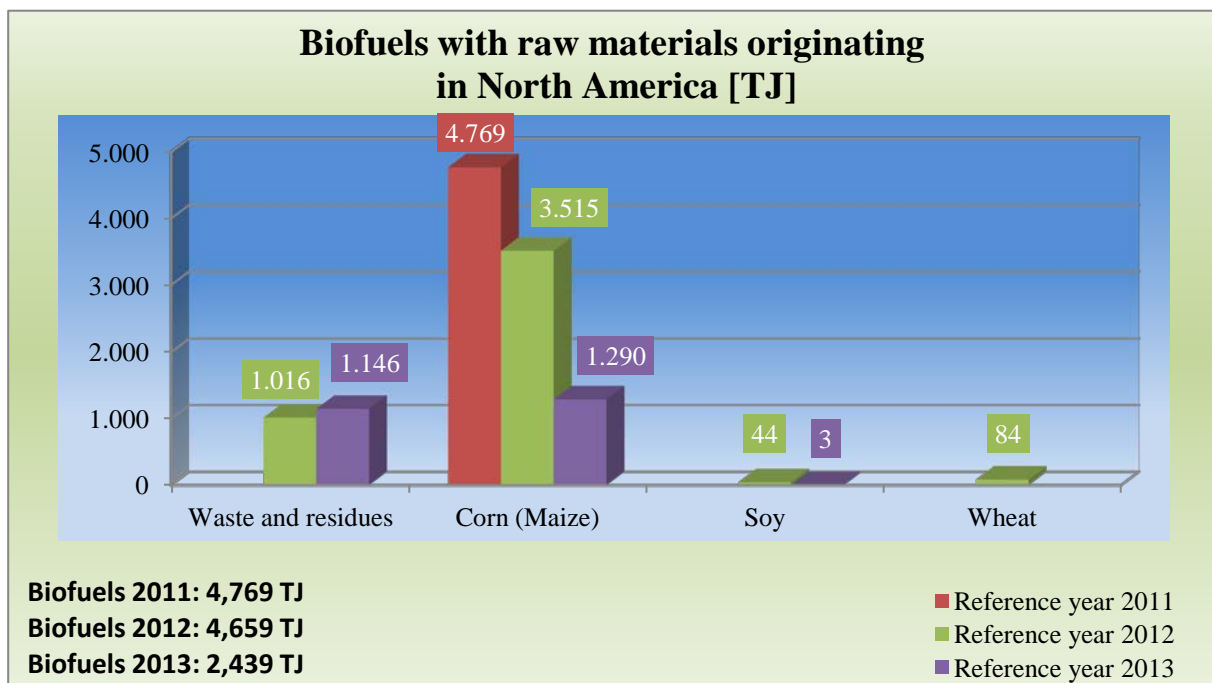


Chart Q-9

While the use of corn (maize) from North America as a raw material became less significant, an increasing amount of biofuels from waste and residues was brought onto the German market.

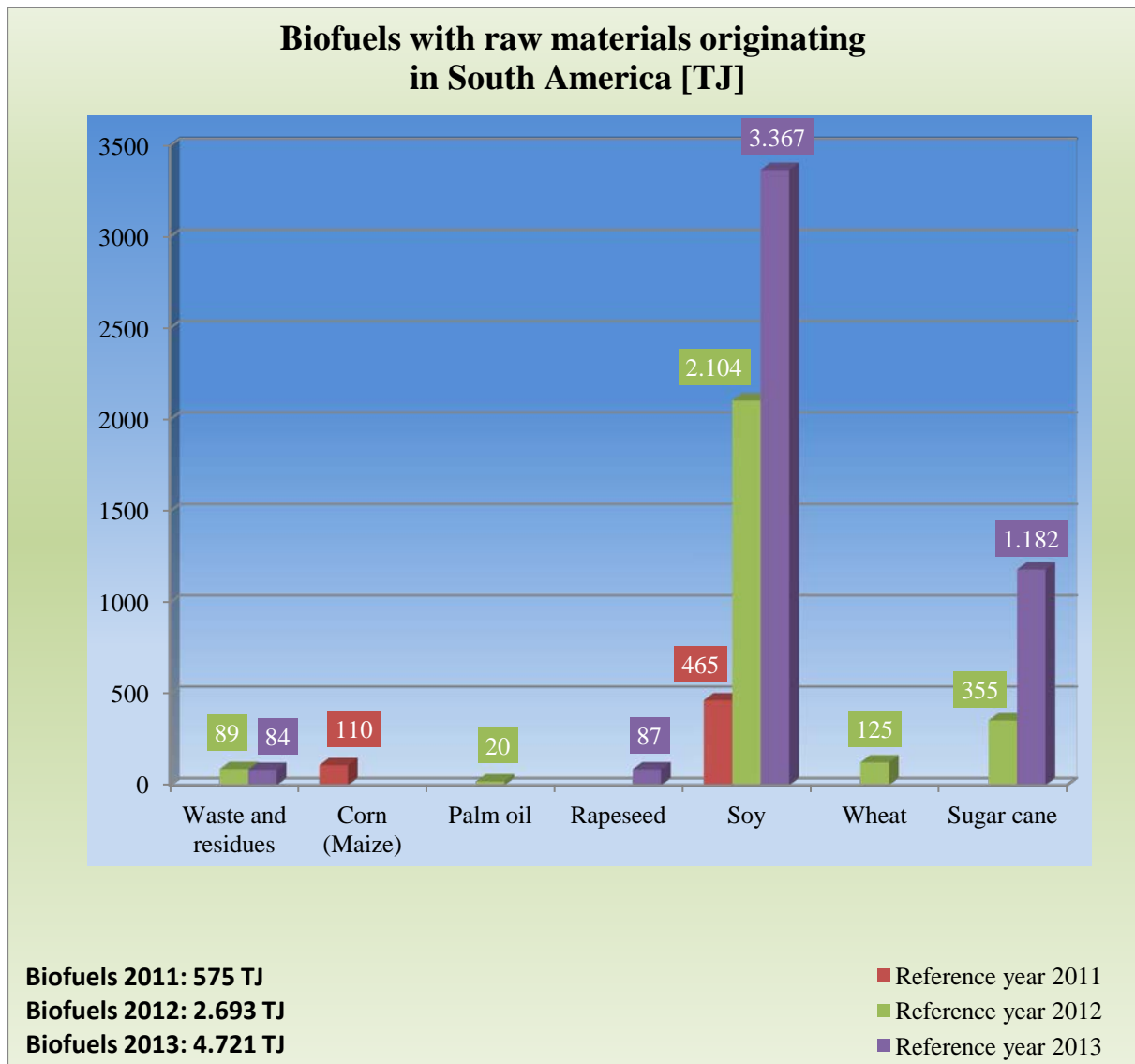


Chart Q-10

In 2011, raw materials of biofuels with an origin in producing countries of South America were of only minor importance. In the following years, 2012 and 2013, a considerable increase could be noted. While the amount of soya remained relatively constant during these years, the share of soy and sugar cane has increased significant.

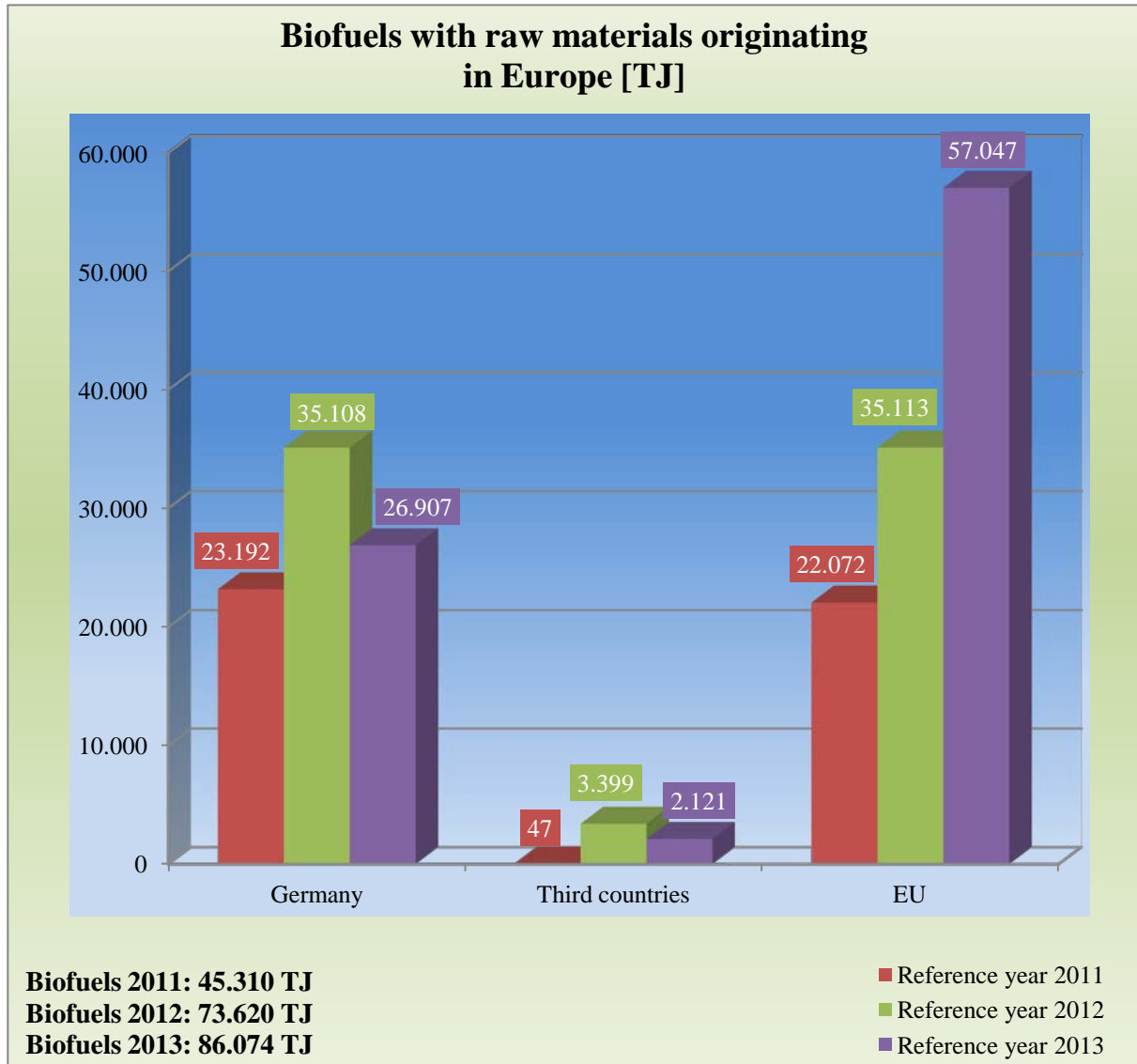


Chart Q-11

The share of biofuels with raw materials originating in Germany or in third countries declined in 2013 compared to the previous year. The percentage of raw materials originating in EU Member States continues to increase every year.



2. Quota year 2013 and origin of raw materials

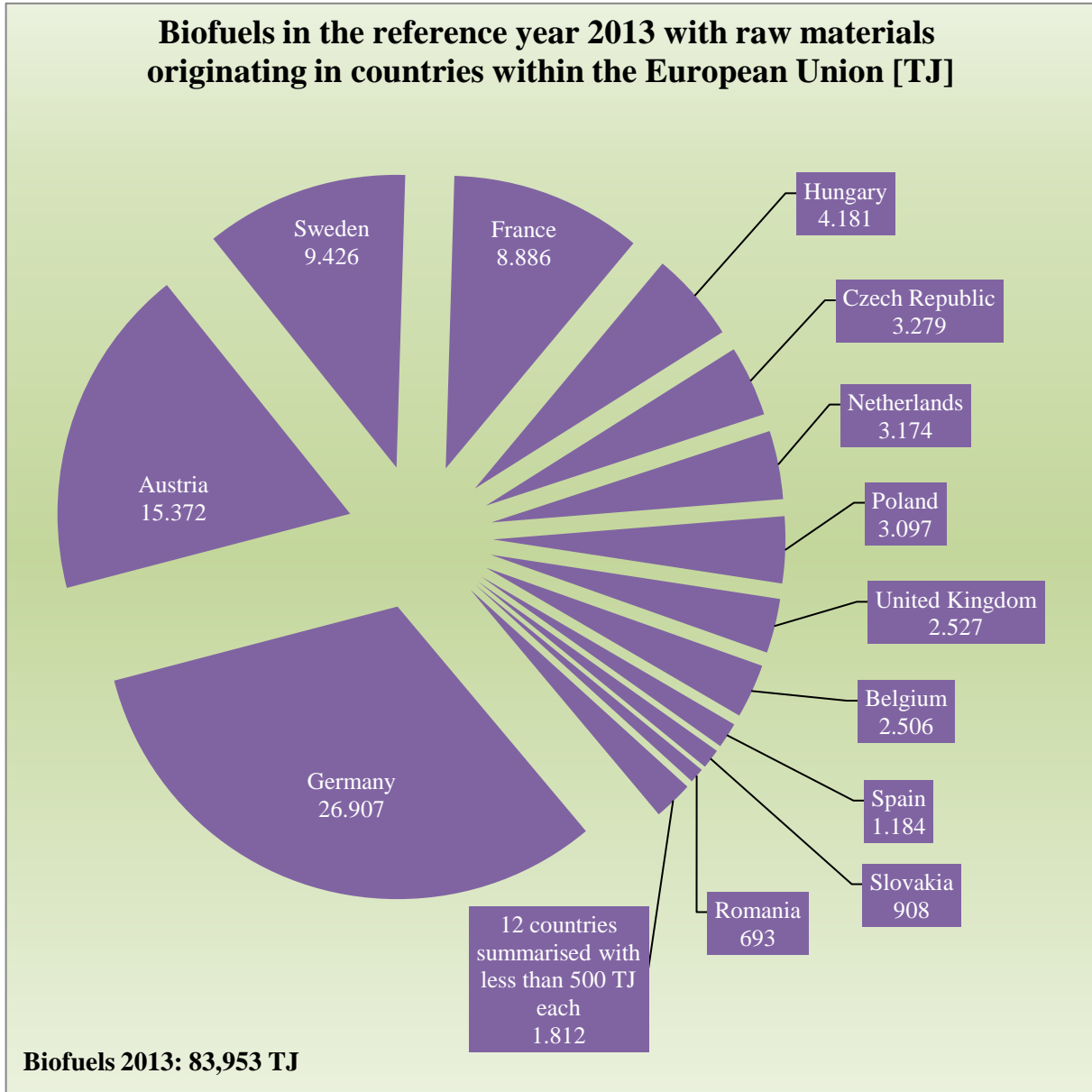


Chart Q-12

The main share of raw materials of biofuels from the European Union originates in Germany. Other EU Member States such as Austria, Sweden and France also contributed a rather large share.

The shares of the twelve countries summarised here are as follows:

Lithuania 491 TJ	Bulgaria 472 TJ	Slovenia 267 TJ	Latvia 259 TJ
Italy 149 TJ	European Union 72 TJ	Luxembourg 44 TJ	Denmark 21 TJ
Ireland, Republic of 19 TJ	Croatia 9 TJ	Finland 5 TJ	Estonia 4 TJ

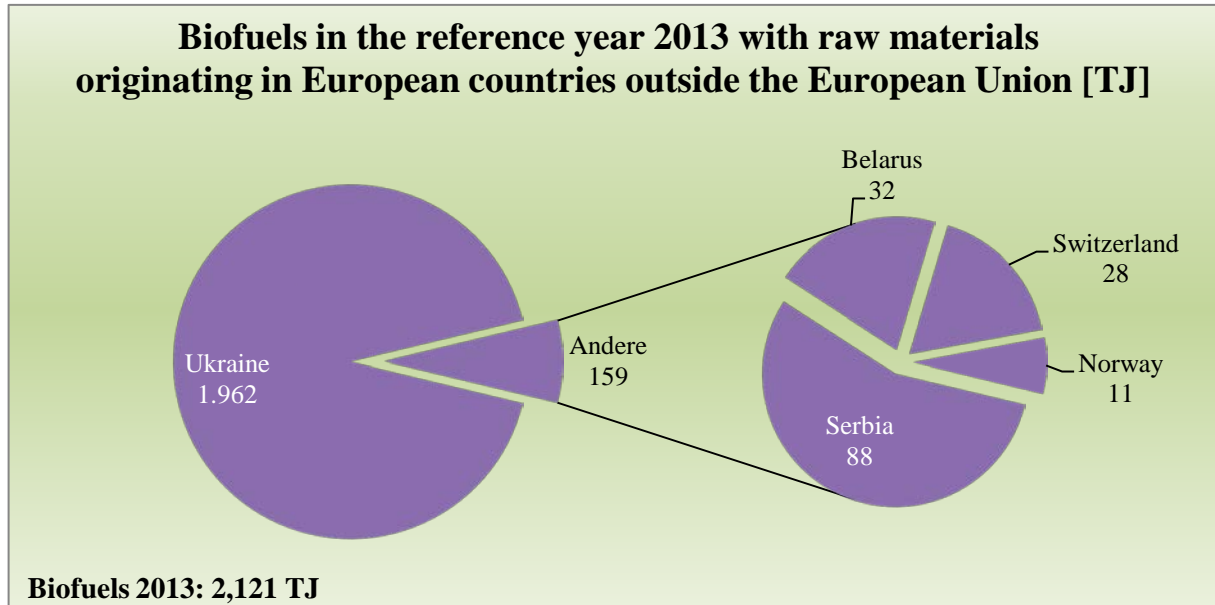


Chart Q-13

Of the biofuels with raw materials originating in Europe, but not in EU Member States, the greatest share was from Ukraine.



3. Biofuel types

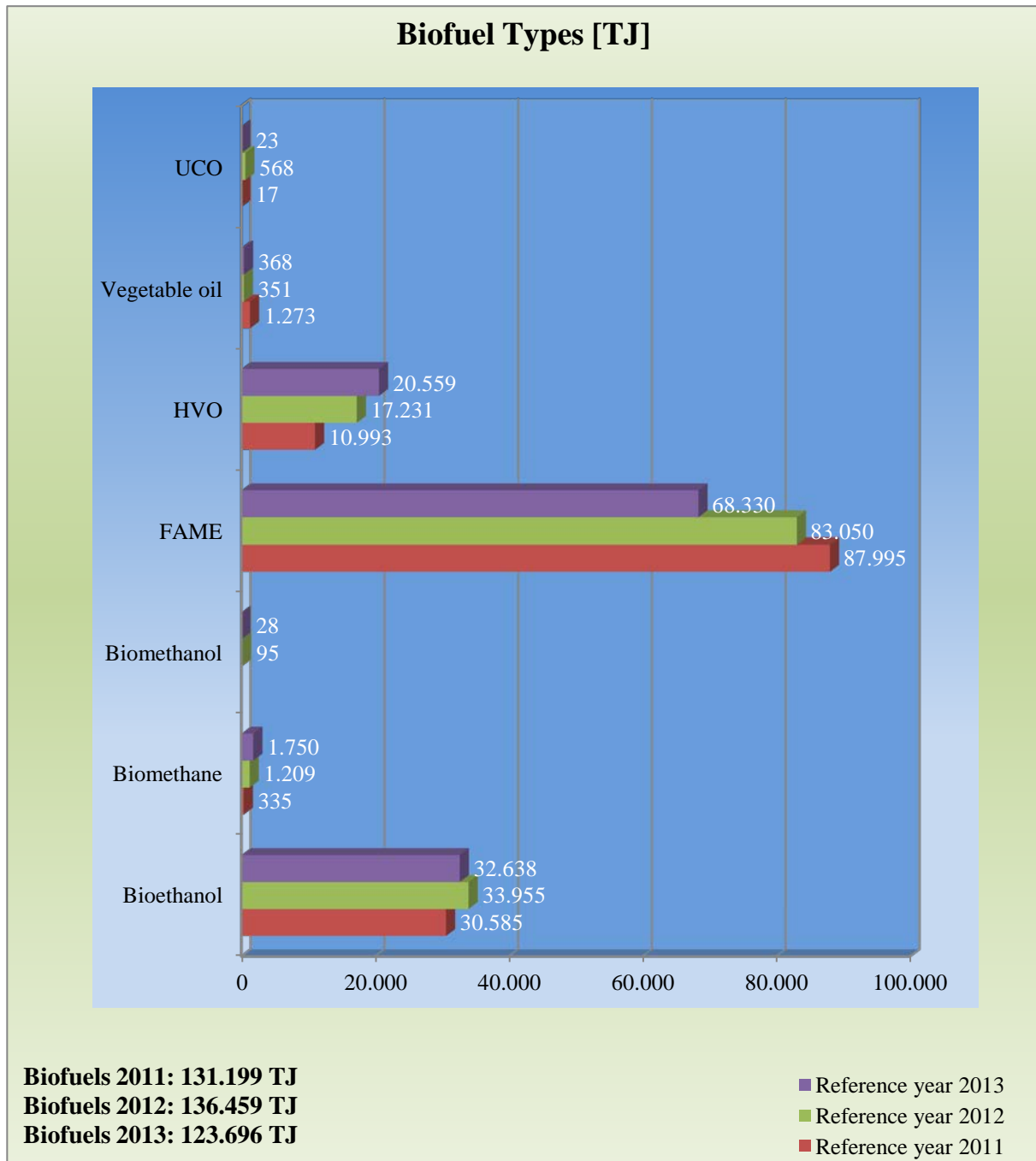


Chart Q-14

In all reference years, the biofuel type FAME had by far the largest share of the total amount of biofuels. The second largest share was provided by bioethanol. UCO, biomethanol and biomethane, on the other hand, were of only minor importance, particularly in 2013.

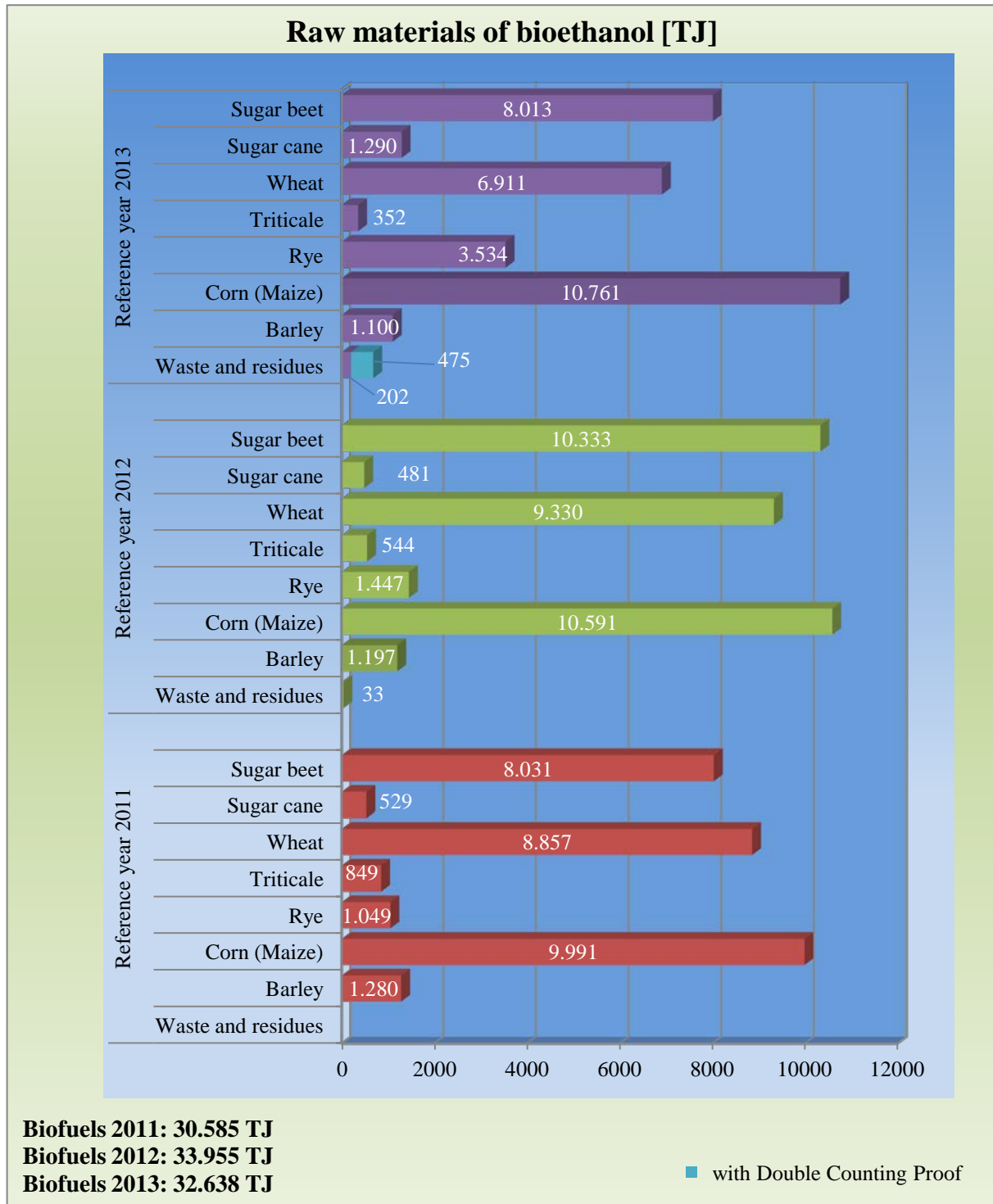


Chart Q-15

Maize, sugar beet and wheat were the most important raw materials for bioethanol in 2013. The share of bioethanol produced from sugar cane increased and mainly originated in South American countries (see Chart Q-10).

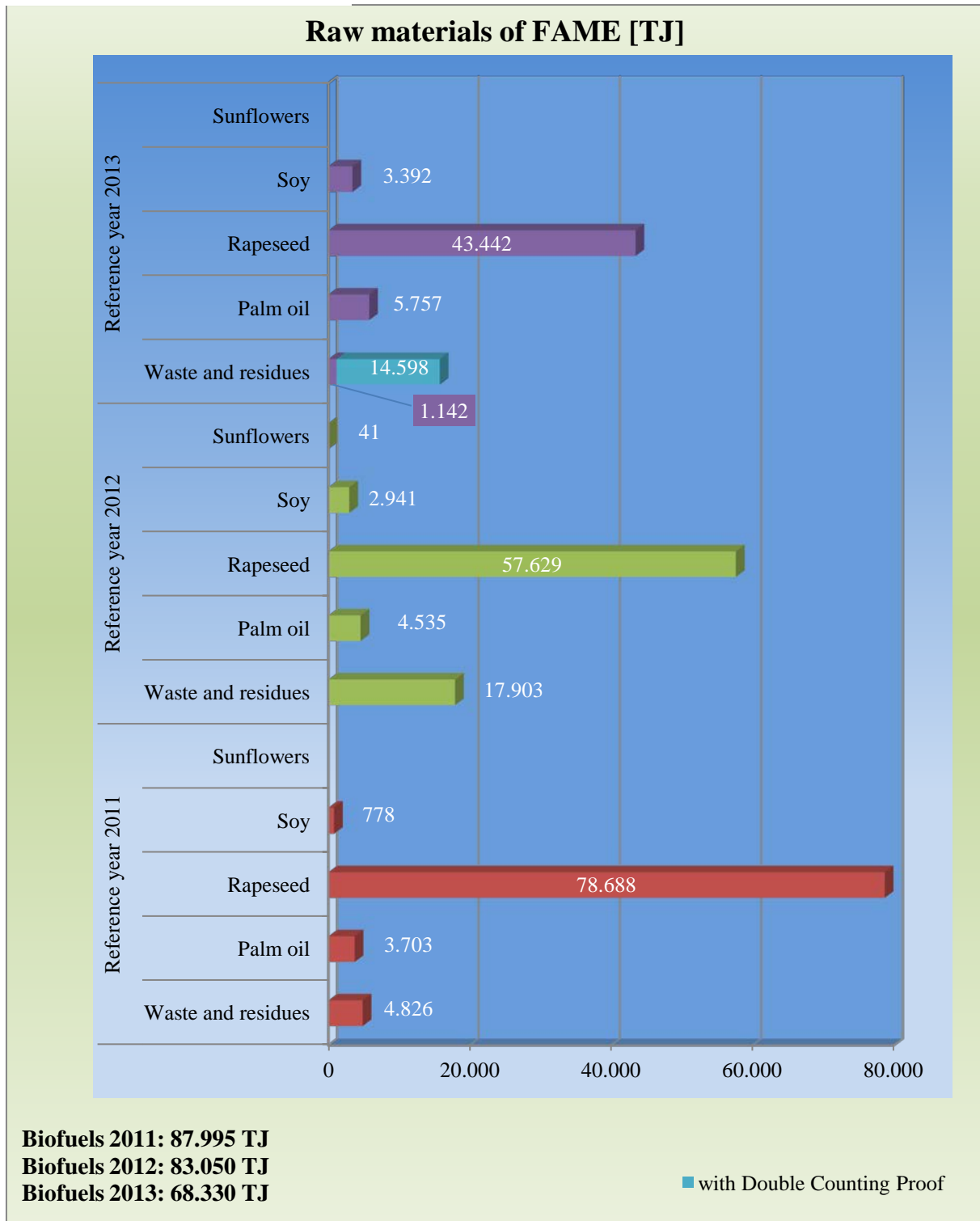


Chart Q-16

Biodiesel was mainly produced from rapeseed. However, the share of rapeseed has been declining for years.

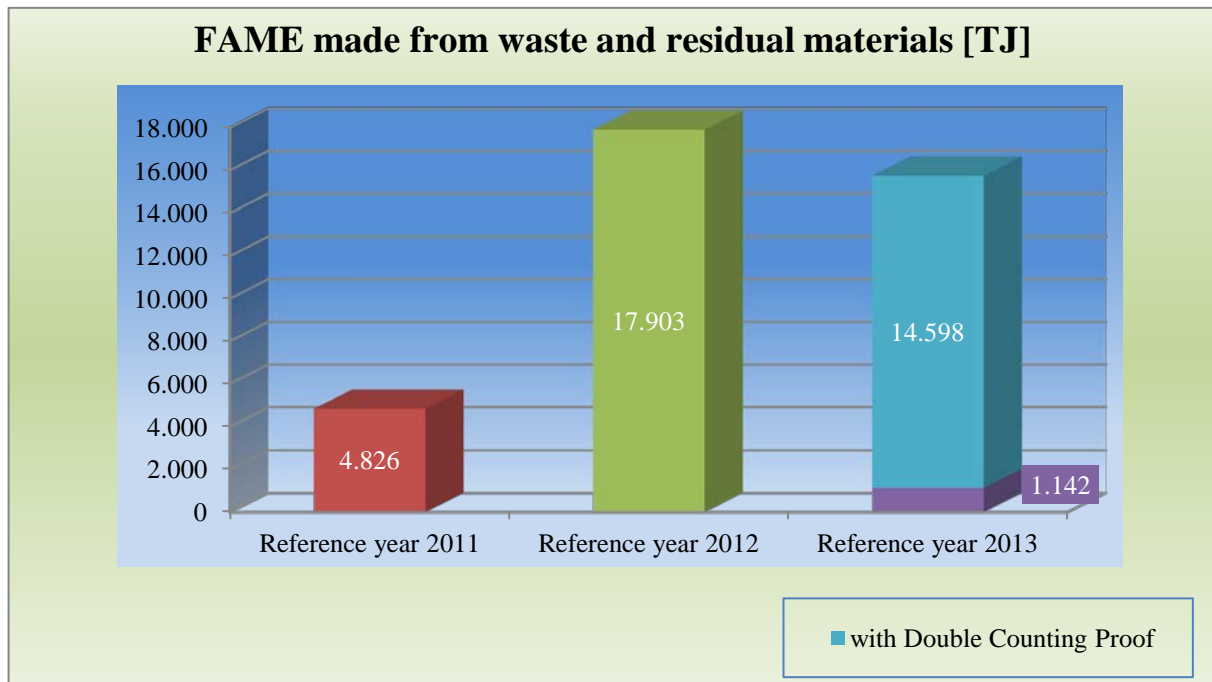


Chart Q-17

In 2013, double-counting proofs were issued for 92.7 % of the amount of FAME made from waste and residual materials and registered with Nabisy.

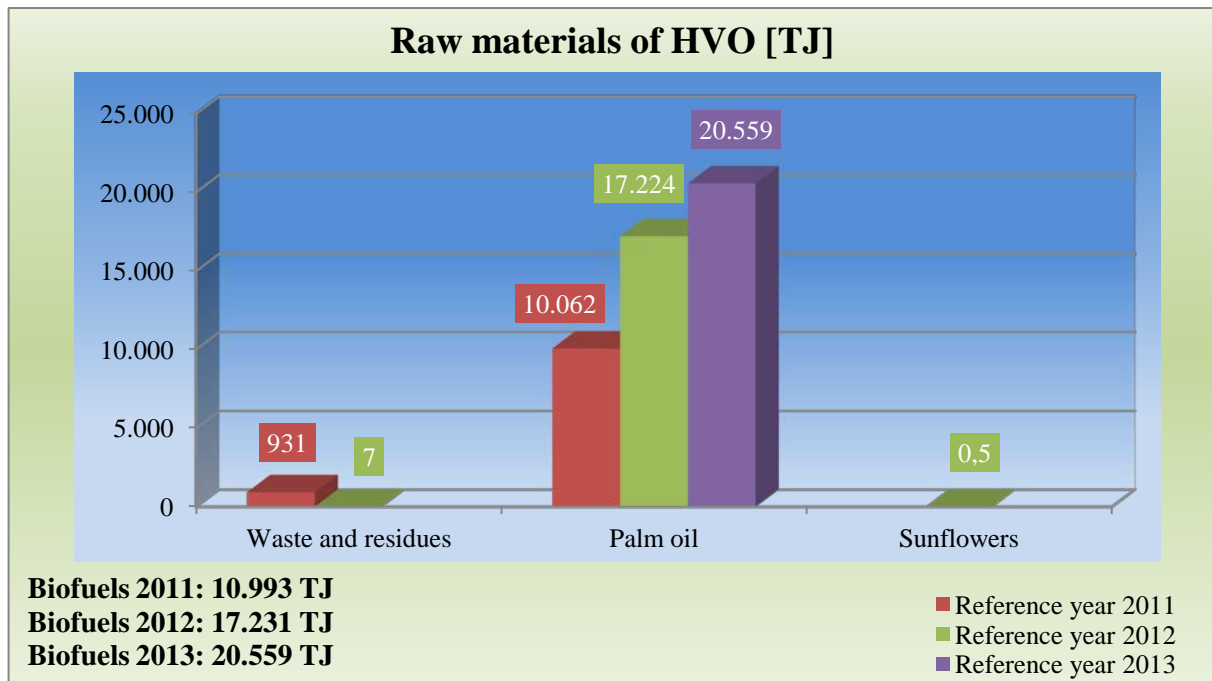


Chart Q-18

Hydrogenated vegetable oils (HVO) were predominantly made from palm oil.

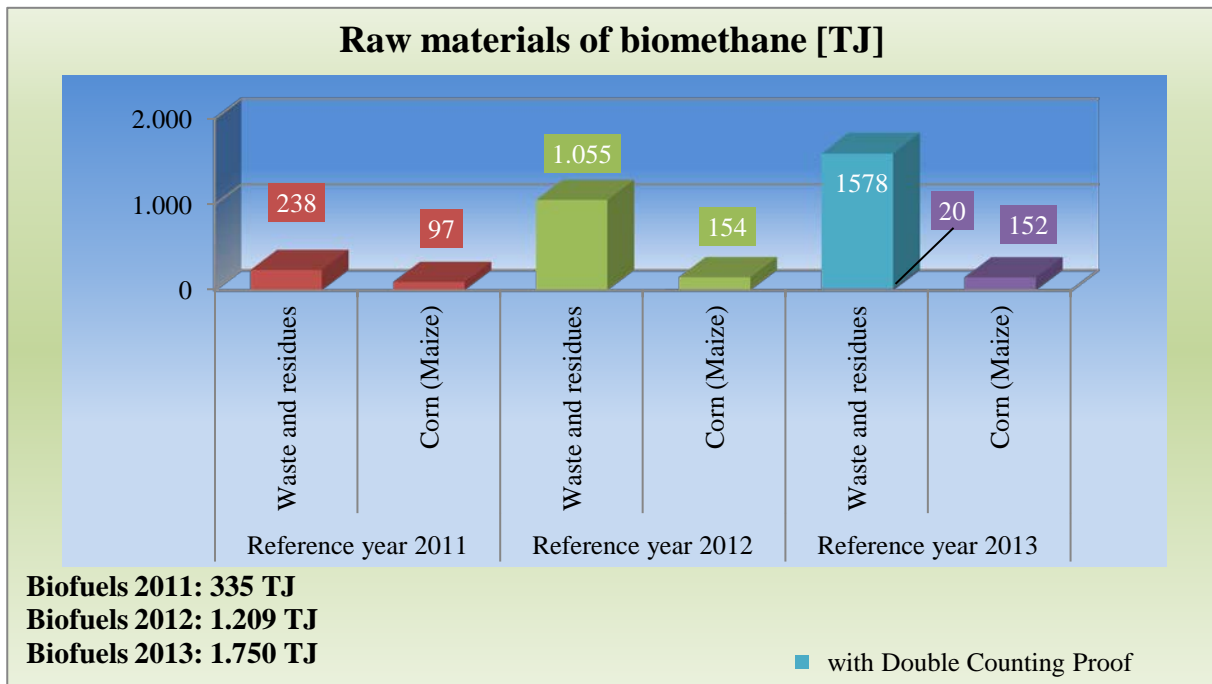


Chart Q-19

Biomethane as a fuel played a minor role in all years and was made from waste, residual materials and maize.

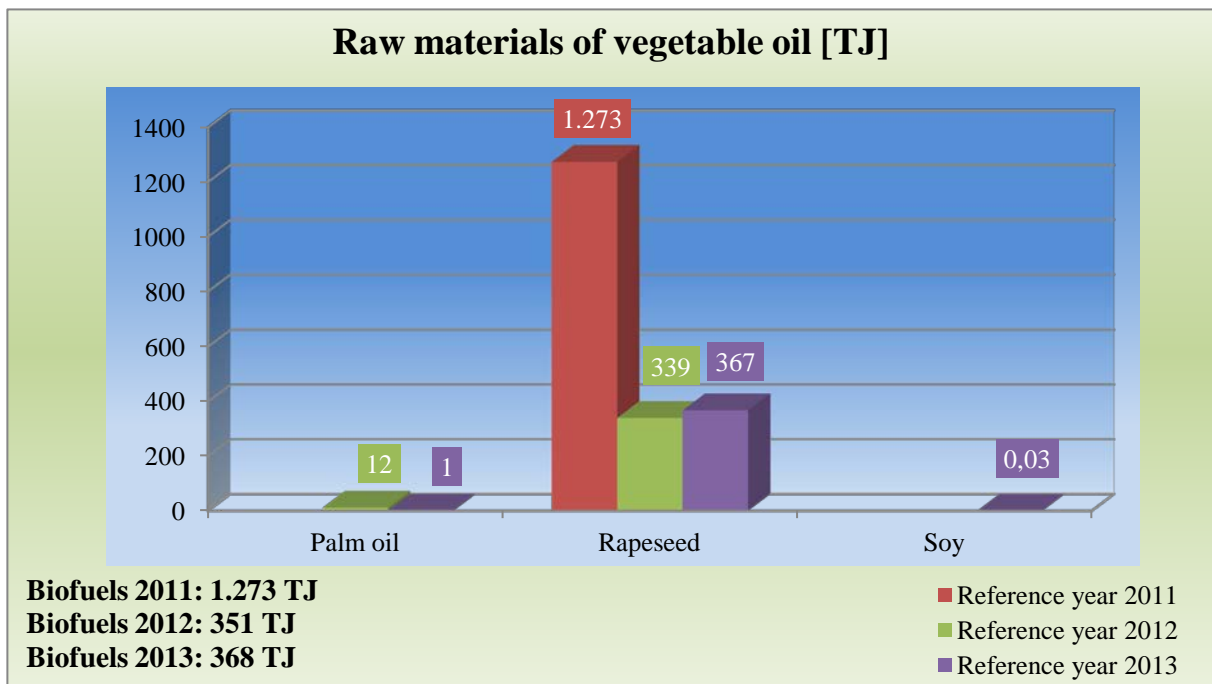


Chart Q-20

Vegetable oil as fuel was also of minor importance only in relation to the total amount. Rapeseed were the main ingredients.



4. Greenhouse gas emissions and savings potential of biofuels for which applications were submitted to be counted towards the biofuel quota obligation or to be considered for tax relief

One aim of the Renewable Energy Directive is the reduction of greenhouse gas emissions. Proofs of sustainability must contain details on the emissions of the product, pursuant to Article 18 BioSt-NachV and/or Biokraft-NachV. Only 'existing plants' could make use of the rule of having to prove the required greenhouse gas savings potential as of 1 April 2013 only. Thus, no emission details of existing plants which made use of this rule can be provided. The reference values underlying the emission calculation can be seen in Table 6.

	Total [TJ]	with emission details [TJ]	without emission details [TJ]	without emission details [%]
Reference year 2011	131,199	118,105	13,094	9.98 %
Reference year 2012	136,459	113,951	22,508	16.49 %
Reference year 2013	123,696	120,128	3,568	2.88 %

Table 6

The emission indicates the total amount of energy required (incl. the data for waste water, waste, transport, etc.) throughout the entire production process for the final product and is quoted as CO₂ equivalent.

In the evaluation and progress reports of 2011 and 2012, the emissions and related savings were calculated on the basis of the sustainability certificates entered into Nabisy.

The following charts exclusively refer to emissions of those biofuels for which applications were submitted to be counted towards the biofuel quota obligation or to be considered for tax relief.

For the calculation of the emission savings, the emissions generated were compared to the fossil reference value for biofuels. The value for the biofuel area of 83.8 g CO_{2eq}/MJ was used as a reference value.

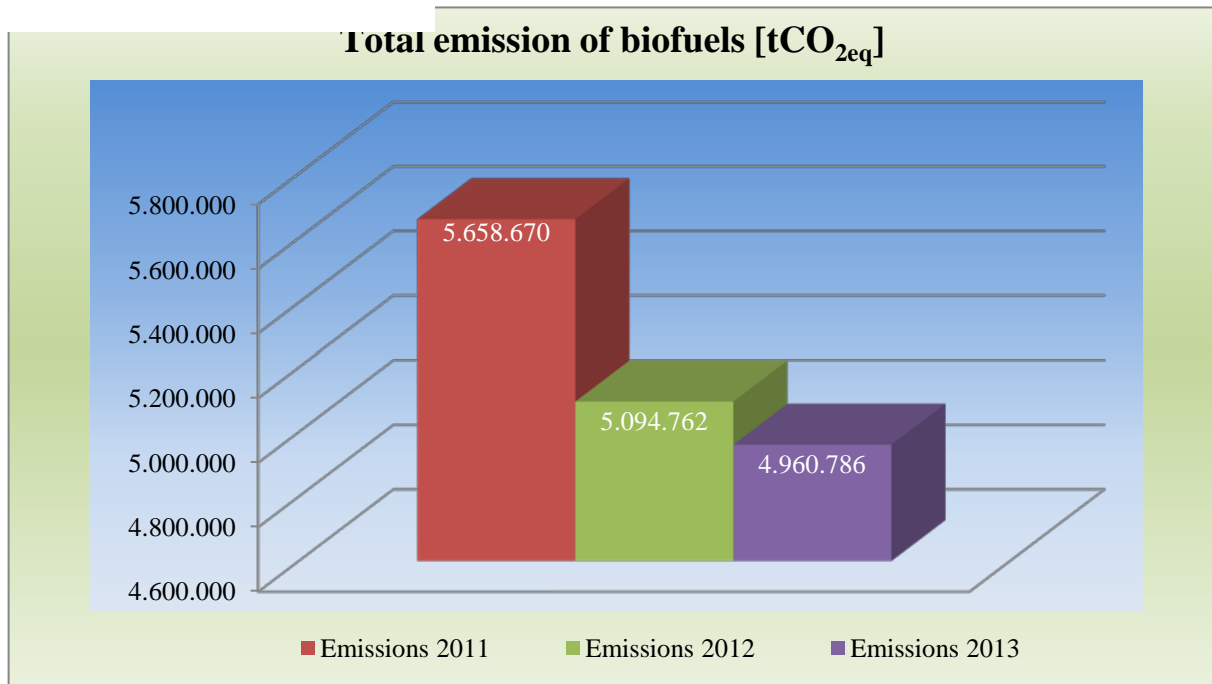


Chart Q-E-1

Because not all proofs of sustainability contain emission details, the reference value of the biomass is smaller than the amount actually cited in the application to be counted against the biofuel quota obligation or to be considered for tax relief. The reference values can be found in Table 6 (see above).

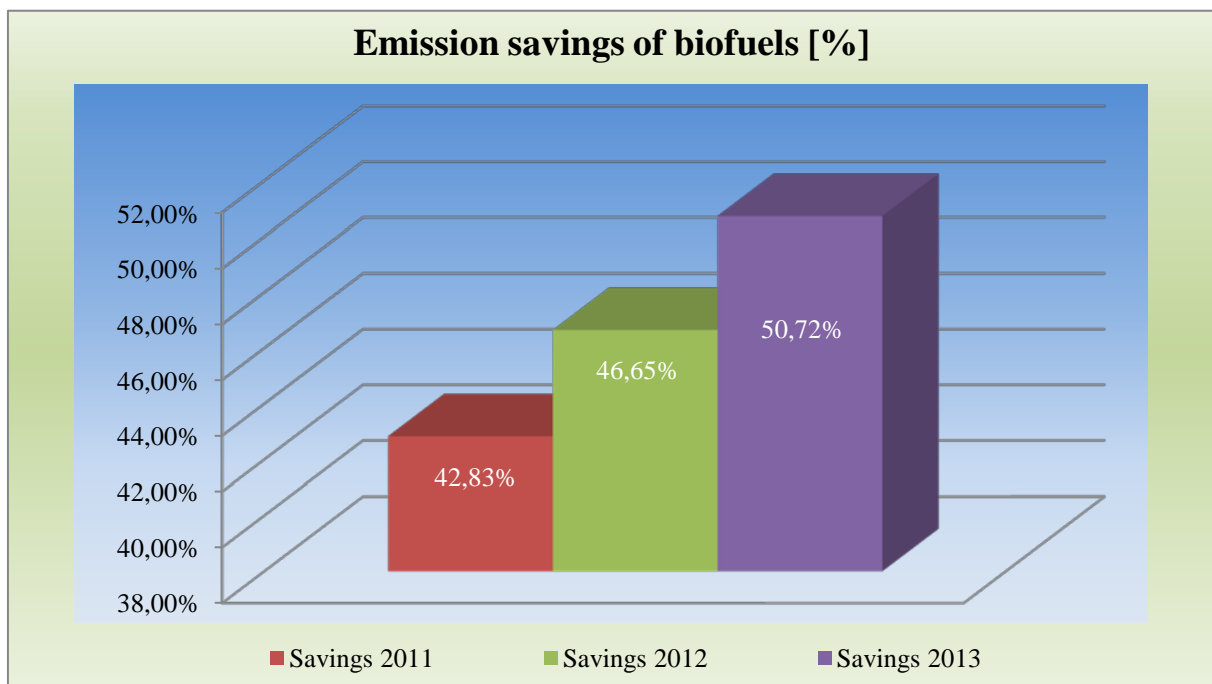


Chart Q-E-2

Emissions generated have declined continuously during the reporting years. This was one contributing factor to improving the total emission savings over the years, which amounted to 50 % in 2013.

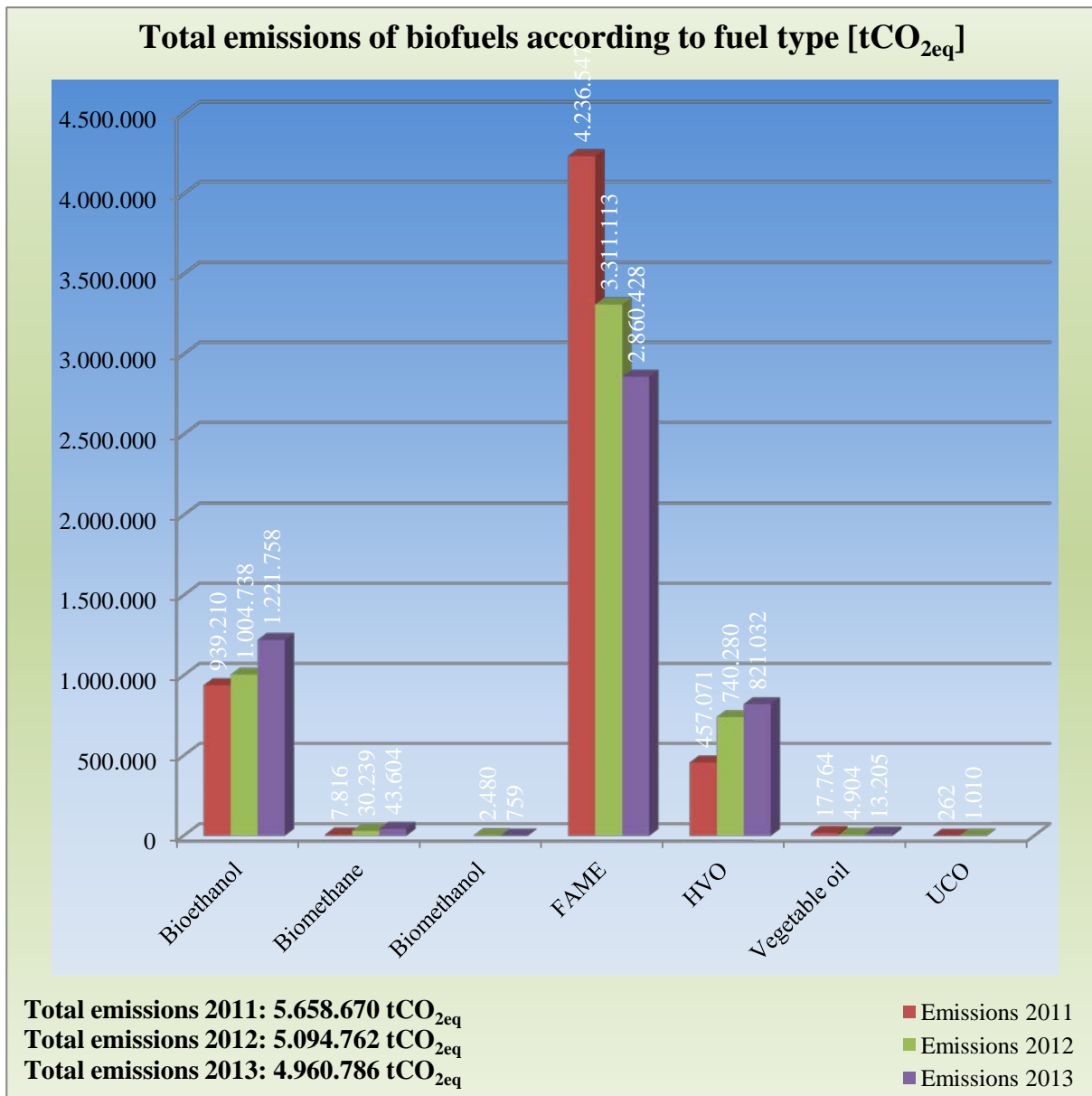


Chart Q-E-3

In all reporting years, FAME, bioethanol and HVO have the greatest shares of emissions generated. The varying levels of emissions reflect the amounts of the individual biofuels. For example, the decline in emissions of the biofuel FAME and the increase in emissions of bioethanol and HVO is connected to the amounts counted in the individual years (see Chart Q-16).

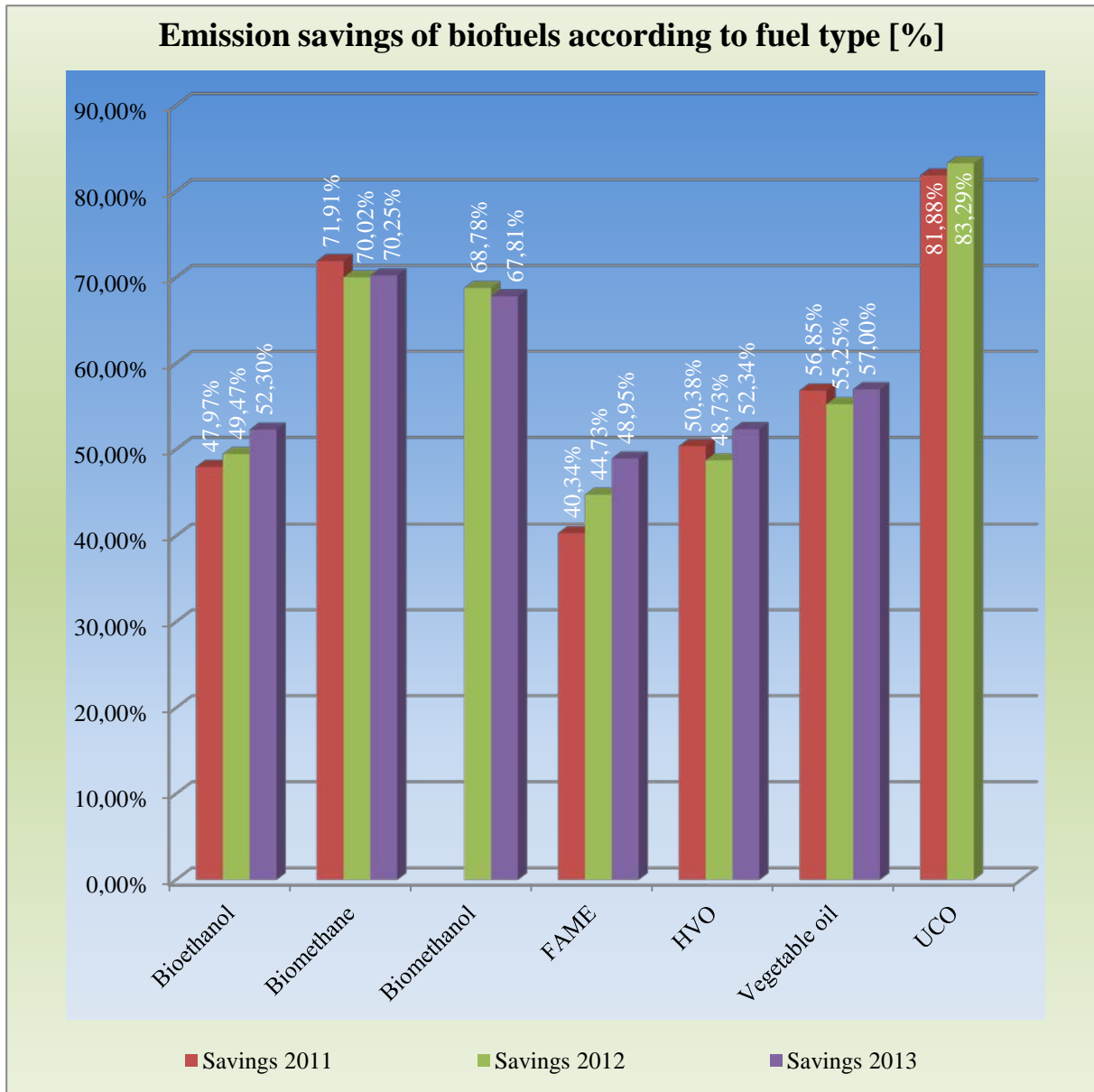


Chart Q-E-4

The greatest greenhouse gas reduction potential was achieved by UCO. However, the credited amount played a minor or non-existent role during the reporting years. FAME, the most important biofuel in terms of amounts, on the other hand, had the lowest savings potential.



VII. Bioliquids registered for remuneration pursuant of the Renewable Energy Sources Act

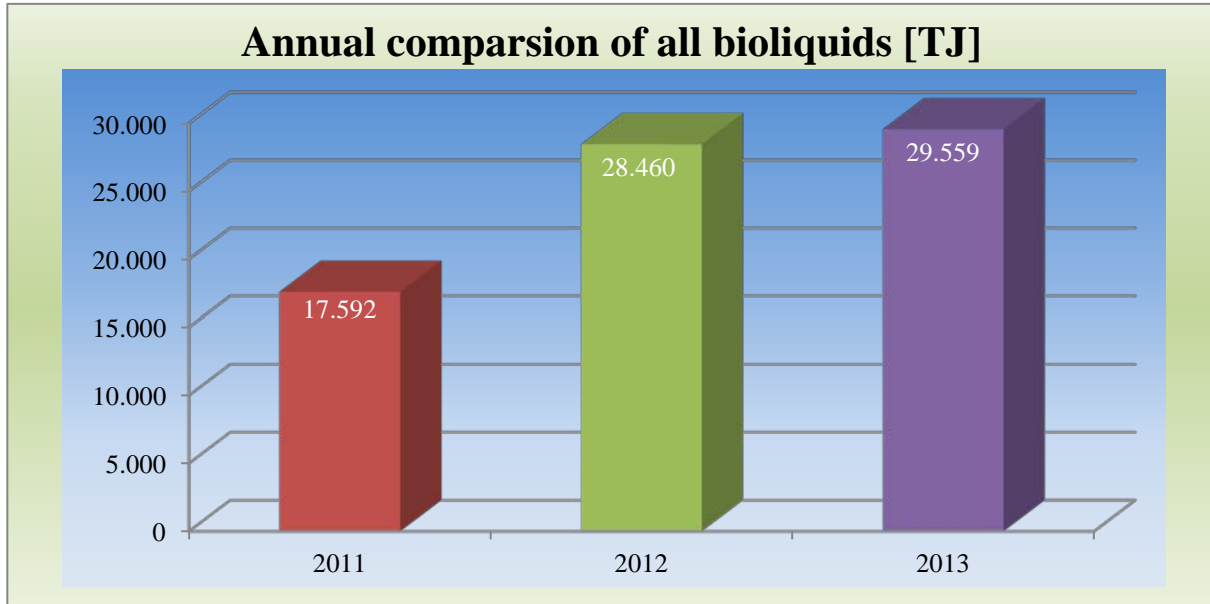


Chart EEG-1

While the amount of bioliquids used for the generation and feed-in of electricity increased strongly in 2012, the increase in 2013 was only marginal.

1. Origin and raw materials of vegetable oils

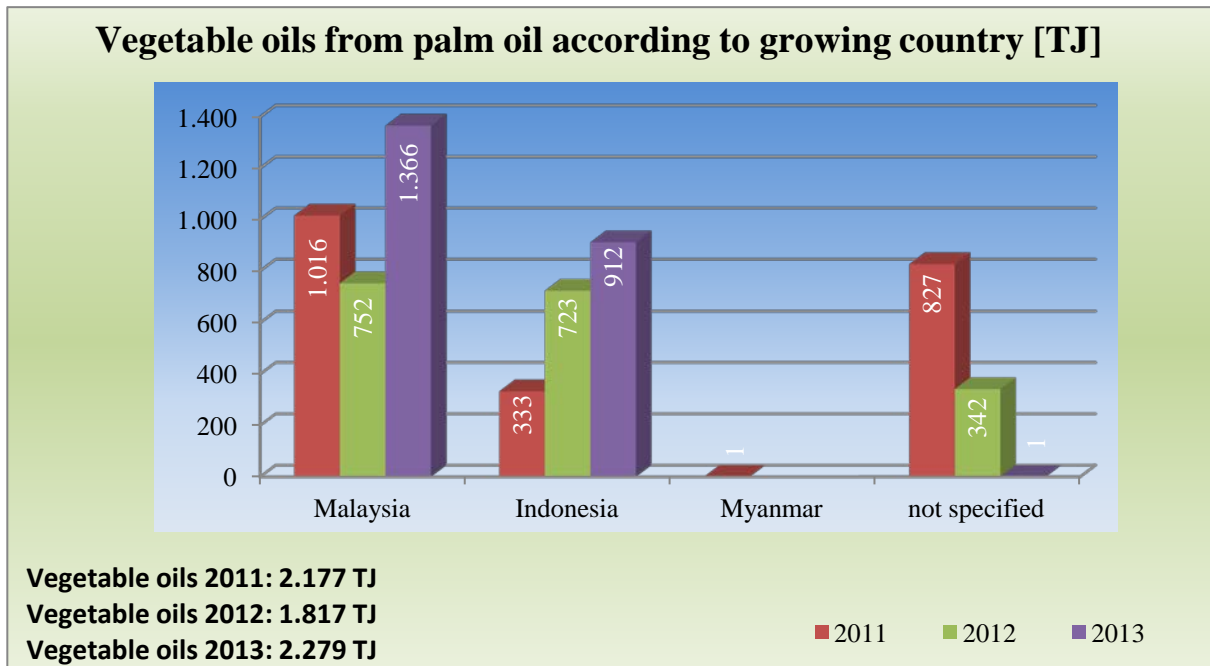


Chart EEG-2

Vegetable oils from palm oil exclusively originated in Asian countries.

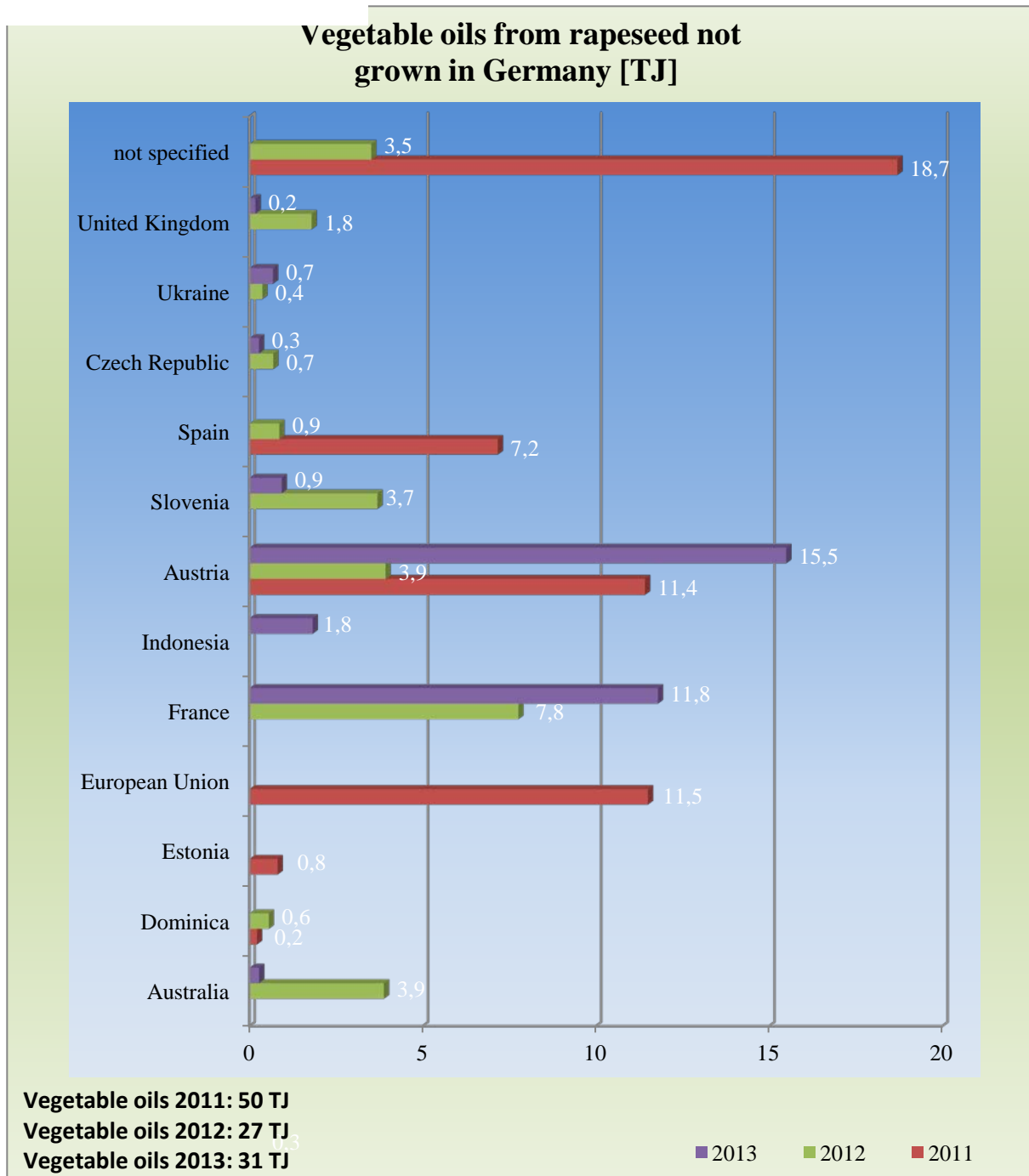


Chart EEG-3

Rapeseed grown in Germany has the largest share in the total amount of rapeseed oil used as bioliquid (not depicted in Chart EEG-3, see Table 7).

Grown in Germany 2011 Vegetable oil from rapeseed [TJ]	Grown in Germany 2012 Vegetable oil from rapeseed [TJ]	Grown in Germany 2013 Vegetable oil from rapeseed [TJ]
808	414	500

Table 7

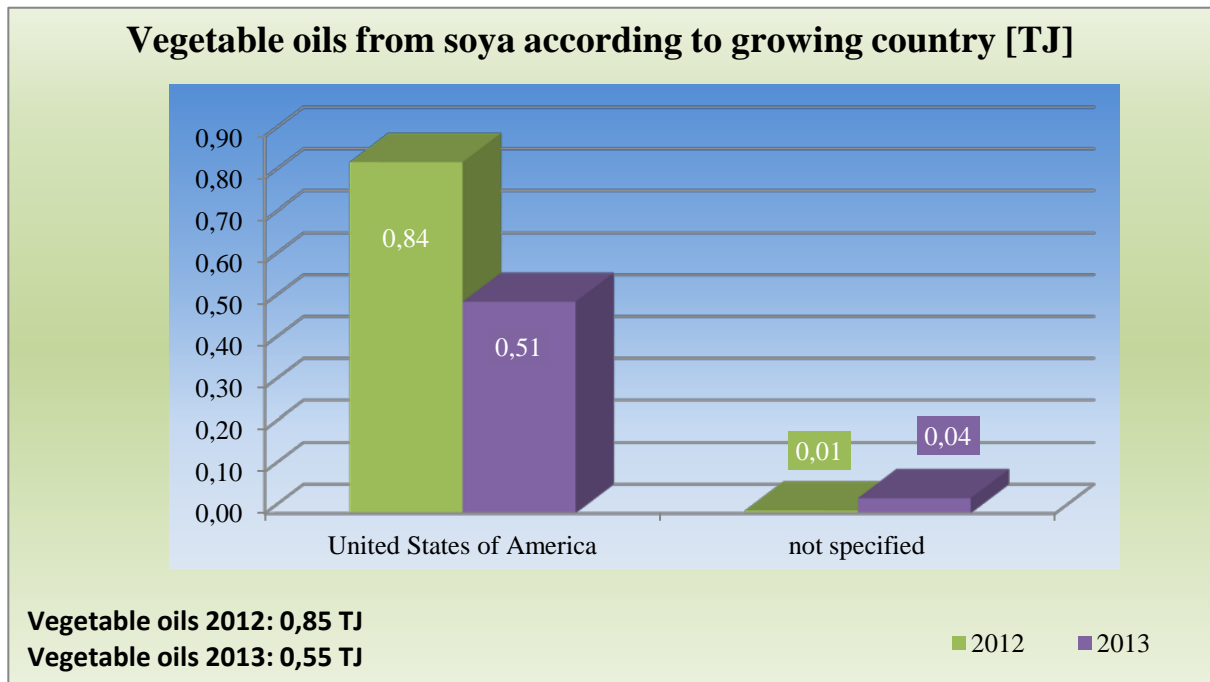


Chart EEG-4

Most of the vegetable oils from soya come from the United States.

2. Bioliquid types

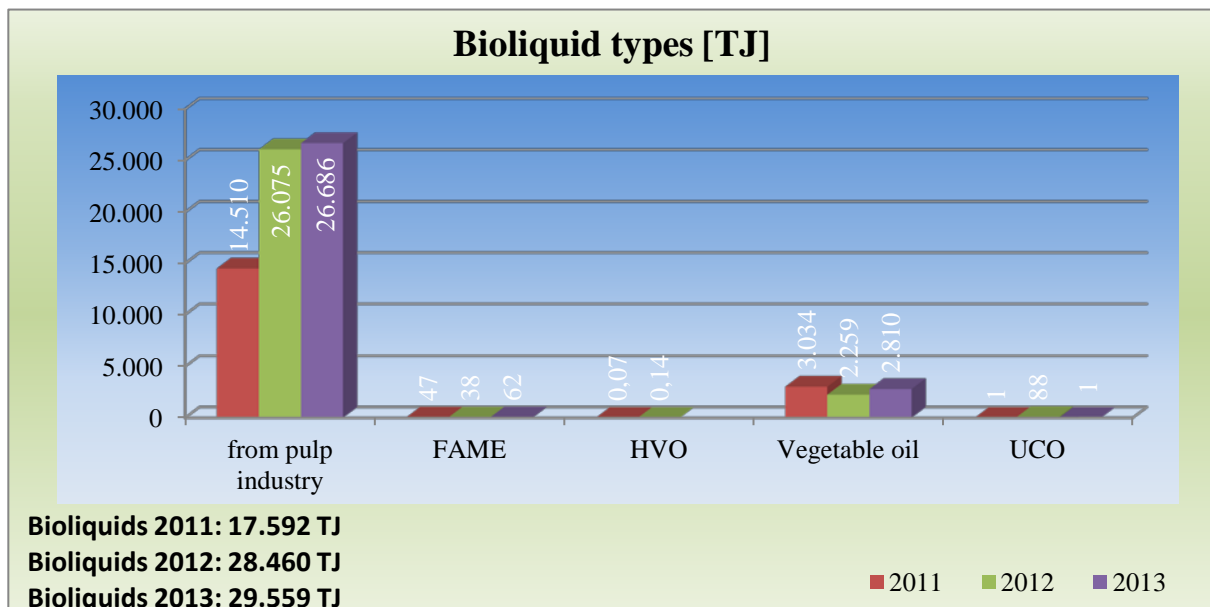


Chart EEG-5

Bioliquids from the pulp industry and vegetable oils are the most important bioliquid types.

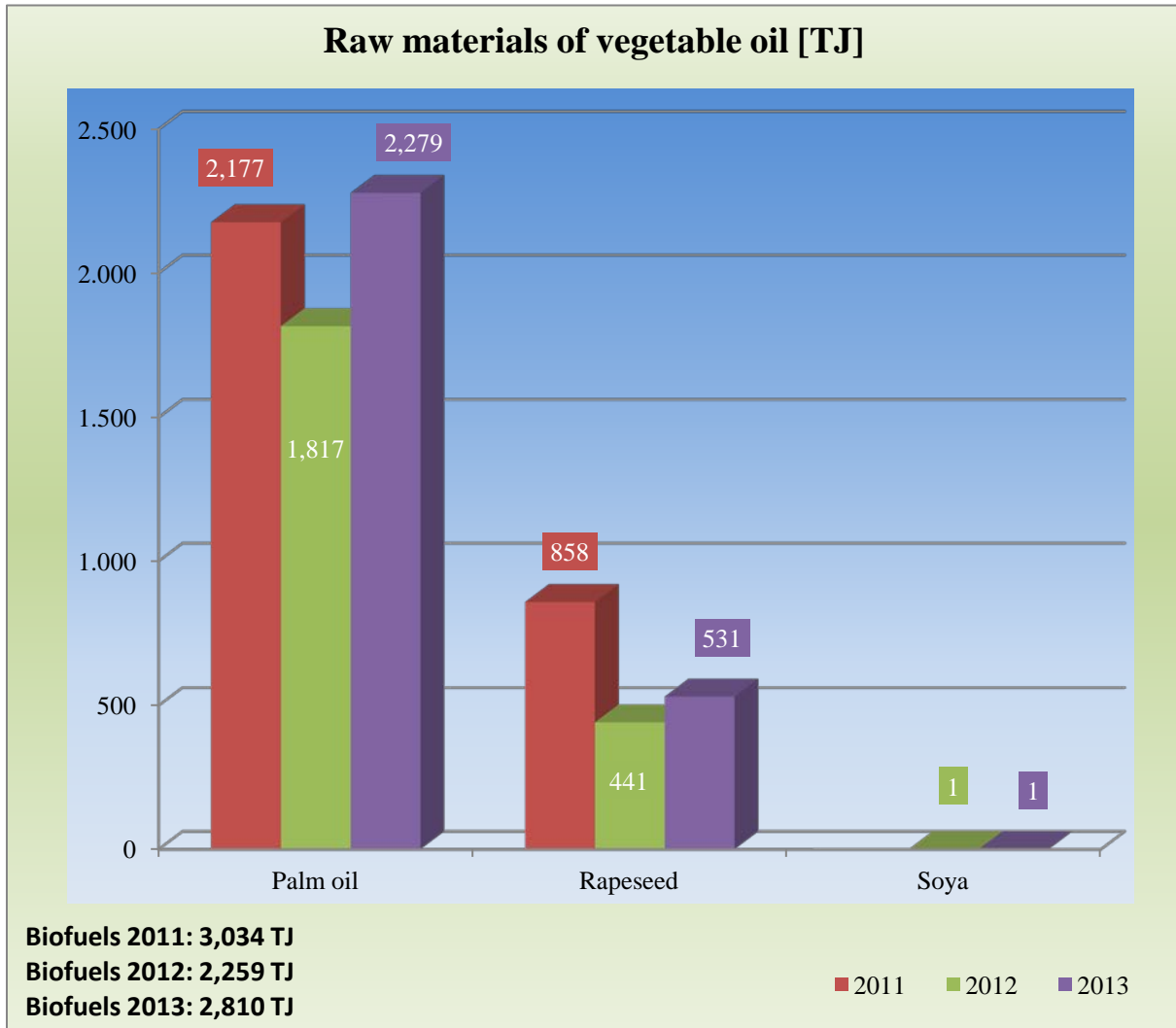


Chart EEG-6

Palm oil was the most important raw material for vegetable oils, followed by rapeseed.



3. Greenhouse gas emissions and savings potential of bioliquids registered for remuneration pursuant to the Renewable Energy Sources Act

The reference values underlying the emission calculation can be seen in Table 8.

In the calculation of the emission savings, the emissions generated were compared to the fossil reference value for bioliquids. The value for electricity of 91 g CO_{2eq}/MJ was used as a reference value.

	Total [TJ]	with emission details [TJ]	without emission details [TJ]	without emission details [%]
2011	17,592	17,528	64	0.36 %
2012	28,460	28,335	125	0.44 %
2013	29,559	29,440	119	0.40 %

Table 8

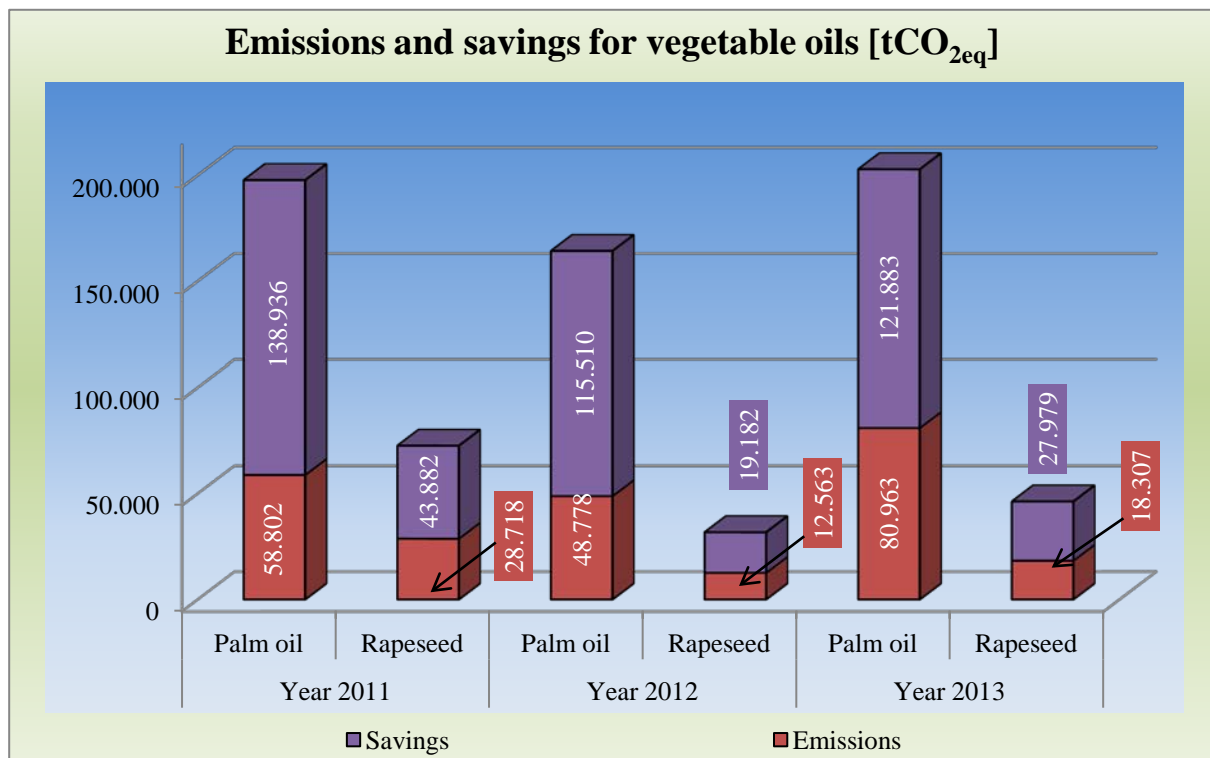


Chart EEG-E-1

The chart illustrates the comparison between actual emissions and the emissions which would have been generated if fossil fuels had been used instead of bioliquids.

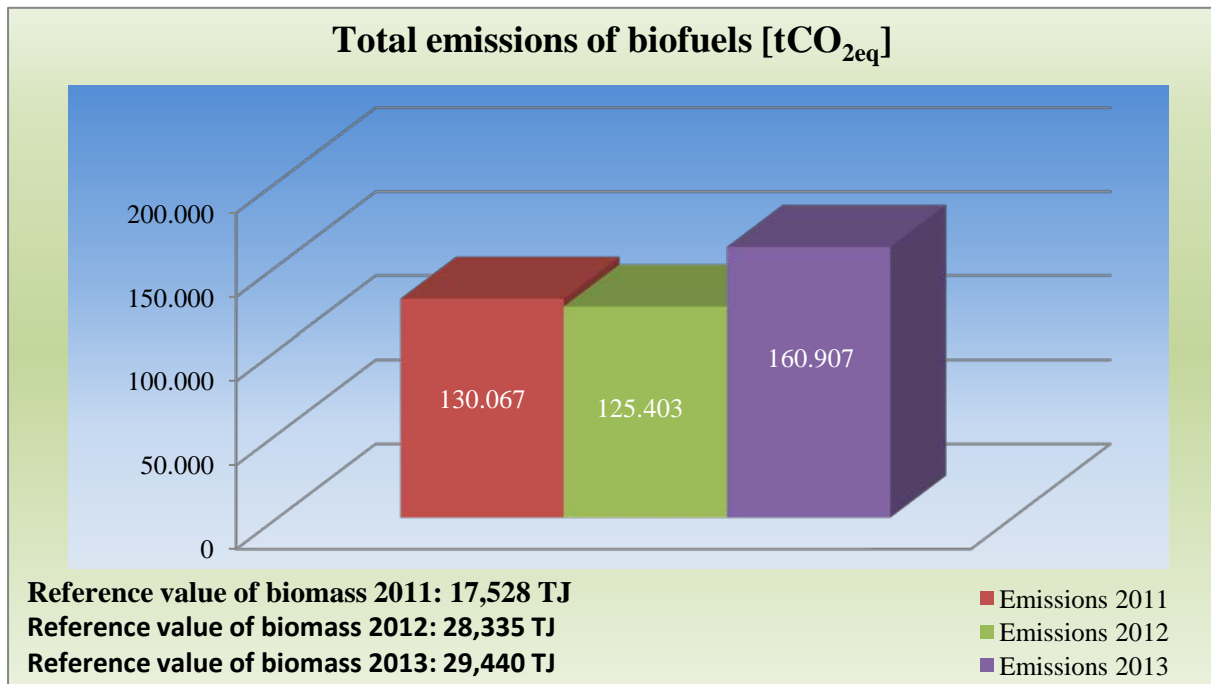


Chart EEG-E-2

Despite a general decline in the use of bioliquids which are remunerated according to the Renewable Energy Sources Act, emissions were higher than in the previous year. The reason for this is that a constant amount of flow-emission liquids from the pulp industry was converted into electricity while there is an increased use of bioliquids from vegetable oils, which generates more emissions.

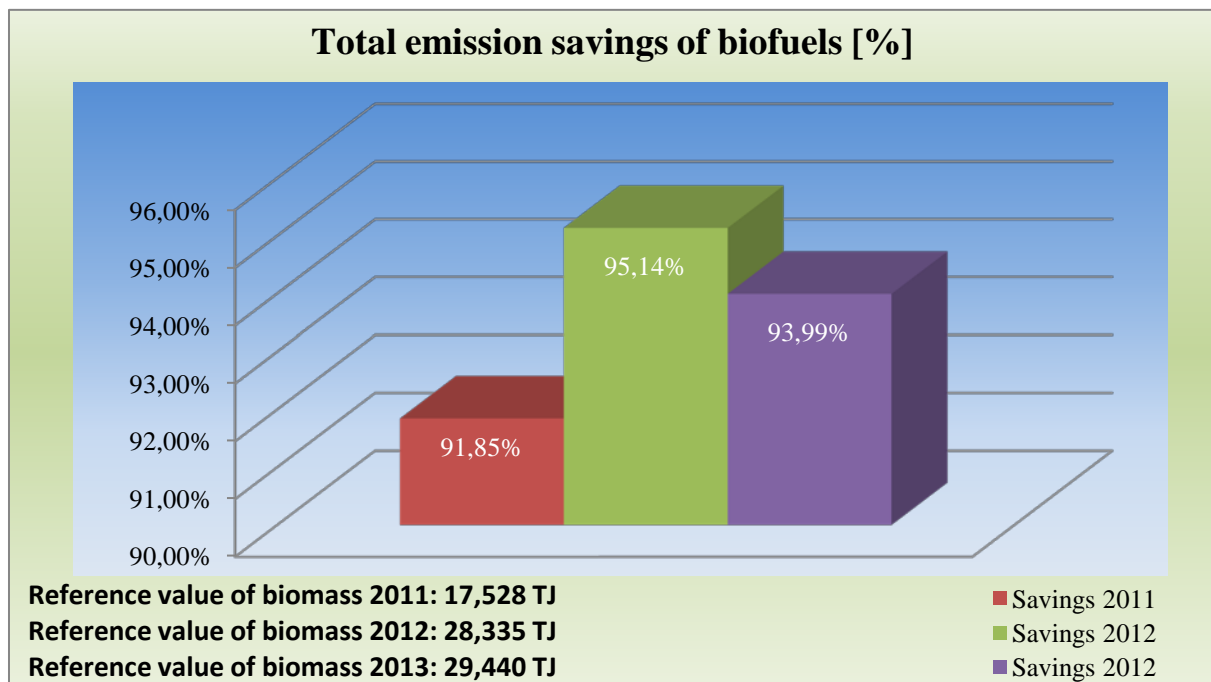


Chart EEG-E-3

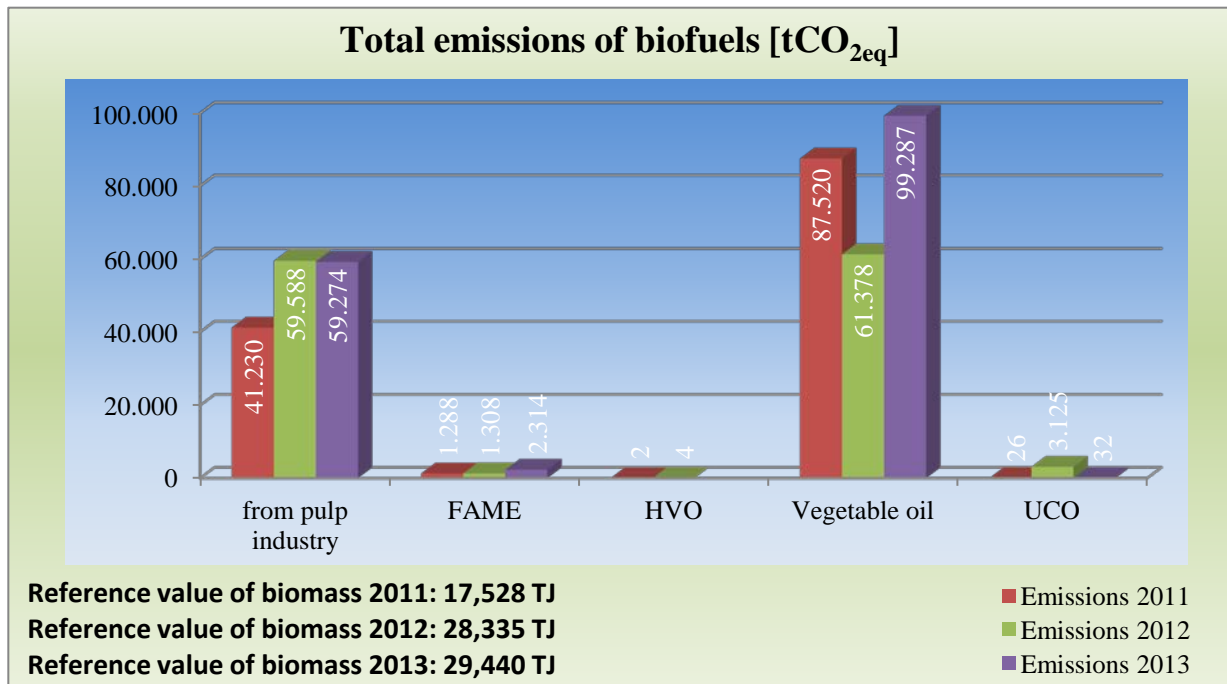


Chart EEG-E-4

Vegetable oil accounts for the greatest share of emissions in the fuels sector.

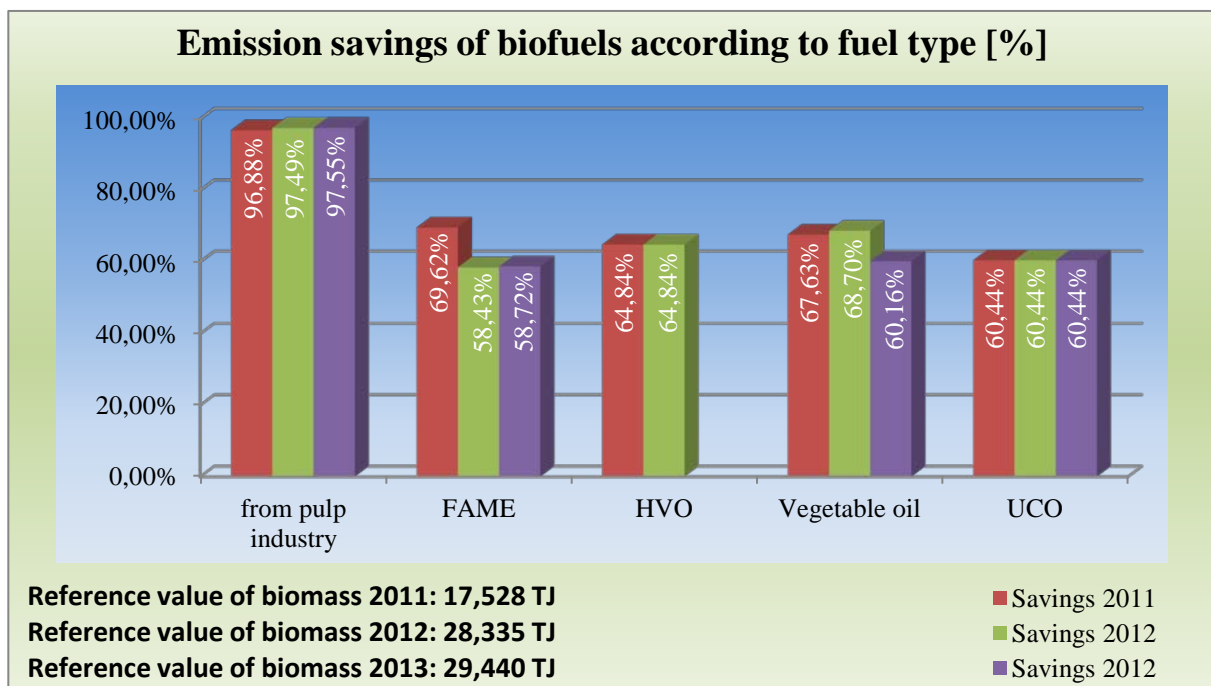


Chart EEG-E-5

Bioliquids from the pulp industry achieve the greatest savings potential by far.



VIII. Installations register

According to the BioSt-NachV, from 2011 to 2013 all installation operators were obliged to register their installation in the BLE installations register if they used liquid biomass to generate electricity.

An installation in the sense of the Renewable Energy Sources Act in connection with Article 3(1) No. 3 BioSt-NachV is any installation for the generation of electricity from liquid biomass, including operations which receive temporarily stored energy produced exclusively from liquid biomass to convert it into electrical energy. An installation operator uses an installation for the production of electricity from liquid biomass.

Installation operators may only claim remuneration for the produced electricity pursuant to the Renewable Energy Sources Act if they can demonstrate to the network operators that the sustainability requirements were met and that the installation is registered.

According to information available to the BLE, only 884 installations producing electricity from sustainable liquid biomass were still active in 2013 (2012: 1012 installations). These installations were operated by 742 installation operators. The following chart refers to data provided by the installation operators during the registration process.

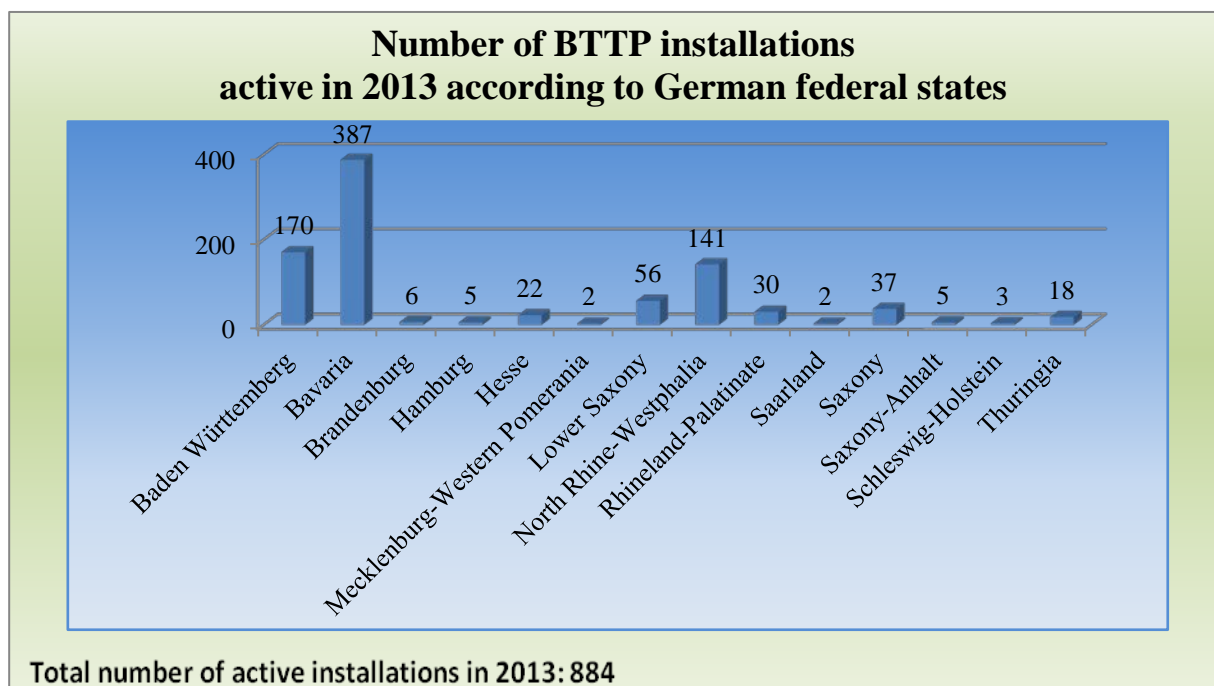


Chart Anl 1

The largest number of CHP installations can be found in Bavaria, followed by Baden-Württemberg, North Rhine-Westphalia and Lower Saxony.

IX. Retirement accounts

Biofuels which are registered in the database Nabisy and exported to other countries need to be retired to the account of the respective country. The evaluation of these data provides a certain overview of the commodity flow of sustainably produced biofuels from Germany to other Member States.

According to the amounts recorded in proofs of sustainability and partial proofs of sustainability which were retired to the accounts of the respective countries in Nabisy, the largest amounts of sustainable biofuels were exported to Austria, Bulgaria and Denmark (see Chart Ausb-2). Chart Ausb-2 shows the most important country accounts.

Apart from the option of retiring to accounts of countries, the electronic database Nabisy provides further retirement options. The following chart gives an overview of three of these other accounts.

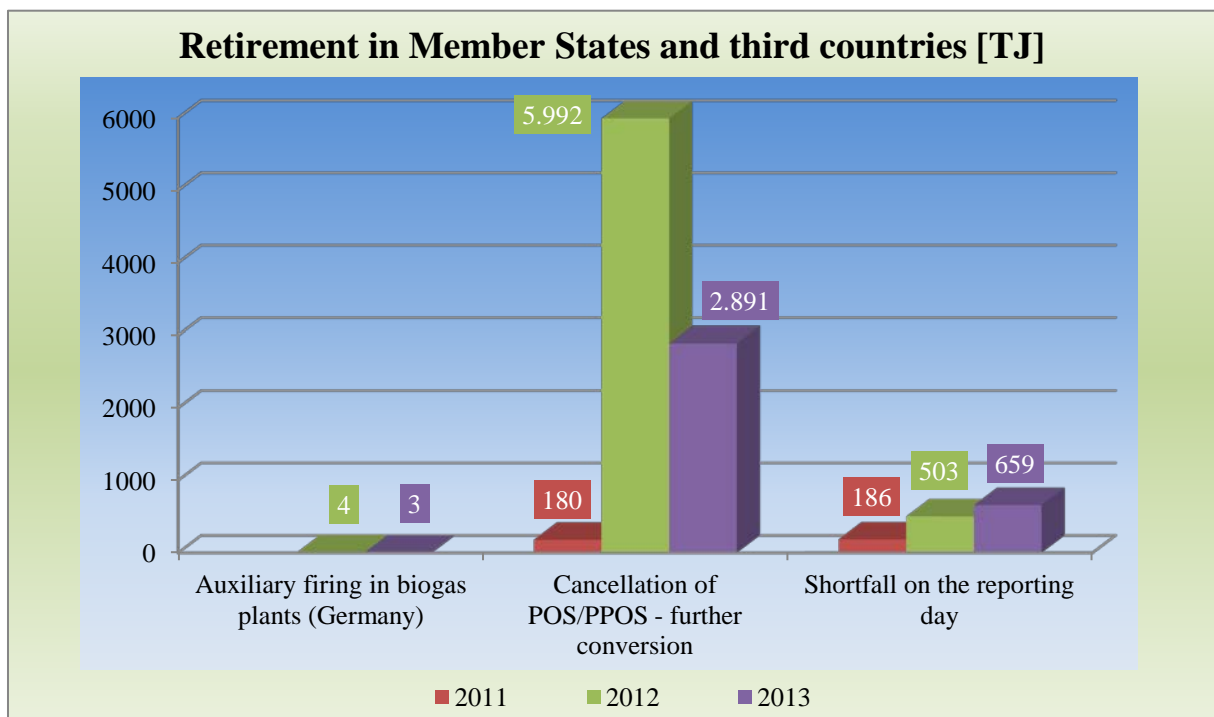


Chart Ausb-1

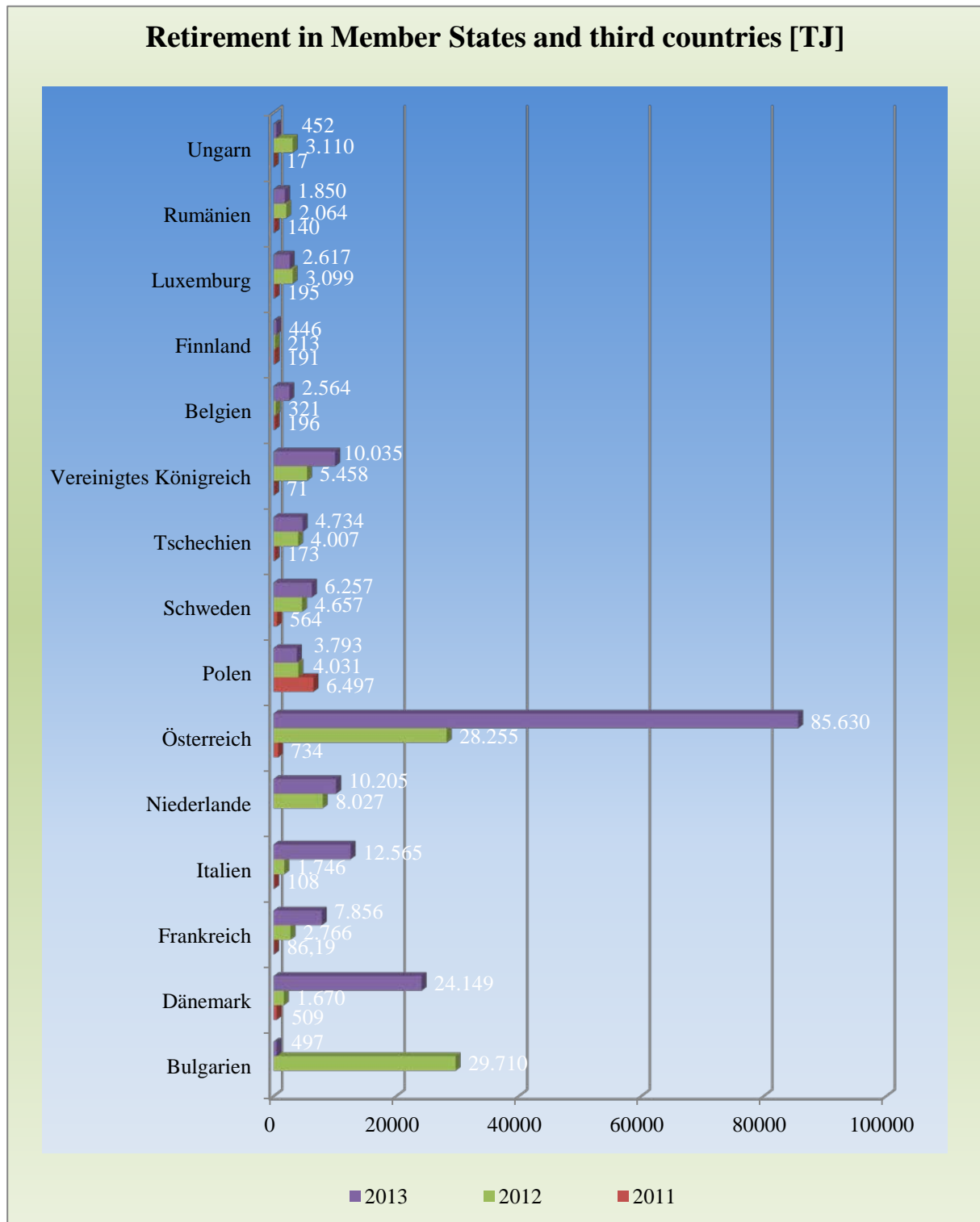


Chart Ausb-2



X. Outlook

As was the case at the beginning of the reporting year, the introduction of the greenhouse gas quota will require further adjustments to Nabisy next year.

At the time of the editorial deadline, the legislative procedure for amending the Federal Immission Control Act had not been concluded. It has been clear since 2009, though, that the energy-related blending obligation will expire on 31 December 2014. As it is an important prerequisite for double-counting, the regulations of the 36th Federal Immission Control Ordinance concerning double-counting are no longer legally significant for biofuels which are brought onto the market after 31 December 2014.

Due to the greenhouse gas quota valid from 1 January 2015, it is expected that the amount of greenhouse gas emissions indicated in the proofs of sustainability will be influencing prices.

In consequence, the economic operators will increasingly use individual emission calculations on the basis of data actually determined instead of using the standard emission values available.

The BLE has taken the required measures to be able to focus increasingly on the implementation of the required methodology in the scope of its supervisory function.

It remains to be seen how the commodity flows will develop against the backdrop of double-counting still being an option in other Member States.



XI. Conversion tables and glossary

Conversion of energy units

Energy unit	Megajoule [MJ]	Kilowatt hour [kWh]	Terajoule [TJ]	Petajoule [PJ]
1 megajoule [MJ]	1	0.28	0.000001	0.000000001
1 kilowatt hour [kWh]	3.60	1	0.0000036	0.0000000036
1 terajoule [TJ]	1,000,000	280,000	1	0.001
1 petajoule [PJ]	1,000,000,000	280,000,000	1,000	1

Density

Biofuel type	Tonne per cubic metre [t/m ³]	Megajoule per kilogramme [MJ/t]
Biofuel from the pulp industry	1.32	7,000
Bioethanol	0.79	27,000
Biomethane	0.00072	50,000
Biomethanol	0.80	20,000
FAME	0.883	37,000
HVO	0.78	44,000
Vegetable oil	0.92	37,000
UCO	0.92	37,000



Glossary

Abbreviation	Meaning
36th BImSchV	36th Ordinance for the implementation of the Federal Immission Control Act (Verordnung zur Durchführung des Bundes-Immissionsschutzgesetzes)
Biokraft-NachV	Biofuel Sustainability Ordinance (Biokraftstoff-Nachhaltigkeitsverordnung)
BioSt-NachV	Biomass Electricity Sustainability Ordinance (Biomassestrom-Nachhaltigkeitsverordnung)
DE system	Certification systems according to Article 33 Nos. 1 and 2 BioSt-NachV and/or Biokraft-NachV recognised by the BLE
EEG	Renewable Energy Sources Act (Erneuerbare-Energien-Gesetz)
EU system	Voluntary scheme according to Article 32 No. 3 BioSt-NachV and/or Biokraft-NachV
FAME	Fatty acid methyl ester (biodiesel)
HVO	Hydrogenated Vegetable Oils
UCO	Used Cooking Oil