

GLOBAL BIOENERGIES

French limited company (*société anonyme*) with a board of directors with share capital
of €25,438.055 Registered office: 5, rue Henri Desbruères 91000 Evry
508 596 012 R.C.S. Evry

Registration Document including **the 2018 Annual Financial Report and** **Management Report of Global Bioenergies SA**

Consolidated financial statements
at 31 December 2018



The present Registration Document was filed with the Autorité des Marchés Financiers (the French Financial Markets Authority, or AMF) on 4 March 2019, in accordance with Article 212-13 of its general regulations. It may be used in support of a financial transaction when accompanied by a prospectus approved by the AMF. It was prepared by the issuer and is binding on its signatories.

This Registration Document includes by way of reference:

- the Registration Document filed with the AMF on 27 April 2018 under number D.18-0447;
- the Registration Document filed with the AMF on 27 April 2017 under number D.17-0442;
- the Registration Document filed with the AMF on 22 September 2016 under number D.16-0852;
- the Registration Document filed with the AMF on 05 June 2015 under number D.15-0574;
- the Registration Document filed with the AMF on 21 November 2014 under number D.14-1067;
- the Registration Document registered by the AMF on 7 June 2013 under number R.13-0031.

Copies of this Registration Document are available free of charge at the registered office of Global Bioenergies. This document may also be examined online on the Company's website (www.global-bioenergies.com) and on the website of the AMF(www.amf-france.org).

Dear Shareholders,

2018 was a difficult year: the stock price of ALGBE lost more than half of its value. The market turmoil in the fourth quarter, which primarily affected small to medium-sized companies (PMEs) such as ours, and the drop in the price of oil contributed heavily. But this decline is also related to the fact that our project for a first plant is delayed. This project is ambitious: it's one of the most significant and most innovative projects in Europe in terms of energy and environmental transition, and it is essential to take one step at a time to achieve this under the proper conditions.

During 2018, Global Bioenergies has greatly improved its fundamentals: significant progress was made in the performance of the Isobutene process. New bacterial strains and new fermentation protocols were established, and each of the three main parameters – yield, productivity and stability – saw significant progress. The work of scaling up continues in France and Germany.

To this technology push there is also a clear market pull: for regulatory reasons, the cosmetics industry is confronting the gradual phase-out of volatile silicones, for which isobutene derivatives are a substitute. Thus, a new market is opening up to our products, unforeseen just a year ago since Europe's decision to ban volatile silicones from a large range of products was taken in April 2018. Several letters of intent to buy product were received from large players in the cosmetics sector, representing up to 10,000 tonnes of isobutene derivatives per year, with a guide price of €4 to 10/kg. These volumes and prices are greater than expected and indicate a very pronounced interest from the cosmetics industry for our products, where they offer a dual solution to the end of volatile silicones and the search for natural products.

Beyond the cosmetics market, the Isobutene process has the potential to shift the goalposts for the energy and environmental transition, now well established among the major concerns in our societies. The Western way of consumption cannot be generalised to a world population of 10 billion people, and everyone knows that radical changes are going to take place. Letters of intent totaling up to 55,000 tonnes of renewable gasoline and jet fuel per year have already been received from industrial leaders in these energy markets. That's more than 1% of fuels for France, and more than the maximum capacity of the future first plant. The market for bio-kerosene is beginning to emerge: the first country, Norway, will require its use for up to 0.5% in all its airports beginning next year.

Europe has entrusted us with 5 projects, representing a total of about €12 million for Global Bioenergies for the period 2017-2023, to adapt the process to use agricultural, forest and industrial waste, and thus prepare for large-scale deployment.

Lastly, expenses have reached their peak: for the first time, the net loss (€13.6 million) is in decline as compared to the prior fiscal year (€14.3 million). This improvement is bound to continue in 2019, and indicates a path to profitability within four years.

Technical advances and market validations achieved in 2018 consolidate the project for the first plant and the outlook for deployment of the process. We hope that 2019 will be a year of achievement, and the entire team at Global Bioenergies is working hard towards this end.

Marc Delcourt
*Chief Executive Officer and
Co-founder [invest@global-
bioenergies.com](mailto:invest@global-bioenergies.com)*

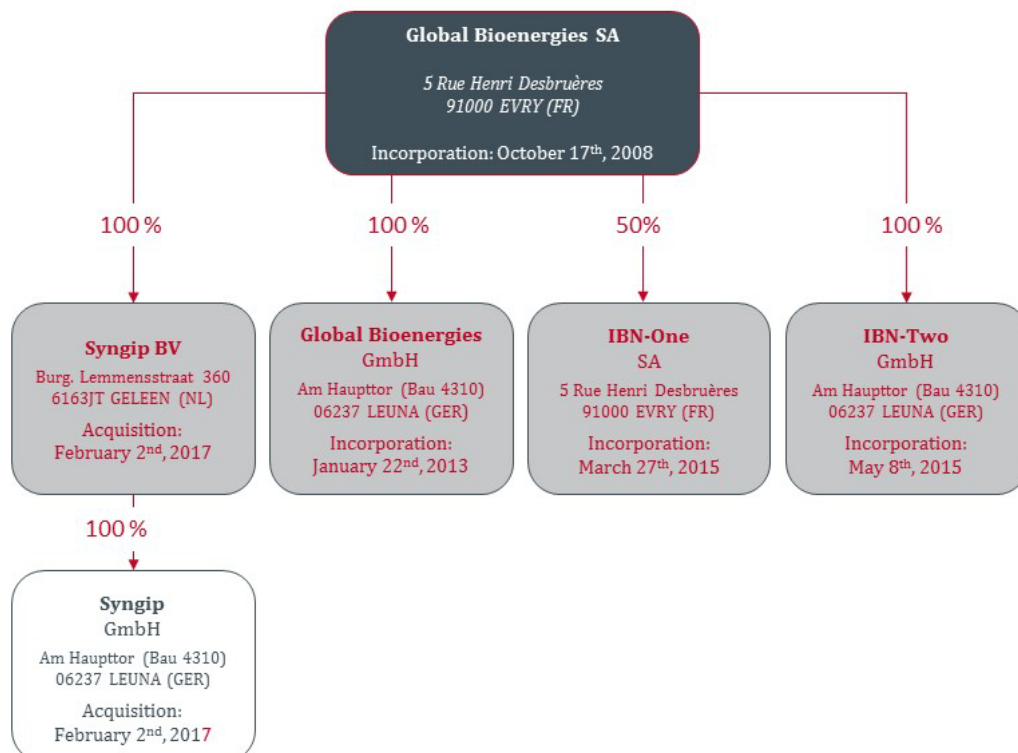
PREAMBLE / GENERAL COMMENTS

In this Registration Document (hereinafter the "Registration Document"), unless otherwise specified, the term "Company" refers to Global Bioenergies SA. The terms "Group" and "Global Bioenergies" refer to the Company and its subsidiaries as described hereunder.

The Company wholly owns a subsidiary based in Leuna, Germany: Global Bioenergies GmbH. The purpose of this subsidiary, set up on 22 January 2013, is to implement the project involving the design, construction and operation of a demo plant in Germany. Global Bioenergies GmbH also aims to provide engineering services, in particular to the Group's subsidiaries focused on the construction and operation of plants using the processes developed by Global Bioenergies.

Moreover, the Company holds 50% of IBN-One SA, while this company's remaining capital is held by the Cristal Union sugar group, via its subsidiary Cristal Financière. The corporate purpose of IBN-One SA is the construction and operation of the first plant dedicated to transforming renewable resources into isobutene (the IBM-One plant), as well as the marketing of this product. In addition, the Company fully owns IBN-Two GmbH, whose corporate purpose is the construction and operation of a plant to transform renewable resources into hydrocarbons in Germany. The Company is contemplating partnerships with investors on a similar model as that used with IBN-One SA.

Finally, it should be noted that after the Extraordinary General Meeting of Shareholders of 2 February 2017, Global Bioenergies acquired the Dutch company Syngip B.V., based in Geleen, founded in 2014 and specialising in the conversion of third generation feedstocks into fuels and materials. Syngip B.V. itself wholly owns a subsidiary in Germany, Syngip GmbH, whose purpose is to facilitate the introduction of potential German investors in order to finance the activities of Syngip B.V.



CROSS REFERENCE TABLE

REGISTRATION DOCUMENT ⇔ ANNUAL FINANCIAL REPORT

To make the Annual Financial Report easier to read along with the Management Report as required by the French Commercial Code, the following table indicates the location in this Registration Document of the principal disclosures provided:

HEADINGS IN THE ANNUAL FINANCIAL REPORT	IN THE REGISTRATION DOCUMENT
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Corporate financial statements, incl. Auditors' report	CH20
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Subsidiaries, equity investments and controlled companies	CH7

Management report

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1 PERSONS RESPONSIBLE

1.1 PERSON RESPONSIBLE FOR THE REGISTRATION DOCUMENT

Marc Delcourt, Chief Executive Officer of Global Bioenergies.

1.2 STATEMENT FROM THE PERSON RESPONSIBLE FOR THE REGISTRATION DOCUMENT

"I hereby certify that, after having taken all reasonable measures to that effect, the information contained in this Registration Document is true and contains no material omission.

I certify that, to the best of my knowledge, the financial statements have been prepared in compliance with applicable accounting standards and are a true representation of the assets, financial situation and results of the Company and all consolidated companies, and that the Management Report attached to this Registration Document accurately presents the ongoing business, results and the financial situation of the Company and of all consolidated companies and describes the main risks and uncertainties these companies face.

I obtained an end-of-mission letter from the Statutory Auditors certifying that they have verified the financial and accounting information provided in this Registration Document and that they have read the document in its entirety".

Executed in Evry, on 1st March 2019

Marc Delcourt
Chief Executive Officer

1.3 PERSON RESPONSIBLE FOR THE FINANCIAL INFORMATION

Samuel Dubruque
Chief Financial Officer
Phone: + 33 (0)1 64 98 20 50
Fax: + 33 (0)1 64 98 20 51
E-mail: invest@global-bioenergies.com

2 STATUTORY AUDITORS

2.1 PRINCIPAL AUDITOR

SARL France Audit Consultants International
represented by Max PEUVRIER
10, allée des Champs-Élysées, 91042 Evry
Start of first mandate: 6 October 2008

First appointment on the incorporation of the Company on 6 October 2008. Mandate renewed by the General Meeting on 19 June 2014 for a period of six years, expiring at the end of the General Meeting ruling on the financial statements for the year ended 31 December 2019.

2.2 ALTERNATE AUDITOR

Olivier Charreau
28 rue Henri Janin, 78470 Saint-Rémy-lès-Chevreuse
Start of first mandate: 6 October 2008

First appointment on the incorporation of the Company on 6 October 2008. Mandate renewed by the General Meeting on 19 June 2014 for a period of six years, expiring at the end of the General Meeting ruling on the financial statements for the year ended 31 December 2019.

2.3 INFORMATION ON STATUTORY AUDITORS WHO RESIGNED, WERE DISMISSED, OR WERE NOT REAPPOINTED

None.

3 SELECTED FINANCIAL INFORMATION

The financial statements prepared were consolidated under French accounting standards on a voluntary basis as the Group did not reach the legal thresholds requiring the presentation of consolidated financial statements. These financial statements were audited and certified by the Statutory Auditor. The financial information contained below was extracted from the consolidated financial statements of the years ended respectively on 31 December 2016, 2017 and 2018. These financial data are reviewed in detail in Chapter 9 "Review of the financial situation and results", Chapter 10 "Cash and capital" and Chapter 20 "Financial information on the assets, financial position and results of the Issuer" of the Registration Document.

Key figures of the Group's consolidated profit and loss account:

€ thousands	from 01/01/18 to 31/12/18	from 01/01/17 to 31/12/17	from 01/01/16 to 31/12/16
Operating income	2,412	2,369	3,292
Operating expenses	18,088	18,002	15,216
<i>Average headcount (Group)</i>	<i>69.3</i>	<i>66.4</i>	<i>61.3</i>
Operating profit (loss)	-15,676	-15,634	-11,924
EBITDA	-12,059	-12,664	-10,723
Financial profit (loss)	-570	-708	-530
Exceptional profit (loss)	64	89	-50
Income tax	-2,546	-1,999	-1,896
Net profit (loss)	-13,637	-14,253	-10,607

Key figures from the Group's consolidated balance sheet:

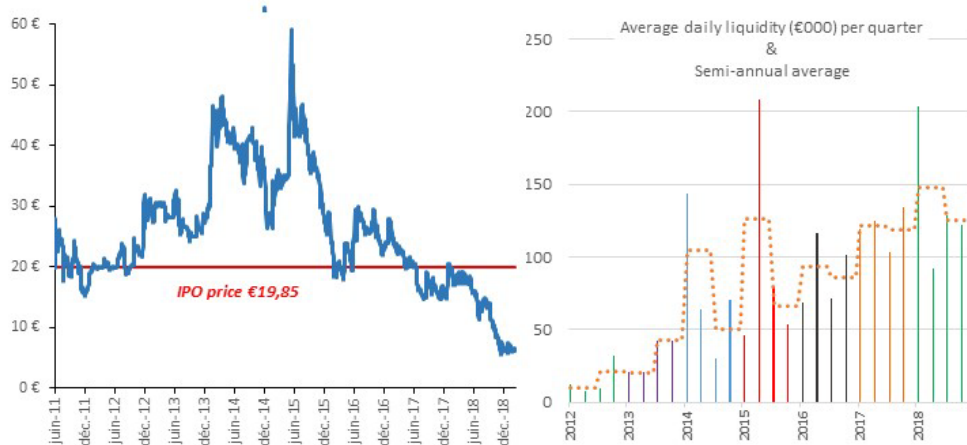
Assets (€ thousands)	31/12/18	31/12/17	31/12/16
Intangible assets	1,228	1,267	69
Assets	7,778	11,075	12,182
Financial assets	1,061	365	146
NON-CURRENT ASSETS	10,067	12,707	12,397
Inventories – Receivables – Prepayments	4,614	4,504	5,074
Cash and equivalents	10,756	13,639	8,066
CURRENT ASSETS	15,370	18,143	13,140
TOTAL ASSETS	25,436	30,850	25,537

Liabilities (€ thousands)	31/12/18	31/12/17	31/12/16
Capital	254	224	168
Share premium	74,207	67,867	49,409
Retained earnings	-54,926	-40,673	-30,066
Profit (loss)	-13,637	-14,253	-10,607
Equipment subsidies	383	553	391
EQUITY	6,280	13,718	9,295
PROVISIONS	66	57	42
Conditional advances and loans	9,356	10,213	11,483
Trade payables and related accounts	3,356	4,622	4,120
Other payables & deferred income	6,379	2,240	597
PAYABLES & DEFERRED INCOME	19,090	17,075	16,200
TOTAL LIABILITIES	25,436	30,850	25,537

Key figures from the Group's consolidated cash-flow statement:

CASH-FLOW (€thousands)	2018	2017	2016
Operating cash flow	-7,418	-9,066	-9,279
Net profit (loss)	-13,637	-14,253	-10,607
Depreciation and amortisation (+)	3,457	2,857	1,213
Change in Working Capital Requirement	2,762	2,330	115
Investing cash flow	-974	-2,022	-6,120
Acquisition of non-current assets (-)	974	2,024	6,125
Sale of non-current assets (+)	-	2	6
Financing cash flow	5,259	16,143	12,676
Capital increase in cash (+)	6,431	17,890	12,527
Capital-increase costs charged to share premium (-)	361	737	908
Other changes	-	-	-6
Equipment subsidies (+)	-	289	391
Repayable advances received (+)	1,087	-	1,109
Loans contracted (+)	297	300	1,019
Repayable advances repaid (-)	-	-	-
Loans repaid (-)	2,279	1,612	1,581
Contributions from associates' current accounts (+)	84	12	126
Net cash flow	-3,133	5,055	-2,722
Cash at start of year	12,486	7,431	10,153
Cash at year-end	9,354	12,486	7,431

Change in the Global Bioenergies share price and the liquidity of the ALGBE share since the initial public offering



4 RISK FACTORS

The Group has conducted a review of the risks which could have a significant negative impact on its business, financial situation or results (or its capacity to achieve its objectives) and considers that, to date, there are no significant risks other than those set out in this chapter. These risks are those that the Group considers, on the date of the Registration Document, as liable to have a significant negative impact on the Group, its business, its financial situation, its results or its development. Certain risks or uncertainties currently unknown or considered as insignificant could also have a negative impact on the Group, its business, its financial situation or its results. Should one or several of these risks or uncertainties materialise, the Group's business, financial situation, results and development may be negatively affected.

4.1 RISKS ASSOCIATED WITH THE GROUP'S BUSINESS AND THE ECONOMIC AND SOCIAL ENVIRONMENT

The Group's business and development are based on the success of its R&D programmes focused on the bioproduction of molecules of interest, including light olefins, the fundamental molecules of petrochemistry, and on the Group's ability to industrialise and commercialise its processes. The development and industrialisation of bioprocesses depend on engineering techniques which present technological risks.

Historically, the R&D programmes developed by the Group have focused on the following molecules:

- isobutene (the "Isobutene" programme);
- butadiene (the "Butadiene" programme);
- acetone, isopropanol and propylene (the "C3" programme).

These three programmes, for which the Group has successfully completed the research phase, are still in the development phase. Since the priority objective of the Group is to bring a first technology to industrial maturity, efforts have been concentrated in recent years on improving the performance of the Isobutene process so that it can move to a demo plant.

The C3 program made considerable progress at year end 2017 by reaching industrial scale, but it remains at a lower point of development than the Isobutene programme. The risks associated with the Butadiene programme remain higher than those associated with the two other programmes due to its earlier stage of development.

The Group may face difficulties, be unable to achieve the final enzyme activity objective, or find that this objective requires more time and resources than initially expected.

While the commercial deployment of processes developed by the Group depends on achieving performance targets, it also depends on the economic environment and societal acceptance of new value chains. Since 2014, the Group has worked to diversify feedstock for its processes. The work aimed at compatibility with so-called second generation resources and the longer term integration of approaches for recycling of CO₂ should improve the overall economic equation of processes implemented. The societal acceptance of these latter should be encouraged by the improvement of their ecological impact and by their dissociation from traditional agricultural products. This work is thus going to expand in the coming years. In this regard, the acquisition of Syngip B.V. in February 2017 enabled the Group's programmes to be more clearly positioned on the path to diversifying its feedstock.

4.1.1 Risks associated with any delay or failure in the development of the Group's bioprocesses and industrial strains

Any delay in the development of the bioprocesses would entail the postponement of the Group's exploitation and commercialisation phase of its bioprocesses. Imperfect results in the industrialisation of the bioprocesses or significant delays could entail the loss of the bioprocesses' competitiveness and reduce their commercial prospects.

Consequently, any delay or impediment in the development of these bioprocesses is liable to have a significant negative impact on the Group's business, outlook, financial situation, results and development.

The fact that the Group's management includes persons with extensive experience in the industrialisation of bioprocesses reduces the risk of impediments or delays.

4.1.2 Risks associated with the protection of strains

The successive generations of production strains are stored in conditions allowing their long-term conservation. They are generally resistant and able to reproduce rapidly. Despite the precautions taken by the Group, these strains could be stolen and subsequently exploited in breach of industrial property rights. Moreover, given the fact that no duplicate of the strains is kept on a separate site, they could be destroyed in a fire or natural disaster affecting the laboratory in which they are stored.

Consequently, any problem affecting the strains is liable to have a significant negative impact on the Group's business, outlook, financial situation, results and development.

The risk increases as the performance of each strain improves, and is managed by the parallel increases in protective measures. The laboratory is located on an enclosed, continuously guarded site. This reduces the risk of intrusion but does not guarantee the impossibility of such an offence.

4.1.3 Risks associated with a change in feedstock prices

4.1.3.1 Rise in the price of plant-based feedstocks

The first products liable to be converted into olefins using the processes developed by the Group are:

- Sugar (cane sugar and beet sugar) whose global production has been rising since the early 1990s at the average rate of more than 2% per year. The end of sugar quotas in Europe for the 2017/2018 campaign is the main influence on the market today. In this environment, 2017/2018 production¹ beat all records with global production estimated at 195 million tons (vs. 174 million in 2016/2017). This new environment weighs significantly on prices; sugar currently trades at about 13 cents/pound compared to 20 cents/pound in early 2017;
- starch, the world's principal agricultural commodity. Starch is the main constituent of maize, wheat and other cereals, as well as manioc and potatoes. Global production of cereals has risen continuously for 10 years and now represents about 2,600 million tonnes (2017/2018 campaign). These strong levels of production, greater than demand, encourage high global inventories, which stand at a record high of approximately 800 million tonnes².

These feedstocks account for a major part of the cost of the products stemming from the Group's bioprocesses. A significant and sustained increase in the purchase price of these feedstocks could jeopardise the profitability of the bioprocess concerned.

¹ USDA November 2018 Sugar World Markets and Trade

² <http://www.fao.org/worldfoodsituation/csdb/en/>

Such a change could result in the suspension or definitive stoppage of the project development or commercialisation and have a significant negative impact on the Group's business, outlook, financial situation, results and development.

To limit the risk associated with the cost of feedstocks, the Group hopes to be able to extend the performance of its processes to the use of lower-cost feedstocks. In particular, the Group is looking into agricultural waste (straw from wheat or maize) and forest waste (short rotation coppice and sawmill waste) from which fermentable sugars can be extracted. In March 2015, the Group announced its ability to produce isobutene in the laboratory from green waste with performance similar to those observed in using wheat-derived glucose. In September 2016, the Group announced it had produced isobutene from straw at the Pomacle-Bazancourt pilot facility and more recently, in early 2019, the Group announced it had produced isobutene from wood chips at Leuna's demo plant. These developments are now supported by diverse collaborations sponsored by the European Union's Horizon 2020 programme. The conversion of this waste into sugar could represent millions of tonnes of additional sugars, i.e. many times the current global agricultural production. Various technologies are currently being developed to extract such sugars; the industrialisation of these technologies could provide a new resource for the Group's process, thereby considerably increasing the quantity of affordable sugars.

The Group is also looking into the use of household waste or industrial effluents as feedstocks for the bioprocesses it has developed. This approach aims to develop fermentation processes based on specific micro-organisms, e.g., ones able to ferment carbon monoxide (CO). The carbon monoxide is obtained through the pyrolysis of household waste, and through the capture of gaseous effluents from steelworks. Developing a microorganism capable of transforming carbon monoxide – a product available at zero or even negative cost, i.e. a waste – into isobutene would free the Group from the above-mentioned risks associated with the cost of feedstocks. In this connection, in February 2017 the Group acquired the Dutch company Syngip B.V., which since 2014 is developing a process based on a proprietary micro-organism able to metabolize carbon dioxide and carbon monoxide in order to convert them into light olefins.

4.1.3.2 Drop in oil prices

Light olefins, which are core objectives of the Group, are currently produced from petroleum.

A significant and sustained drop in oil prices could jeopardise the profitability of the bioprocesses developed by the Group. Thus, the discovery of large quantities of readily available oil could significantly bring down oil prices for one or two decades. Such an event already took place in the recent past: the oil counter-shock of 1979 thus ended the wave of enthusiasm prevailing in the 1970s for biofuels.

Oil prices started their sharp decline in June 2014, when the monthly average Brent price hit nearly \$112 per barrel³. The fall in price appears to stem from numerous economic and geopolitical factors, as well as the market itself – most significantly, the rise of the North American production through the extraction of shale oil, and the price war waged by OPEC against this new resource. The price of oil reached a low in January 2016, when the average Brent price fell to just less than \$31 per barrel. Prices gradually increased during the first half of 2016; the threshold of \$50 a barrel was crossed in June and prices have consolidated over the following twelve months, as supply and demand have come into balance after more than two years of surplus production⁴.

³ Source: Reuters / DGE

⁴ Source: Monthly report of the International Energy Agency (IEA) published on 14 June 2016

In 2017, prices finally rose nearly 20%, the Brent price moving up from about \$55 a barrel to \$65-70 a barrel one year later. 2018 saw stronger fluctuations with oil moving up during the first 10 months, reaching \$80 a barrel, followed by a swift fall in prices during the last quarter of the year with prices coming close to \$50 a barrel by year's end. Since this low point, oil regained 30% of its value and stands at about \$65 a barrel at the date this Registration Document was released.

Changes in oil price affect the price of light olefins in varying proportions; the Group closely tracks these prices. The Group deems that its Isobutene process would be competitive on certain specific markets, supported by tax incentives and corresponding to several full-size plants, when oil prices are at \$50-60 per barrel. The outlook associated with the very first plant, particularly in the domain of cosmetics, indicates that even the profitability of this initial plant does not depend on the price of oil (see 6.6.1).

4.1.3.3 Combination of changes in feedstock prices

The conjunction of a rise in plant feedstock prices and a drop in oil prices or any combination of changes in feedstock prices which would reduce the difference between the cost of the bioprocesses developed by the Group and the cost of oil-based production could jeopardise the profitability of the Group's related products. Such a change could result in the suspension or definitive stoppage of the project development or commercialisation and have a significant negative impact on the Group's business, outlook, financial situation, results and development.

4.1.4 Risks associated with the procurement of feedstocks of plant origin

The bioprocesses developed by the Group are based on the use of sugar, starch, cereals, agricultural waste and forest waste which can be transformed into fermentable sugars. The development of an agricultural and forest waste treatment industry should contribute to securing a major sugar resource.

The shortage of agricultural feedstock, due to a change in the balance between supply and demand on the local or global level, could impede or limit the industrialisation of the Group's bioprocesses and have an impact on its business.

Likewise, the delayed or failed development of alternative routes based on the use of agricultural, forest, domestic or industrial waste, could limit the exploitation of the Group's bioprocesses if the agricultural feedstocks proved too costly. This would have an impact on the Group's business.

4.1.5 Risks associated with competition

The Group only has a small number of competitors, most of whom are based in the USA. Some of these companies have reached more advanced development stages than the Group and have more funds at their disposal (see chapter 6.8.1).

Certain competitors could develop their bioprocesses more rapidly than the Group, or develop more efficient and less costly bioprocesses than those developed by the Group.

The success of one of these competitors could result in agreements with certain oil or chemical industry players, making it more difficult for the Group to enter into agreements with these companies. However, the coexistence of several industrial agreements with the same oil industry player has already been observed (e.g. an agreement between Total and Gevo, as well as an agreement between Total and Amyris).

Moreover, the signing of major agreements between competitors and agricultural industry players (sugar producers, starch producers, etc.) could reduce the motivation of the latter to consider the exploitation of the processes developed by the Group.

4.1.6 Risks associated with the emergence of competing technologies

During its first years of existence, the Group used very innovative approaches and concepts, which made it possible to develop the first artificial metabolic pathway, i.e. consisting of several unseen enzymatic activities.

The innovative results obtained by the Group are now used as models by other companies working in the field of industrial biology. These competitors may manage to develop similar processes to those developed by the Group. As for isobutene, only a few players are committed to programmes that are in direct competition. The main competition stems from the biofuels industry, since biofuels are one of the applications of isobutene.

Competition is stiffer for the butadiene programme than for the other olefins and mainly stems from two American companies, Genomatica and Invista. It would seem that Braskem is also interested in the production of biosourced butadiene, as confirmed by the publication of a collaboration agreement between Braskem and Genomatica in December 2013. The players' respective positions in terms of intellectual property are not yet fully known, as most of the patent applications are still at an early stage. However, to the Group's knowledge, no patent threatening its freedom of exploitation has yet been delivered. On the other hand, in April 2014 and then in October 2015 Global Bioenergies was granted two US patents covering key stages of its biosourced butadiene production process.

These other industrial biology companies could be trying to emulate the Group's developments. This is liable to constitute new competition and thus represents a risk for the Group.

Furthermore, the use of new technological approaches, which would reduce the interest of the approaches developed by the Group, cannot be excluded. However, the risk of the premature obsolescence of the processes developed by the Group is limited, and no innovation stemming from a third party has so far had such an impact.

4.1.7 Industrial risks related to the environment

The production of agrolefins (plant-derived olefins) requires a special environment on two levels:

- firstly the microorganisms used for the production of agrolefins are genetically modified microorganisms, which must be kept in a confined environment. After the production phases, they must thus be destroyed through specific thermochemical processes, and various incident levels must be anticipated beforehand to minimise the risks that such genetically modified microorganisms escape into the natural environment;
- like petroleum-based olefins, agrolefins are inflammable, and even explosive when present at high concentrations in the air. From the pre-industrial development phase, their production must thus take place in a non-explosive atmosphere ATEX meeting the specific standards laid down in this respect: protected electrical installations, earthing of all devices, etc.

The Company has obtained a certification for the handling of genetically modified microorganisms within the scope of its Isobutene programme. This approval was obtained in 2011 for a period of 5 years, i.e. until 2016, and then was renewed until 2021.

Possible changes in legal requirements concerning the handling of genetically modified microorganisms and ATEX installations could alter the conditions for the development and exploitation of the processes. The Group keeps track of the legislation in this respect.

The Group is bound by various restrictive laws and regulations, in particular concerning the environment, health and safety, especially for the storage, use, handling, transport and disposal of hazardous chemical or biological products, industrial waste and genetically modified organisms.

The need to comply with the laws and regulations, the consequences of their possible breach, the Company's loss of any authorisations granted to it, the failure to obtain the required authorisations, in particular the certifications delivered by the local government for the storage, use, handling, transport and disposal of hazardous chemical or biological products, industrial waste and genetically modified organisms, could entail costs for the Group (taxes, investments to ensure compliance with the laws and regulations, in particular concerning the environment, health and safety).

The Group may incur additional expenses to comply with new laws or regulations concerning the environment, health and safety. In particular, the Group may be required to buy new equipment, make changes in its premises or installations and, in general, incur other significant expenses. In the event of accidental contamination, bodily injury or damage of any kind, the Group may be held liable for such damage. This could have a negative impact on its business and financial situation, even if the Group has insurance covering certain risks inherent in its business.

4.2 RISKS ASSOCIATED WITH THE GROUP'S OPERATIONS

4.2.1 Specific risks associated with historical and estimated future losses

The Group recorded, respectively, a net loss of €0.6 million for fiscal year 2016, €4.3 million for fiscal year 2017 and €3.6 million for fiscal year 2018 (the change in profit (loss) between fiscal years 2016 and 2017 was marked in particular by the start of depreciation for the Leuna demo plant for a total of €1.4 million amortized over only 4 years).

The Group has seen in these last few years an increase in its losses, which is explained in particular by the commitment to industrialise the Isobutene process undertaken in 2013. To this end, many people have been hired (69 employees at 31/12/2018 as against 36 at 01/01/2013), and employee costs still represent the Group's largest expense item. For the first time in the Group's history the net profit (loss) for 2018 showed an improvement as compared to the net profit (loss) of the previous year (€3.6 million loss in 2018 versus €4.2 million in 2017).

The income recognised in the profit and loss account refers mainly to revenue from partnerships developed with manufacturing companies and to operating subsidies from the French and German governments or from various programmes of the European Commission.

The recognition of further operating losses is expected for the next few years.

The Group's profitability will depend on its capacity to successfully develop, produce and licence its technology and processes. It is not certain that the granting of licences will have the expected success, and the risk that the Group may fail to achieve this licence granting objective is real.

4.2.2 Risks associated with financing needs

Since its incorporation in 2008, the Group has mainly financed its research by strengthening its equity through capital increases.

As at 31 December 2018, the gross financial resources injected into the Group since its incorporation can be summarised as follows⁵:

In thousands of euros	Capital increase	Subsidies	Repayable advances	Innovation loans	Bank loans	TOTAL
From 17/10/08 to 30/06/09	637	0	0	0	0	637
From 01/07/09 to 30/06/10	600	20	330	0	0	950
From 01/07/10 to 30/06/11	8,589	40	0	0	0	8,629
From 01/07/11 to 30/06/12	1,403	75	332	0	0	1,81
from 01/07/12 to 31/12/12	3,038	59	193	0	0	3,29
from 01/01/13 to 31/12/13	23	20	143	740	0	23,903
from 01/01/14 to 31/12/14	1,148	1,372	398	0	1,018	3,936
from 01/01/15 to 31/12/15	1,882	859	1,726	1,4	4,4	10,267
from 01/01/16 to 31/12/16	12,526	3,141	1,109	0	0	16,776
from 01/01/17 to 31/12/17	17,89	2,341	0	0	0	20,232
from 01/01/18 to 31/12/18	6,431	1,706	1,087	0	0	9,224
TOTAL	77,144	9,634	5,318	2,14	5,418	99,653

At 31 December 2018, the Group's financial debt amounted to €0.4 million (comprised of bank loans for €2.9 million, repayable advances for €5.9 million, valuation of the restatement as assets of items that were leased for €0.4 million as well as a debt of €0.2 million carried by IBN-One following an initial payment of €250,000 from Cristal Union in September 2016, then a second payment of €200,000 in October 2018).

On 4 June 2013, the Group was granted total funding of €4 million by the French government. The proceeds were received in March 2014 in the amount of €0.6 million, in March 2015 in the amount of €1.7 million, in December 2015 in the amount of €0.9 million and the balance of €0.8 million in December 2016 under the *Investissements d'Avenir* programme managed by ADEME⁶. This programme supports the construction and operation of the pilot plant of Pomacle-Bazancourt for the development of the Isobutene process.

Moreover, in November 2013, the Federal Ministry of Education and Research (Germany) decided to support the construction and operation of the Group's demo plant in Leuna, near Leipzig (Germany), by granting a subsidy of €5.7 million to the Group's German subsidiary Global Bioenergies GmbH. The balance of this subsidy was received in 2018.

⁵ The subsidies are shown according to the amounts recognised in the profit and loss account and, as the case may be, on the balance sheet for equipment subsidies; for the other headings the amounts correspond to the amounts received during the fiscal year

⁶ *Agence de l'Environnement et de la Maîtrise de l'Energie* [the French Agency for the Environment and Energy Management]

In 2014, the Group made its first use of bank debt by obtaining two loans from two French banks for a total of €1 million, enabling the partial financing of the Pomacle pilot plant and miscellaneous equipment in the Evry laboratory. Furthermore, on 31 March 2015, the Group announced that it had obtained a further loan of €4.4 million from a consortium of four French banks for the full financing of the Leuna demo plant in Germany.

Moreover, at the beginning of 2015, the Group obtained an interest-free loan of €1.4 million from Bpifrance.

In June 2016, the Group was granted new funding under *Investissements d'Avenir* for "demonstrators of the environmental and energy transition" operated by ADEME. This overall funding of €9 million is for the ISOPROD project (€5.7 million for Global Bioenergies SA and €3.3 million for IBN-One), which is focused on achieving the conditions necessary for the IBN-One plant to be constructed and operated. At the date of this Registration Document, an initial payment of €1.4 million was recognised in September 2016 for this funding, of which €501,000 for the benefit of IBN-One and €58,000 for the Company; a second payment of €1,087,000 was then recognised in June 2018, only for the Company.

In July 2016, the Group was granted an additional subsidy of €0.4 million by the Federal Ministry of Education and Research (Germany) to finance a project dedicated to the production of renewable gasoline additives. The entirety of this subsidy has been received at the release date of this Registration Document.

Lastly, in May 2017 the Group announced that it had succeeded in winning a European subsidy as part of a consortium of 6 participants including Global Bioenergies, coordinator, for the purpose of converting residual wheat straw into oligomers usable in lubricants, rubbers, solvents, plastics and fuels. The project is known as Optisochem and benefits from the Bio-Based Industries Joint Undertaking (BBI- JU), a public-private partnership between the European Union and the Bio-Industries Consortium (BIC), in the amount of €9.8 million, out of a total cost of €16.4 million. Global Bioenergies will ultimately receive €4.4 million from this project in the form of a subsidy. The first advances were received in the summer of 2017 and recognised in the accounts of Global Bioenergies as subsidies for €266,000 in 2017 and €1,459,000 in 2018.

In May 2018, the Group announced it had been able to land four new European subsidies for as many projects, all related to the diversification of feedstock usable by the process. The main project, entitled Rewofuel and for which Global Bioenergies is the coordinator, aims to convert forest waste into isobutene for fuel applications, and benefits from €13.9 million in financing from the *Agence exécutive européenne pour l'innovation et les réseaux* (INEA) (the European Executive Agency for Innovation and Networks) out of a total cost of €19.7 million. Global Bioenergies will ultimately receive €5.7 million from this project in the form of a subsidy. An advance corresponding to 80% of the total financed was paid on 30 May 2018. In the 2018 fiscal year, the subsidy recognised for this project was €174,000. The three other projects, respectively named Sweetwoods, Biorecover and E4fuel, are also subject to funding by the Horizon 2020 programme leading to €2 million in subsidies expected for Global Bioenergies. Advances related to the various projects were received during the first half of 2018; €326,000 of subsidies were recognised in the 2018 fiscal year.

In addition, in May 2014 the Group signed an optional line of equity financing with Yorkville Advisors. The Group obtained more than €1.4 million from this line against the exercise of 37,272 warrants, before deciding to terminate this contract. Following the termination of the contract with Yorkville Advisors, a new line of equity financing was signed (a PACEO®) with Société Générale in October 2015. At the date of the Registration Document, the Group has obtained €3.5 million from this new line against the exercise of 135,000 warrants. In September 2016 the Company signed a first contract with Bracknor Investment, which has enabled it to obtain €8.25 million against the issuance of 410,963 new ordinary shares through the conversion of convertible bonds. A second contract, providing for higher monthly tranches, was agreed in May 2017.

This has allowed €2.2 million to be received against the issuance of 171,205 new ordinary shares through the conversion of convertible bonds.

To date, the Group has only generated negative net operating flows and the continued industrialisation of its processes will still require major expenses. The Group deems that, other than its available cash at 31 December 2018 and the above-mentioned⁷ public funding already awarded, its principal sources of financing over the next few years will be the following:

- payments received from industrial players within the scope of licence or licence option agreements. The income generated by the Group should account for a significant and growing part of its financing. The Group's ability to generate income from licences and licence options granted to third parties for the use of its technologies is an important factor for its financial equilibrium on the medium term. The Group has thus allocated business development resources who will contribute to the set-up of new contracts likely to generate short-term lump-sum income for the Group and licence fees over the medium and long term;
- revenue from the provision of engineering services to companies wishing to build and operate plants that use the Group's processes;
- the research tax credit;
- the income derived from the exercise of warrants as part of lines of equity financing;
- to a more marginal extent, income from cash management and short-term financial instruments.

Moreover, other factors could require the finding of additional sources of funding:

- new opportunities for the development of new processes or the acquisition of technologies or other activities;
- higher costs and slower-than-expected progress of the Group's research and development programmes;
- increased costs to defend its patents and other intellectual property rights.

The interruption of one of these sources of income or the postponement of any of them could have a significant negative impact on the Group's business, outlook, financial situation, results and development. In particular, the Group may have to:

- delay, reduce or even eliminate research and development programmes, or reduce its workforce;
- obtain funds through agreements or partnerships which may require it to relinquish rights to some of its technologies or products; or
- grant licences or conclude new collaboration agreements which may be less favourable than those it may have been able to secure under a different context.

The Group may be unable to raise additional funds, or such funds may not be available under acceptable financial conditions when it needs them. Furthermore, to the extent the Group would raise capital through the issuance of new shares, its shareholders' stakes could be diluted.

⁷ €6.5 million remain to be received for the "ISOPROD" project, €3.3 million remain to be received for the "OPTISOHEM" project, €1.425 million remain to be received for the "REWOFUEL" project and €1.5 million remain to be received for the three other European projects

The materialisation of one or more of these risks could have a negative impact on the Group, its business, its financial situation, its results and its development. Lastly, it should be noted that cash at 31 December 2018 does not enable the expenses expected in 2019 to be fully covered.

4.2.3 Risks associated with access to grants from non-trading partners

Like all research programmes benefiting from public grants, the Group is exposed to the risk of having to reimburse all or part of such grants in the event of non-compliance with its commitments.

Should the Company not comply with the contractual terms and conditions provided in the agreements signed with ADEME as part of the BioMA+ and ISOPROD projects or with European agencies as part of the five European projects for which it receives funding, it could have to repay in advance the sums disbursed. Such a situation could deprive the Group of some of the financial resources it needs to carry out its research and development projects. Indeed, the Group cannot guarantee that it will have the required additional financial resources, time, or the possibility of replacing such financial resources with others.

4.2.4 Risks associated with the research tax credit

To finance its activities, the Group also relies on a French research tax credit (CIR) for its parent company. This research tax credit is granted to companies investing significantly in research and development. The research expenses eligible for the CIR include, in particular, salaries and emoluments, consumables, services outsourced to certified research bodies (public or private) and intellectual property fees.

It cannot be ruled out that the tax authorities may challenge the methods used by the Group for the calculation of its research and development expenses or that the CIR may be denied by the tax authorities despite the Company's compliance with the documentation requirements and eligibility of the expenses, or that the CIR may be amended through a change in regulations. Such a situation could have a negative impact on the Group's results, financial situation and outlook.

For information purposes, the Company was subject to a tax audit begun in 2015 primarily regarding the research tax credits in the years 2012, 2013 and 2014. The conclusions of this audit and the expert's report relating to the research tax credits highlighted a "very comprehensive project not only from a technical/scientific point of view but also in terms of the financial data and supporting documents, allowing a thorough analysis of the projects and the work carried out. These can unequivocally be called R&D work, combining applied research and experimental development." The entire audit concluded without any adjustments required. No audit has since been conducted.

4.2.5 Risks of dependence on key skills

The Group's success largely depends on the work and expertise of its co-founders: Marc Delcourt, Chief Executive Officer and Chairman of the Board of Directors from the creation of the company until 31 August 2015 - following the change in chairmanship of the Board of Directors, Mr Delcourt retained his duties as a Director and Chief Executive Officer -, and Philippe Marlière, a Director who supports the progress of the scientific teams.

Philippe Marlière's scientific knowledge has been essential during the research phase of the Isobutene bioprocess. The Group has now moved into an industrial development phase which relies on teams comprising some 50 scientists.

A "Key Person" insurance policy (covering permanent disability and death) was taken out on 15 June 2011 with ACE Europe to cover Marc Delcourt, Chief Executive Officer of the Company, up to an amount of €1 million.

Moreover, the recruiting of each new manager reduces the risks for the Group in the event of the incapacity of Marc Delcourt.

The Group also has several key employees, who have major responsibilities within the Group. These include the heads of the business development and finance activities, as well as the directors of the various departments dedicated to the Group's research and development activities. In June 2013, the Group hired Frédéric Pâques, formerly Scientific Director at Collectis. Frédéric Pâques is the Chief Operations Officer at Global Bioenergies. In May 2015, the Group hired Bernard Chaud, whose career to date has been split between the chemicals industry (plant manager), the sugar industry (director of biofuels) and the French civil service (ministry of agriculture). Bernard Chaud now manages the industrial strategy of the Group; he is also Chairman & CEO of IBN-One SA.

The Company's two operational Vice-Presidents, Charles E. Nakamura and Richard E. Bockrath, joined the Group in 2012. Both of them have lengthy experience in the development of industrial biology processes and play a key role in the industrialisation of the Isobutene process.

Generally speaking, the departure of certain key employees could result in:

- the loss of know-how and the weakening of certain businesses; or
- shortcomings in terms of technical skills that may slow down activities and eventually alter the Group's ability to achieve its objectives.

The Group is in competition with other companies, research bodies and academic institutions for the recruitment and retention of highly qualified scientific, technical and management personnel. As this competition is fierce, the Group may be unable to attract or retain such key personnel under economically acceptable conditions.

The Group's inability to attract and retain such key persons could generally prevent it from achieving its objectives and thus have a significant negative impact on its business, results, financial situation, development and outlook.

4.2.6 Risks associated with the management of organic growth

The Group may have to deal with substantial growth in its business. It might need to recruit staff in order to be able to expand its operations. It will thus need to rally its internal resources and, in particular:

- train, manage, motivate and retain a growing number of employees;
- anticipate the expenses and investments associated with this growth, as well as the related financing needs;
- anticipate, for its products, the income they may be able to generate; and
- increase the size of its existing IT systems dedicated to operations, finance and management.

The Group may be unable to manage its growth and could encounter unforeseen difficulties in its expansion. If this were to be the case, the Group's business, outlook, financial situation and development could be affected.

4.3 LEGAL RISKS

4.3.1 Risks related to industrial property

The Group exploits a portfolio of 35 patent families for processes relating to the biological production of molecules of interest from renewable resources. These patents and patent applications are the Group's core business.

Currently, 31 patent applications were published and among these latter, 90 patents were issued in numerous countries or territories including Europe, the United States, China, India, Japan and even Brazil.

Among these 35 patent families and patent applications: (i) nine are held by SCIENTIST OF FORTUNE SA, (ii) sixteen are jointly held by SCIENTIST OF FORTUNE SA and the Company, (iii) nine are held by the Company and (iv) one is held by a large industrial group with which the Company signed an exclusive licence agreement for its exploitation (see 11.2.1).

Uncertainties associated with the protection provided by the patent applications

A significant number of patent applications exploited by the Group are currently under examination, which means that there is uncertainty as to the outcome of the granting procedure, as in all such procedures.

The Patent Office's decision to issue the patent (or not) is solely based on the examination conducted by the examiners. In actual fact, this decision may take several years. Moreover, at the time a patent application is filed, despite the checks conducted, there may be prior art of which the requester is unaware, for example patent applications already filed by third parties but not yet published. Consequently, the granting of a patent does not guarantee its validity, which may be challenged by third parties at any time.

Consequently, the Group cannot guarantee that:

- the patent applications under examination will effectively give rise to the granting of a patent;
- the patents granted, whether held under licence, owned or co-owned by the Company, will not be challenged by third parties and/or invalidated by a competent court;
- the scope of the protection provided by the patents will be sufficient to protect it from its competitors (the Group deems that this risk is limited by (i) the broad nature of the claims made in the patent applications exploited by the Group, and (ii) the anticipation of that risk through an active search for alternative solutions which the Group will be able to claim before a third party does so);
- its products do not infringe on third-party patents, or will not be accused of doing so (however, the Group conducts an active watch in this regard and, to date, has detected no prior art on its patent applications, enabling it to consider that this risk is very low); or
- third parties will not take legal action or claim a property right on the patent applications or other intellectual property rights exploited by the Group.

The occurrence of one of those events concerning one of the patents or intellectual property rights held and/or exploited by the Group could have a negative impact on its business, outlook, financial situation, results and development.

Legal actions could prove necessary to enforce the Group's intellectual property rights, protect its know-how and trade secrets, or determine the validity and extent of its intellectual property rights. Any legal dispute could cause considerable expenses, reduce the amount of potential profits that could be generated by the Group and fail to provide the protection sought. The Group's competitors could successfully challenge its patents or patent applications, whether these are held under licence, fully owned or co-owned, before a competent court, thereby reducing the scope of the Group's patent portfolio. Furthermore, the laws of certain countries do not protect industrial property rights in the same way as in Europe or the USA, and the procedures and rules required to defend the Group's rights may not exist in such countries. Moreover, these patents or patent applications could be counterfeited or successfully circumvented by third parties.

The granting of a patent does not guarantee its validity and third parties may challenge it. The granting of a patent in the field of biotechnology is uncertain and raises complex legal and scientific questions. Until now, no uniform policy has emerged on the global level in terms of the content of the patents granted and scope of the claims authorised in the field of biotechnology.

Risks of patent competition from third parties not yet perceived and which may represent a threat for recently filed patent applications

Generally speaking, patent applications are published 18 months after their filing date.

The fact that patent applications filed by third parties are kept secret for 18 months deprives the Group of an exhaustive vision of its competitors' latest developments. There is thus a risk for the Group, as well as for any company involved in the innovation, that third parties may have filed patent applications constituting prior art to the inventions covered by the patent applications exploited by the Group. In such a case, to continue to exploit these inventions, the Group would be forced to obtain a licence for the use of the patents held by third parties, or failing that, interrupt or modify certain activities or processes, or even develop or obtain alternative technologies. This would be liable to have negative impacts on the development of its products and on its future income.

However, the specific risk associated with third-party patents not yet published only concerns patent applications filed over the past 18 months. The first patent applications exploited by the Company were filed over 18 months ago, thereby eliminating any uncertainty, except for the specific case of the USA. Uncertainties still exist for the most recent patent applications.

In the USA, specific laws may give rise to a different situation. In particular:

- (i) patent applications may remain unpublished until the granting of the patent if the applicant requests it and undertakes not to extend its patent application outside the USA;
- (ii) patents may thus be granted according to the invention date, which may pre-date the filing date. Consequently, the patent is not always granted to the first applicant to file the request. This rule was repealed by a law dated 16 September 2011, enforcing the "first to file" system (instead of the "first to invent" system). However, this new system is only applicable to patent applications filed as from 16 March 2013.

This situation could, in certain cases, prove to be unfavourable for the Group. However, to date, no element liable to limit the Group's exploitation rights due to this specific law has been identified. At any rate, any damages liable to arise in this respect would solely concern the exploitation of the inventions on US territory.

Risks associated with the fact that the Group exploits patents filed under an exclusive licence agreement or under co-ownership

The majority of patent applications exploited by the Group are either co-owned, or used under licence with agreements with third parties and in particular with SCIENTIST OF FORTUNE SA. For further information concerning these licence agreements, please refer to Section 11.2 of the Registration Document.

The fact that the Company does not own all its patents and patent applications, but holds some of them under exclusive licence or co-ownership, does not prevent it from fully exploiting the patents and patent applications since the licence agreements are written in such a way that the Group has all related exploitation rights for the production of light olefins.

The first licence agreement, concluded with SCIENTIST OF FORTUNE SA in 2009, requires the Group to commit a minimum amount to research and development or to earn a minimum revenue from the exploitation of these patents and patent applications.

Thus, every year, the cumulative amount of the sums invested for the development of patent applications granted under that licence and the revenue earned from the exploitation of these patent applications must be at least €500,000⁸. If this condition is not met, SCIENTIST OF FORTUNE SA has the right to convert the licence into a non-exclusive licence on simple notice to the Group. To date, the Group has largely fulfilled this obligation by far.

Furthermore, amendments 5 and 6, respectively signed in September and October 2012 (see Chapter 11 of the Registration Document), which bring into the scope of the first licence agreement new inventions, in particular concerning the biological synthesis of propylene, provide that each year, the cumulative amount (i) of the sums committed for the development of these new inventions, including all operating expenses, and (ii) the revenue earned from their exploitation (including the know-how, results, patent applications, any upgrades and the related biological material), must be at least €500,000⁹. This second minimum amount is added to the minimum amount initially set in the first licence agreement.

The second licence agreement, also concluded with SCIENTIST OF FORTUNE SA, but this time in 2011, also provides an obligation for the Group to commit a minimum amount to research and development (at least €450,000 per year) or to earn a minimum revenue from the exploitation of the technology (at least €500,000 per year). If this condition is not met, Scientist of Fortune is entitled to convert the licence into a non-exclusive licence.

The third licence agreement was concluded with a large industrial group much later, in 2016, on a patent for enzyme activities for which a particular interest was identified, related to activities developed by Global Bioenergies. It is an exclusive agreement obtained in exchange for future royalties, but without fixed payments.

This legal situation entails specific risks, given the fact that SCIENTIST OF FORTUNE SA holds significant intellectual property rights. In addition to any disagreement, differing interpretations and/or disputes that may arise concerning the licence agreements and the early termination of such agreements by SCIENTIST OF FORTUNE SA or the large industrial group, could have a significant negative impact on the Group's business, financial situation and outlook. The early termination of these licence agreements would mean that the Group would no longer be able to exploit the patents or patent applications or the part of such patents or patent applications it holds under licence, since it would no longer have the authorisation to do so.

Risks associated with imperfect protection of the confidentiality of the Group's data and know-how

It cannot be ruled out that the methods for protecting the know-how developed by the Group or licensed to the latter may not be optimal or may be violated, that the Group may not have appropriate solutions against such violations, or that its know-how and trade secrets may be disclosed to its competitors or developed independently by them, with the understanding that the protection of confidentiality is rarely infallible.

⁸ Minimum amount calculated at the end of a 12-month period, on the contract anniversary date, i.e. on 13 February of each year

⁹ Minimum amount calculated at the end of a 12-month period, on each rider's anniversary date, i.e. on 12 September of each year for Rider 5 and on 30 October of each year for Rider 6

The materialisation of one or more of these risks could have a significant negative impact on the Group's business, outlook, financial situation, results and development.

The Group occasionally supplies information and biological material to researchers working within universities or other public or private entities, and asks them to conduct certain tests. In all cases, it signs appropriate confidentiality agreements with each of these entities and a research contract granting it all or part of the rights related to the results of the research carried out, whether these can be protected by intellectual property rights or kept secret as know-how. The Group also relies on technologies, processes, know-how and non-patented confidential data, which it protects through confidentiality agreements with its employees, consultants and certain sub-contractors. Nevertheless, the Group cannot guarantee that such agreements will be complied with, that the Group will have adequate remedies in the event of disclosure, nor that such confidential data will not be disclosed to third parties in any other way or used and developed independently by competitors. Should the Group be unable to ensure the confidentiality of particular data, the value of its technologies and products could be affected.

Moreover, some elements of know-how come under the licence agreements mentioned above and are thus subject to the same risks as the patents and patent applications covered by these agreements.

Risks associated with the succession of contracts for the same technology

The Group exploits patent applications through chains of contracts allocating their ownership/exploitation to various entities: SCIENTIST OF FORTUNE (owner or co-owner), Global Bioenergies SA (licensee, owner or co-owner), and various sub-licences.

While the outcome of the intellectual property rights relating to the work conducted within the scope of these contracts is properly managed, identifying what belongs to a particular party may sometimes prove difficult and give rise to disagreements. Thus, risks of disputes in this regard cannot be ruled out.

Risks with respect to inventors

The patents filed (or to be filed) by the Company, either on its own or jointly with Philippe Marlière or SCIENTIST OF FORTUNE SA, cover inventions stemming from the Group's employees or non-employee corporate officers (such as Marc Delcourt), or external consultants (such as Richard Bockrath).

Concerning employees entrusted with an inventive mission (Research Directors, Project Managers, Engineers, etc.), the Group (which automatically has the ownership rights to the inventions they develop) pays them a bonus for their contribution.

Concerning employees not entrusted with an inventive mission, the Group (which has a pre-emptive right over the inventions they develop) will, where applicable, need to give them a "fair price" for the acquisition of their contribution.

Concerning Marc Delcourt, a transfer agreement was signed on 28 April 2011 between Marc Delcourt and Global Bioenergies SA covering the transfer of Marc Delcourt's past contributions, and a commitment for the transfer of any future contribution he may make during the performance of his duties.

The transfer of contributions prior to 28 April 2011 concerns two patent applications, which hold very different places in the Group's intellectual property portfolio:

- patent application A2 ("Production of alkenes by [...] enzymatic conversion of 3-Hydroxyalkanoic acids", see Section 11.2.1 of the Registration Document) is an improvement of patent application A, on which the Group's business is based. This improvement is significant. However, this patent application cannot be exploited independently from patent application A;
- patent application Z ("Method for the enzymatic production of isoprenol using mevalonate as a substrate," see Section 11.2.1 of the Registration Document) does not concern the Group's main project. It concerns the biological production of another molecule, isoprene.

Concerning the transfer of contributions after 28 April 2011, the Group may be required to settle the transfer with Marc Delcourt on a case-by-case basis, for his contribution to the inventions for which he intends to file patent applications.

Lastly, concerning Richard Bockrath, the latter signed a consultancy contract with the Group on 20 December 2011, stipulating that he transfers to the Group all intellectual property rights related to the work carried out within the scope of the performance of the contract. The transfer of the rights that Richard Bockrath holds on inventions for which two published patent applications were filed by the Group in December 2012 and published in 2014 was confirmed through a specific contract dated 1 December 2012.

Specific risks associated with counterfeiting

The Group's competitors could infringe on the patents and patent applications exploited by the Group. To prevent this, the Group may need to initiate infringement actions which may prove to be long and costly. The Group cannot guarantee that it will always be able to ensure the enforcement of its industrial property rights.

However, the Group considers that it is less exposed to infringement than other players operating in other industries, for several reasons:

- firstly, given the high investment requirement, it would be difficult for a counterfeiting institution to invest in the set-up of a production plant worth tens of millions of euros, while being aware of the risk of having to stop its operations rapidly due to an infringement action brought against it by the Group;
- secondly, counterfeiting is detectable and the traceability of the product is an indispensable element to detecting possible counterfeiters. The molecules produced by the Group are easy to trace using a system that measures the carbon 14 content, which makes it possible to date the carbon, i.e. determine the moment when the carbon was incorporated in the living matter. This technique makes it possible to separate olefins of petroleum (fossil) origin from olefins produced from plants. The performance of such tests on olefin samples or olefin-based products (a piece of inner tube, plexiglass, a fuel sample, etc.) will make it possible to determine with certainty whether the product is of fossil origin or stems from a bioprocess, thereby facilitating the identification of the counterfeiters and their prosecution.

Any dispute or claim brought against counterfeiters by the Group, irrespective of their outcome, could entail substantial costs and, consequently, risks for the Group. Moreover, it cannot be ruled out that the third-party counterfeiters may not initiate a counter-claim for invalidation of the patent(s) they are accused of counterfeiting.

Dependence on technologies held by third parties

The Group exploits inventions and know-how developed by SCIENTIST OF FORTUNE SA, either on its own or in collaboration with the Group within the framework of licence agreements (see Chapter 11.2). Moreover, it exploits a patent application from a large industrial group and for which a licence agreement was concluded.

4.3.2 Risks associated with the Group's liability arising from its products

The Group could be found liable in the event of non-conformity of its products, or non-compliance with regulatory requirements and standards applicable to said products, as well as the environment associated with their production, transport, storage and use. Should the use of one of the products cause damage, the Group could be subject to legal proceedings that could prove costly.

4.3.3 Litigation risks

As at the filing date of the Registration Document, to the Group's knowledge, there are no administrative, criminal, judicial or arbitration proceedings against it, including any pending or threatened proceedings, liable to have, or having had over the past 12 months, a significant negative impact on the Group, its business, its financial situation, its results or its development. Consequently, the Group has booked no litigation provision.

4.4 FINANCIAL RISKS

4.4.1 Foreign exchange risk

The Group's revenue is denominated in euros and its expenses are mainly paid in the same currency. A minor part of the Group's expenses is paid in US dollars, due to the use of consultants based in the US for industrialisation studies. For that reason, the Group has opened an account in dollars in order to manage its foreign exchange risk as best as possible. However, the Group may be exposed to fluctuations in foreign exchange rates within the framework of the licences or licence options it will be granting under agreements liable to be denominated in foreign currencies.

To date, the Group is not exposed to any significant foreign exchange risk.

The Group's exposure to such foreign exchange risk will mainly depend on the currency in which it will earn its revenue and pay all or part of its expenses. The significance of this risk will depend on the countries in which the Group will develop its business, its future partners, as well as the currency in which it will have to pay its operating expenses. If the Group is able to expand its industrial and commercial activities to countries outside the euro zone, it will probably earn revenue and pay expenses in other currencies. The Group will then look for the most appropriate method to monitor and manage its foreign exchange risk.

The economic advantages provided by the Group largely depend on the price of the materials on markets pegged to the US dollar. A significant and sustained variation in the euro/dollar exchange rate could result in the reduction or even the loss of the competitive advantage of one or more of the bioprocesses developed by the Group in a particular geographical region. This risk may vary depending on the geographical situation and local market data.

4.4.2 Liquidity risk

As at 31 December 2018, the Group's available cash and marketable securities totalled €10.8 million. On the same date, the Group's commitments under various repayable advances and loans totalled €9.4 million. The Group conducted a specific review of its liquidity risk and considers that it has the required funds to meet its upcoming commitments.

4.4.3 Interest rate risk

To date, the interest-bearing credit facilities extended to the Group all bear interest at fixed rates:

- the repayable advances and innovation loan granted by BPI France (formerly OSEO) are interest-free;

- the repayable advance of €2.7 million granted by ADEME under the *Investissements d'Avenir* programme “BioMA+”, for which the repayment schedule is set out in Chapter 10.1.3, bears fixed-rate interest;
- the repayable advance of €9 million granted by ADEME under the *Investissements d'Avenir* programme “ISOPROD”, for which the repayment schedule is set out in Chapter 10.1.3, bears fixed-rate interest;
- the bank loans of €5.4 million to finance miscellaneous equipment and tooling at the Evry laboratory but in particular to complete the financing required for the Pomacle pilot plant and the Leuna demo plant, are also at a fixed rate.

The Group considers that it is not exposed to any interest rate risk.

4.4.4 Counterparty risk

To date, the Group's commercial activity is still limited, and the Group only covers a small part of its expenses with payments made by its customers. The Group's exposure to customer debts (unpaid receivables) is thus very limited.

4.4.5 Equity risk

To date, the Group holds no stakes in listed companies and is thus not exposed to any equity risk.

4.4.6 Risks relating to cash management

The Group manages its cash in a prudent way. Its currently available cash and cash equivalents position consists of cash and marketable securities held by the Group (mainly shares in money-market funds and term deposits). As at 31 December 2018, the cash and marketable securities held by the Group totalled €10.8 million and mainly consist of low-risk liquid instruments.

4.5 INSURANCE AND RISK COVERAGE

The Group has set up a policy to cover its main insurable risks. It deems that the amounts of cover provided are compatible with the nature of its business.

Type of policy / Risks covered	Insurer	Limit	Term
<p><u>RC Zurich n° 7400027942</u> <u>Civil liability during operation and/or construction</u></p> <p>Damage of all kinds INCLUDING:</p> <ul style="list-style-type: none"> - Gross negligence for all claims in the same year of insurance - Consequential material and intangible damage - Damage to entrusted goods - Non-consequential intangible damage - Damage resulting from accidental environmental harm. <p><u>Civil liability after delivery</u></p> <ul style="list-style-type: none"> - Damage of all kinds - Consequential material and intangible damage - Non-consequential intangible damage - Including costs of removal and refitting and recall expenses incurred by the Third Party <p><u>Optional coverage</u></p> <ul style="list-style-type: none"> - Professional third party liability - Legal defence 	ZURICH	<p>€8,000,000 per claim</p> <p>€2,000,000 per year of insurance and €500,000 per victim</p> <p>€8,000,000 per claim</p> <p>€150,000 per claim</p> <p>€500,000 per claim</p> <p>€1,000,000 per year of insurance</p> <p>€5,000,000 per year of insurance</p> <p>€5,000,000 per year of insurance</p> <p>€1,000,000 per year of insurance</p> <p>€500,000 per year of insurance</p> <p>€500,000 per year of insurance</p> <p>€100,000 per year of insurance</p>	Renewable automatically on 1 May
<p><u>Professional multi-risk coverage no. 5068318604</u></p> <p>Theft</p> <p>Glass breakage</p> <p>Fire and related risks</p> <p>Equipment, furniture (at replacement value) and supplies</p> <p>Information materials</p> <p>Losses, including substantiated indirect losses</p> <p>Claims by neighbours and third parties</p>	AXA	<p>RI index value 01/01/2019</p> <p>€3,018</p> <p>€6,581</p> <p>€220,132</p> <p>€18,402</p> <p>€88,052</p> <p>€2,201,329</p>	Renewable automatically on 1 May
<p><u>Machinery breakdown coverage no. 119.120.509</u></p>	MMA	€4,998,513	Renewable automatically on 1 May

<u>Machinery breakdown coverage no. 141.312.487</u> -Value of the assets insured (fermenter + Pomacle purifier)	MMA	€1,000,308	Renewable automatically on 1 May
<u>Machinery breakdown coverage no. 6816470004</u> -Value of new replacement (central air handler)	AXA	€237,001	Renewable automatically on 1st September
<u>Machinery breakdown coverage no. 127.128.376</u> -Value of new replacement of assets named by Syngip BV	MMA	€165,298	Renewable automatically on 1 March
<u>Individual accident insurance No. FRBCOA06835</u>	CHUBB	€1,000,000	Renewable automatically on 1 May
<u>Local civil liability insurance, Germany no. 801.380.035.866</u>	ZURICH	€1,000,000	Renewable automatically on 1 May
<u>Civil liability insurance of officers and corporate officers no. 7.916.695</u>	AIG	€5,000,000	Renewable automatically on 1 May
<u>Auto insurance for business use of employees' vehicles no. 56807299</u>	Allianz	Cf contract	Renewable automatically on 1 July
<u>Machinery breakdown coverage no. 120.140.422</u> -Value of assets insured (purification/ fermentation unit)	MMA	€10,263,050	Renewable automatically on 1 January
<u>Comprehensive worksite coverage n° 127.125.079</u>	MMA	Construction cost of the building structure: €72,332	Temporary, set to end on 15/09/2025
<u>Provident Insurance No. 11016233/NAG01 1</u>	GENERALI	Cf contract (non-executive academy)	Renewable automatically on 1 January
<u>Local Civil Liability Insurance Holland n° 24525</u>	ZURICH	€1,000,000	Renewable automatically on 2 February

The overall amount of insurance premiums recognised by the Group for the year ended 31 December 2018 for all insurance policies contracted totals €109,000. (excluding local policies for Germany and Holland, Provident, Comprehensive Worksite and Auto insurance for business use of employees' vehicles).

5 INFORMATION CONCERNING THE ISSUER

5.1 HISTORY AND DEVELOPMENT OF THE COMPANY

5.1.1 Company's legal name and trading name

The Company's legal name is "Global Bioenergies".

5.1.2 Company's place of registration and registration number

The Company is listed in the corporate and trade register of Evry under the single identification number 508 596 012.

The Company's activity code is 7211 Z. This corresponds to biotechnology research and development.

5.1.3 Date and term of incorporation

The Company was incorporated as a simplified joint-stock company by private deed on 6 October 2008. It was registered in the corporate and trade register on 17 October 2008.

The Company was incorporated for a term of 99 years as from the date of its registration in the corporate and trade register, i.e. until 17 October 2107, unless this period is extended or the Company is dissolved before that date.

5.1.4 Company's headquarters, legal form and applicable law

The Company's headquarters are located at 5, rue Henri Desbruères – 91000 Evry

The Company's contact phone number is +33 (0)1.64.98.20.50.

Initially set up as a simplified joint-stock company, the Company was transformed into a public limited company with a Board of Directors by decision of the Extraordinary General Meeting of the partners which took place on 13 February 2009.

The Company is a French public limited company ("société anonyme") with a Board of Directors. It is governed by applicable current and future French laws and regulation, in particular the French Commercial Code and its amendments, as well as the Company's Bylaws.

The Company is subject to regulations on health, safety and the environment, in particular concerning the use, handling, transport and disposal of hazardous chemical and biological products and genetically modified organisms.

The confined use of genetically modified organisms (GMOs) is governed by the French Environment Code. The confined use of genetically modified microorganisms (GMMs) for research and development purposes is subject to certification by the Haut Conseil des Biotechnologies. This certification requires compliance with procedures relative to the handling of GMMs (staff training), waste treatment, the fitting-out of premises and their decontamination. These procedures, as well as the prevention and detection of breaches in confinement and storage, have been set up within the Company with the help of the Quality, Health, Safety and Environment team. The Company has obtained a certification for the handling of genetically modified microorganisms within the scope of its Isobutene programme. This certification was obtained on 4 April 2011 for a period of five years, i.e. until 4 April 2016. The Company has requested additional certifications for each new R&D programme and approval has been extended until 2021.

5.1.5 Company history

- October 2008: founding of Global Bioenergies by Marc Delcourt and Philippe Marlière
- February 2009: first round of funding raising €0.6 million from funds managed by Masseran Gestion (subsidiary of the BPCE venture capital group) within the framework of a total investment of €3.2 million
- First half of 2009: start of research and development in the premises of the Genopole business incubator in Evry
- June 2009: creation of the Scientific Board, made up of eminent scientists
- October 2009: proof-of-concept obtained for the bioproduction of a first product, isobutene
- February 2010: agreement in principle for funding of €760,000 from OSEO to step up the development of the isobutene bioproduction process
- April 2010: move to new premises covering 708 sq.m.
- September 2010: first integrated prototype of isobutene production on a laboratory scale
- October 2010: opening of offices in Munich
- November 2010:
 - o agreement for OSEO AIR grant (Aid for Responsible Innovation) of a maximum estimated amount of €100,000;
 - o licence option granted to a major American manufacturer
- June 2011: Company's initial public offering on NYSE Alternext in Paris
- July 2011: partnership signed with the Synthos Group – a leading European manufacturer of synthetic rubber – for the development of a biological process to produce butadiene
- September 2011:
 - o Synthos acquired a stake in Global Bioenergies via a capital increase of €1.4 million
 - o a repayable advance of €475,000 was obtained for the programme "*pre-industrial development of a bacterial strain for the production of isobutene on the laboratory scale*".
- October 2011: extension of Evry premises to obtain a total surface area of 1,428 sq.m.
- November 2011:
 - o collaboration agreement signed with a German car manufacturer wishing to integrate sustainable development into its activities (this agreement has expired but the parties have initiated talks to continue their collaboration);
 - o collaboration agreement signed with LanzaTech to study the feasibility of the production of biological isobutene from carbon monoxide
- May 2012: appointment of two operational Vice Presidents to support the Isobutene process industrialisation phase

- June 2012: opening of an office in the United States
- July 2012:
 - o capital increase via a public offering on NYSE Alternext Paris ;
 - o start of the laboratory pilot phase for the Isobutene process
- September 2012: the Company won the Europabio prize for the most innovative biotechnology company in Europe
- October 2012: proof-of-concept obtained for propylene
- December 2012: proof-of-concept obtained for butadiene, along with the completion of a stage in the strategic partnership with Synthos
- March 2013: new OSEO funding of €740,000 to create an isobutene bioproduction strain compatible with the conduct of tests in a pilot plant
- June 2013: funding of €4 million secured under the Investissements d’Avenir programme (all of which was received by the date of the Registration Document) for the construction of a pilot plant for the development of the Isobutene process
- July 2013: capital increase with public offering of €23 million, via the creation of 927,419 new shares on *Alternext Paris*
- October 2013: technical objective achieved, allowing Global Bioenergies to initiate exclusive negotiations with a major American manufacturer, with a view to securing a licence agreement
- November 2013: subsidy of €5.7 million granted to Global Bioenergies GmbH by the German Federal Ministry of Education and Research (BMBF) for the launch of the Leuna demo plant
- December 2013: Enter Next prize for the most successful financial transaction (capital increase of €23 million in July 2013) awarded at the 3rd annual stock market conference in Paris
- January 2014: announcement of the signing of a partnership with car manufacturer Audi to develop the biological production of high-performance isooctane from isobutene
- March 2014:
 - o Global Bioenergies announced that the design of its second pilot plant would be handled by the Engineering division of The Linde Group, a global leader in the field of gas and engineering;
 - o Granting of two patents by the Australian Intellectual Property Office covering the key stages of the process for the conversion of renewable resources into isobutene
- April 2014: granting of a key patent by the United States Patent and Trademark Office (USPTO), for the biosourced butadiene production process
- May 2014: set-up of an optional line of equity financing with Yorkville Advisors, for a maximum of €3 million over a period of three years;

- July 2014:
 - o Contract signed between Global Bioenergies and the Fraunhofer Centre for Chemical - Biotechnological Processes for the commissioning and operation of Global Bioenergies' demo plant, built on the site of the Leuna refinery;
 - o Global Bioenergies announced the acceptance testing of the fermentation unit and its satellites on the Pomacle site
- November 2014:
 - o Successful start-up of Global Bioenergies' first pilot plant on the Pomacle-Bazancourt site;
 - o First production of biosourced butadiene by direct fermentation
- December 2014: First production of biosourced propylene by direct fermentation
- February 2015: Completion of the first key stage of the BioMA+ project for the defining of a process to convert plant feedstock into methacrylic acid, an essential component of acrylic paints. The completion of this stage gave rise to a payment of €1.7 million
- March 2015:
 - o First isobutene production from waste biomass;
 - o Completion of the basic engineering phase of the Leuna demo plant;
 - o Start of construction of the demo plant in Germany. Additional financing of €4.4 million obtained
- May 2015:
 - o First batch of biosourced isobutene delivered to Arkema;
 - o First production of liquid hydrocarbons from plant feedstock using the Isobutene process;
 - o Delivery to Audi of the first batch of renewable gasoline produced on the Pomacle site;
 - o Joint venture *created* by Cristal Union and Global Bioenergies to build and operate, in France, the first biosourced isobutene plant
- July 2015: Adaptation of the Isobutene process to sucrose, the main component of sugar cane and sugarbeets. Until then, the process was developed on a glucose base, derived from cereals, potatoes or cassava
- August 2015: Adaptation of the Isobutene process to xylose, a sugar extracted from wood
- September 2015: The French Butane and Propane Commission (CFBP) and Global Bioenergies announce the success of a series of tests including renewable isobutene in bottled gas à for domestic use
- November 2015: Two new milestones reached in the BioMA+ project
- December 2015: Installation of the central unit of the Leuna demo plant, a 5,000 litre fermenter

- January 2016:
 - o Heightened cooperation with Audi and LanzaTech through the signature of two new agreements to broaden the field of raw materials compatible with the Isobutene process
 - o Capital increase of approximately €6.5 million through the issuance of 274,931 new shares via a private placement
- April 2016:
 - o Achievement of 99.77% purity level for the isobutene produced from the Pomacle-Bazancourt pilot plant and purified with the assistance of Processium. This very high purity level expands potential markets, including those with high added value
 - o Delivery of batches of isobutene produced in Pomacle-Bazancourt to ARLANXEO, world leader in synthetic rubber
- May 2016: Fully satisfactory scale-up of the Isobutene process; the performance (productivity, yield, robustness) obtained a few months earlier in the laboratory is now achieved by the Pomacle-Bazancourt pilot plant
- June 2016:
 - o New funding for the portion of the Investissements d'Avenir programme managed by ADEME; this new funding of € million is for the ISOPROD project focused on achieving the conditions necessary for the construction of the IBN-One plant. The € million of financing will be shared between Global Bioenergies SA (€5.7 million) and its subsidiary IBN-One SA (€3.3 million). This new project incorporates participation of Cristal Union and L'Oréal;
 - o All of the major equipment for the Leuna demo plant was received;
 - o The industrial groups Arkema and Clariant announce that they separately conducted validation tests of the isobutene produced by Global Bioenergies, which proved conclusive
- July 2016:
 - o New €400,000 subsidy received from the Federal Ministry of German Education and Research for a project on the production of renewable gasoline additives;
 - o Partnership announced with the Swedish group Aspen, world leader in alkylate gasoline for small 2-and 4-stroke engines. This agreement secures a right of access for Aspen to the isobutene which will be produced in Leuna and by the IBN-One plant
- August 2016: IBN-One announced it had awarded the first engineering contract from its bio-isobutene plant to French groups Technip and IPSB
- September 2016:
 - o Arrangement of bond financing by the reserved issue of OCABSAs (bonds convertible into warrants or shares) with Bracknor Investment. The transaction could ultimately result in an equity contribution of €18 million (€1.25 million through convertible bond subscriptions (OCAs) and €6.75 through the exercise of the warrants (BSAs));

- Global Bioenergies joined a Swedish consortium to establish a biosourced gasoline sector in Sweden. The value chain will rely on Sveaskog's forestry activities, on Sekab's biomass to sugar conversion process, on Global Bioenergies' Isobutene process and Preem's know-how in gasoline production, blending and retailing activities;
 - First production of isobutene from wheat straw at the industrial pilot scale
- November 2016: End of construction of the demo plant in Leuna, Germany
- December 2016: Approval by the main German national certification agency, TÜV, to start operations of the Leuna demo plant, which will begin its activities sequentially: First the fermenter, then the purification unit and lastly the filling station
- January 2017:
 - Success and last payment in the BioMA+ project financed by the French government;
 - Exclusive partnership signed with Butagaz, which would become the first gas distributor in France to market butane and propane containing bio-isobutene
- February 2017:
 - Acquisition of Syngip B.V., a Dutch company developing since 2014 a process to convert carbonised gaseous resources into light olefins; this acquisition enabled reliance internally on technologies using so-called third generation resources, at significantly improved economic and environmental cost
 - A world first: production of entirely renewable ETBE, which is an additive to gasoline representing a global market of over €2 billion
 - New delivery of batches of isobutene to Clariant, following the announcement of the success of the first phases of tests
- April 2017: Success of the scale-up of the Isobutene process on the Leuna demo site, in the form of a first production of fermentative isobutene with a duration and performance superior to that previously obtained on the scale of the Pomacle pilot plant
- May 2017:
 - Coordination of a European consortium as part of a project tender organised by the BBI-JU. The Optisochem project, to convert residual wheat straw into isobutene and then into oligomers, is funded by a €9.8 million subsidy, including €4.4 million for Global Bioenergies on a project whose total cost, for all partners, is estimated at €16.4 million ;
 - Agreement with Bracknor Investment to reorganise the financing programme by issuing 20 new tranches of €1.2 million each
- June 2017: Launch and success of a private placement of approximately €10.25 million in consideration for the issuance of 640,000 new ordinary shares
- September 2017: First bottled packaging on the Leuna demo plant
- October 2017: Strengthening the management team: Recruitment of Luc Mathis to the position of Chief Business Officer, appointment of Samuel Dubruque as Chief Financial Officer, and appointment of Karlheinz Segebrecht to the position of Director of Engineering of the German subsidiary Global Bioenergies GmbH

- November 2017:
 - o Delivery of the first batch of a renewable cosmetic ingredient to L'Oréal as part of the ISOPROD project supported by ADEME;
 - o Commitment to the scale-up of the C3 process (acetone / isopropanol, which can then be converted into propylene); first pilot test conducted successfully
- January 2018:
 - o Development of a new biosourced cosmetic polymer, enabling more natural formulations in compliance with ISO Standard 16128: 2016;
 - o Announcement of the estimated 69% reduction in greenhouse gas emissions for entirely renewable ETBE as compared to fossil gasoline;
 - o Presentation and distribution of the first household bottles of biosourced gas as part of an operation conducted with Butagaz; up to 40% less CO2 emissions over the life cycle of bottled gas
- March 2018: Achievement of a new milestone as part of the production agreement between Global Bioenergies and Audi, with the delivery of a batch of 60 litres of renewable gasoline produced at Leuna
- April 2018:
 - o Formulation of a 34% renewable gasoline, in compliance with standard EN228 for distribution in Europe, and confirmation of its very high performance;
 - o Announcement of the collaboration between Global Bioenergies and SkyNRG on the ASTM certification of bio-isobutene and its conversion to a sustainable aviation biofuel
- May 2018: Funding obtained from the European Union for 4 new projects which are part of the diversification process of Isobutene into different new substrates – including a major project aimed at producing gasoline and kerosene from soft wood, ultimately resulting in the receipt of nearly €8 million in subsidies for Global Bioenergies
- June 2018:
 - o Successful first key step in the ISOPROD project, funded by ADEME by attaining performance that enables exploitation of high value-added markets;
 - o Successful testing of scaling up the C3 process, aimed at production of acetone and isopropanol then of polypropylene in a fermenter of 4m³
- July 2018: Renewal of the partnership with Audi on gasoline by way of a new agreement focused on the use of residues as substrate, preparation for commercial deployment and the test of new renewable gasoline mixtures
- August 2018: Public support for renewable isobutene by the addition of its derivatives – ETBE and isooctane – to the list of biofuels benefitting from tax incentives
- September 2018: Successful private placement of €6.2 million from qualified investors to finish development of the Isobutene programme

- October 2018: Reached 87% of the target yield of the Isobutene process in the lab
- November 2018: Receipt of intentions to purchase covering the production capacity of IBN-One, a significant portion of which for high value-added markets (cosmetics, speciality fuels)
- January 2019: 2019 Finance Law passed, providing for an increase in the minimum amount of biofuels in road fuels
- February 2019: First production launch of isobutene from wheat straw on the scale of the Leuna demo plant, as part of the OPTISO-CHEM project receiving European funding.

5.2 INVESTMENTS

5.2.1 Main investments made

Intangible items

In 2014-15, the Group began deployment of its Laboratory Information Management System (LIMS) for the automatic management of the data from its screening platform. Designed to increase this platform's analysis throughput, this application ensures the traceability of the samples tested and stored and facilitates the analysis of the results. The enzyme optimisation department also acquired new software to push ahead with its molecular modelling work.

Furthermore, beginning in 2017, the Group started developing bioinformatics to enable modelling genetically modified organisms in the lab, then to automate genetic, metabolomic, genomic and fermentation analyses. Data thus generated, impossible to process without powerful algorithms, serve as support for the development of artificial intelligence activities intended to manage bioreactors in an automated way or even design new production strains. These activities require specific investments (computer equipment, creation of software...).

Tangible items

In the Evry laboratory

The purchases from the years 2013 to 2015 enabled a highly ambitious level of equipment in the Evry laboratory to be achieved. The fermentation platform is now at leading world-class scale. Equipment incorporating the latest technologies round out the existing assets, in particular in metabolomic research, which make it possible to identify and quantify the intracellular metabolites involved in the processes.

In 2016, with the heavy investments made over previous years, acquisitions within the laboratory represented only €130,000. In 2017, the replacement of some devices at the end of their useful life and acquisition of new devices brought this figure to €20,000. In 2018, investments represented only €8,000.

On the site of the Pomacle-Bazancourt pilot plant

In 2014, the Group's pilot plant emerged with the aim of producing 100% biosourced isobutene on a larger scale than that of the laboratory, purifying this isobutene, and bottling it in pressurised containers. The facility is mainly composed of a 500-litre fermenter and a purification and bottling unit, interconnected by an automated module, and represented an investment of €1.4 million.

On site of the Leuna demo plant

The Group's largest investments in hardware have been concentrated at the Leuna demo plant since 2015. In June 2016, all the major equipment had been received. The teams then connected and checked the various modules. The construction of the Leuna demo plant was completed in November 2016, following which official authorisation to start operations was issued by the German organisation TÜV. Depreciation of the facility began on 1 April 2017, based on the total depreciable amount of €11.4 million.

5.2.2 Main investments made by the Group during the current year and type of financing

Investments were limited in 2018 to the replacement or acquisition of some minor equipment for the Evry lab for €147,000, the acquisition of additional, more basic equipment for the Syngip B.V. lab for €84,000, as well as replacement of certain parts for maintenance of the Leuna demo plant for €62,000.

5.2.3 Main upcoming investments

The major investments made in the Evry laboratory since 2013 have made it possible to achieve a high and ambitious equipment level, allowing the furthering of the research started in the various programmes. To date, no need for any additional investment has been identified.

On the respective sites of the industrial pilot and demo of Pomacle-Bazancourt and Leuna, adjustments may be necessary to adapt equipment to the specificities of other processes. Moreover, it is envisaged to add an isobutene conversion unit to the Leuna demo plant, which will enable molecules for various markets targeted by future plants to be directly produced without having to use outside service providers.

6 OVERVIEW OF ACTIVITIES

6.1 SUMMARY

The Company was founded ten years ago with the vision, still unchanged, to create and bring to market an innovative process for converting renewable resources into isobutene and its derivatives. Isobutene is one of chemistry's main building blocks, representing an existing market of some \$20 billion.

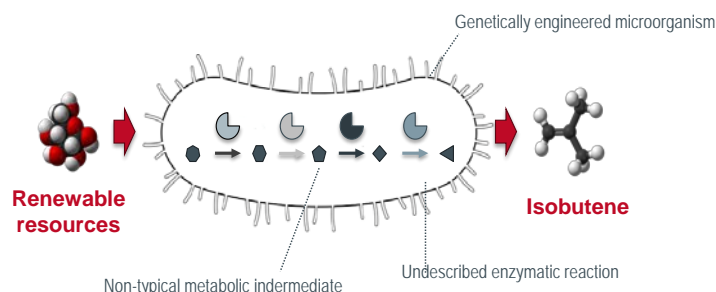
Two isobutene molecules combined together form isooctane, an eight-carbon hydrocarbon already known to be the best compound for gasoline (petrol) engines. Converting plant resources (biomass) into isobutene thus makes it possible to produce renewable gasoline, which can be mixed in a high ratio into petroleum-derived gasoline. Isobutene derivatives can also be included up to 50% in kerosene, and the Company's process offers the prospect of introducing biofuels into aviation.

Lastly, isobutene derivatives are also widely used in cosmetics. Because the cosmetics world seeks naturalness and cost pressures are lower there than elsewhere, this market has been targeted as a priority in the short term. In this field of cosmetics, the Company's products will provide a twofold solution, for both the desire for naturalness and as a replacement for silicones, a family of compounds disappearing from the market, for which isobutene derivatives are the natural substitute. In 2016 a collaboration in the cosmetics area was begun with L'Oréal, and letters of intent to purchase product have been obtained from several large companies in the industry.

By substituting oil by biomass feedstock, the process developed by Global Bioenergies has two main advantages:

- it will produce less CO₂, the main cause of climate change;
- it will help to re-industrialise the countryside, since the future production factories will be located in the middle of areas where biomass is harvested.

Micro-organisms do not naturally produce isobutene. Getting micro-organisms to produce isobutene represented a very high technological bar. To meet this challenge, the Company has developed an innovative approach based in synthetic biology.



Bacterium converting plant-based resources into gaseous isobutene (corn glucose, sugar beet sucrose and sugars from agricultural waste such as straw and forestry waste such as wood chips)

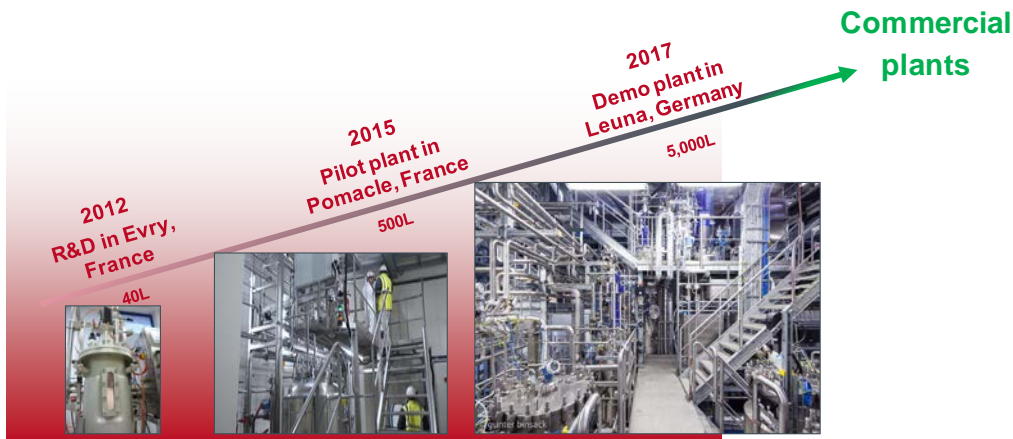
Global Bioenergies has proven the validity of the concept by radically altering the central metabolism of bacteria and implanting in them an artificial enzymatic pathway, created from scratch, to direct the sugars consumed into the production of isobutene. "Sugars" needs to be broadly understood since they may derive from different channels:

- sugar beet or cane sucrose, particularly the residual flux obtained from the crystallisation of edible sugar;
- grain glucose (wheat, corn), particularly from non-food grade grains;

- hydrolysates of straw, corn stalks or other agricultural waste;
- hydrolysates of wood chips.

Gradually, the performance of the process has improved in the lab. In 2018, an ambitious programme vastly improved the productivity and stability of the process, now sufficient for the process to be profitably operated at scale in a first commercial plant.

At the same time, scaling work has been done at the pilot plant and demo plant level.



Development stages for the isobutene programme

The pilot plant, with a 500 litre fermenter and simplified purification unit, was built and installed at Pomacle-Bazancourt, the largest agro-industrial site in Europe, near the city of Reims. It has been operating routinely since 2015.

While the pilot plant remains R&D based and can be thought of as a laboratory scale-up, the demo plant is implementing the commercial process.

Installed at the Leuna refinery in Germany, the demo plant has been in operation since 2017 and prefigures the commercial plants. Its industrial design is innovative and adapted to the gas fermentation process concept promoted by the Company. This is the first time that a fermentation process has been used to produce a gas, which offers significant advantages that will translate into lower operating costs.

The demo plant consists of a fermentation unit and a purification unit, enabling the integrated process to be validated and large batches of high-purity isobutene to be produced.



Leuna demo plant

Batches of isobutene have been produced, purified, packaged and shipped to numerous industrial companies such as Audi, L'Oréal, Arkema, Butagaz, Arlanxco and Clariant.

The commercial phase began when Global Bioenergies and Cristal Union set up a joint venture called "IBN-One", into which each invested around €1 million. IBN-One has a license on the process and is to finance, build and operate the first biological isobutene plant.

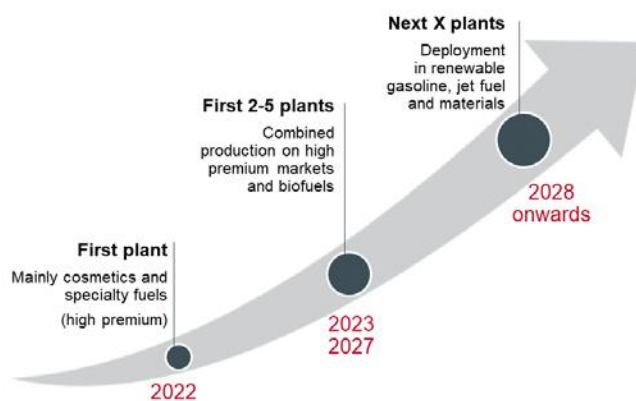
The engineering firms of Technip and IPSB, both recognized in the specific field of industrial biology, have completed the preliminary work on the plant. IBN-One is preparing to raise the €140 million that will be necessary to finance the construction of the plant.

Letters of intent to purchase over 50,000 tonnes of isobutene and derivatives have been received from large manufacturers in a variety of sectors: road fuels, aviation fuels, household gas, specialty fuels and cosmetics.

In particular, purchase intents for 10,000 tonnes of cosmetics products and 5,500 tonnes of speciality fuels have been received. Some of these contain prices, from between €4 to €10 /kg for cosmetics and €3 to €8/kg for speciality fuels, which are well above the prevailing market prices for road and aviation fuels.

Focused as it is on high value-added markets, this first plant will be very profitable. The IRR of the plant project is significantly higher than manufacturing standards, which allows us to offset the risk inherent in a first-time plant operating an innovative process. In the baseline scenario, this first plant alone will enable Global Bioenergies to reach profitability, with cash flows from both licensing fees and dividends.

Global Bioenergies expects to replicate this joint-venture and licensing model with other industrial groups and in different countries. Once the IBN-One plant is in operation, a rapid commissioning of other plants can be expected, given that the manufacturing risk will have been eliminated and the high-premium markets will not have been saturated.



Outlook for the industrial deployment of the process

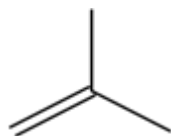
Much longer-term, we can see a massive deployment of the process focusing on road and aviation fuel applications. This will require that:

- the ratio of oil prices to sugar prices continues to increase; and/or
- Governments promote renewable solutions even more as a way to combat global warming.

The day will come when the current world of energy abundance will give way to a world of energy scarcity. Along with that, awareness of environmental harm due to our way of life is already resulting in restrictions being placed on the use of fossil resources. Having an industrial process for producing renewable gasoline and kerosene will turn out to be a distinct advantage in the transition to a different world more in tune with Nature.

6.2 ISOBUTENE: INTRODUCTION

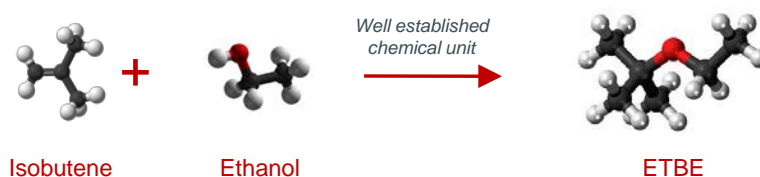
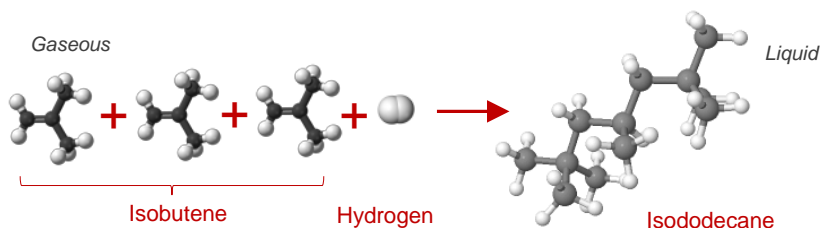
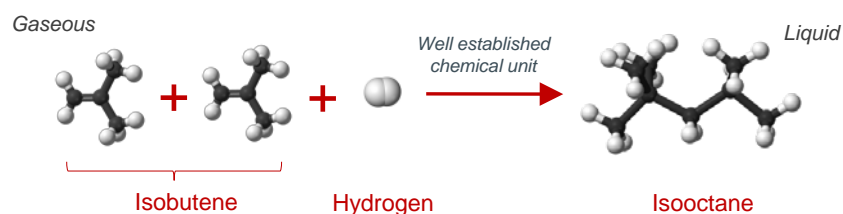
Isobutene, also called isobutylene (or 2-methylpropene in its UICPA designation), has four carbon atoms and is a colourless gas that is flammable under normal temperature and pressure conditions.



Chemical formula of isobutene

Around 20 million tonnes of isobutene are produced each year from oil¹⁰. The price of low-purity isobutene ranges between \$800 and \$900 per tonne at current market conditions, and high purity isobutene at about \$1,300 per tonne¹¹. The existing market for isobutene is \$15 - \$20 billion.

Isobutene is not used as is but only after being converted into various derivatives. Among the simplest derivatives are isooctane (2 isobutenes combined), isododecane (3) and ETBE (a combination of isobutene and ethanol.)



Production of isobutene derivatives

¹⁰ SRI 2008

¹¹ Argus Dewitt January 2018

Several suppliers offer technologies for producing these derivatives. Those technologies operate at very high efficiency and have been operated for decades by many industrial producers, using fossil isobutene. Some of them enable the versatile production of the compounds listed above in a single plant.

The market for fossil isobutene is very oriented to energy. Twelve of the 15 million tonnes of isobutene produced globally every year are converted into additives for gasoline. These isobutene derivatives have a very high octane rating and are well-known for drastically reducing the number of particles produced in an exhaust pipe, which improves the air quality of cities and the health of the public. Speciality fuels such as for two-stroke engines and aviation represent a special niche, with generally higher prices.

Isobutene is also used in large volumes outside of the energy sector. About 3 million tonnes of isobutene are used in commodity chemicals¹²: rubber, Plexiglas®, lubricants, paint, etc.

Lastly, isobutene derivatives are also widely used as emollients in cosmetics. This is a very large niche market, with volumes in the tens of thousands of tonnes, which will make it possible to fill at least one plant with the capacity of IBN-One.

The process developed by Global Bioenergies makes it possible to produce isobutene not from oil but by using renewable resources like residual sugars, non-food grade grains and waste from farming and forestry. Since Europe is currently experiencing surplus sugar production, it will also be possible, in the short run, to use non-residual sugar.

The renewable isobutene produced by the Company competes in the various market segments covered by fossil isobutene. In the short-term, speciality fuels and cosmetics will be given top priority. In particular, the issue of naturalness in cosmetics promises high prices.

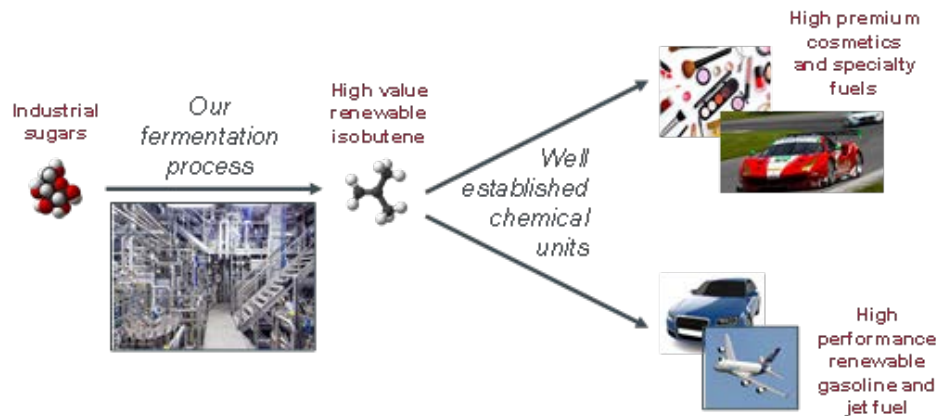
Longer-term, the gasoline market will be targeted. Producing renewable gasoline that can be mixed in high proportions into fossil gasoline will increase the percentage of biofuels in gasoline beyond the technical limit of 10% for ethanol.

Isobutene derivatives can also be incorporated into kerosene in high proportions (up to 50%). Because this industry's share of total CO₂ emissions is growing rapidly, opening bio-kerosene production is timely. Norway will require bio-kerosene to be used at all its airports, at the rate of 0.5% in 2020, and Europe as a whole plans to follow this path. The bio-kerosene incorporation rate will gradually rise to 5% in 2030 and over 10% in 2040.

¹² SRI 2008

6.3 VALUE PROPOSITION

Schematically, one can divide the applications of isobutene in two groups: those associated with a high market premium, which will be the earliest markets targeted, and the broader ones for road and aviation fuels, whose large volumes will in time require a massive undertaking.



Positioning bio-isobutene first on high-premium markets and then on the very large markets for road and aviation fuels.

There are four separate benefits to the direct fermentation of gaseous isobutene:

- lower production costs as compared to other innovative approaches in industrial biology;
- lower production of CO₂;
- marketing advantage;
- suitability for existing infrastructures.

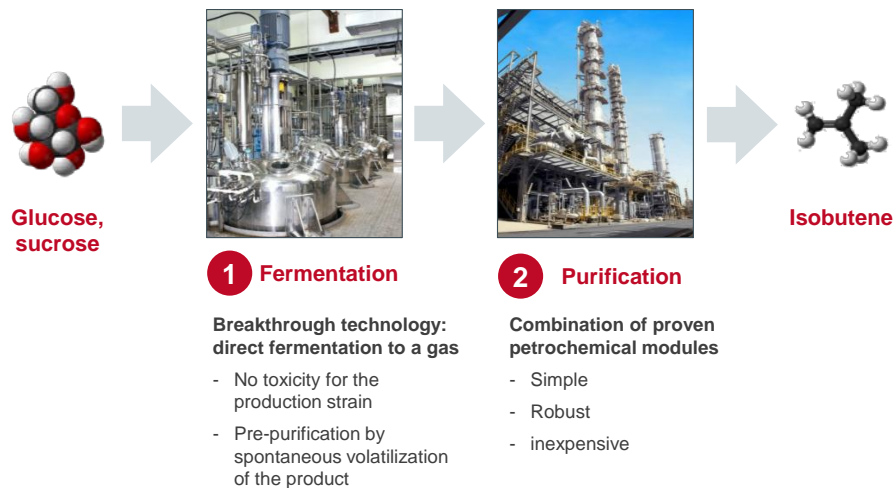
These aspects are each presented below:

6.3.1 Production costs

This is the first time in history that a fermentation process has been used to produce a gas, which offers two major advantages over the production of a liquid product through fermentation:

- firstly, it avoids the issue of product toxicity, since the gaseous product does not accumulate in the reaction medium. The toxicity of the final product is one of the principal constraints to the development of bioprocesses resulting in a liquid product. This absence of toxicity in the fermentation of gaseous isobutene opens the way to a continuous process, which is less costly to operate;

- secondly, downstream purification work is radically reduced. This point is very important for the production of liquid compounds which accumulate in the reaction medium and are often difficult to purify from a complex culture medium which varies from one resource to another.



The absence of toxicity and spontaneous volatilisation of the product will enable a low cost and an excellent environmental footprint.

(The facilities shown in the photographs are examples and not the Company's actual facilities)

This advantage for gaseous fermentation does not hold in the special case of ethanol, which has both a very high toxicity point (about 15%) and a very simple purification method (distillation). Ethanol has other limitations, such as its 10% blend limit in gasoline mixes.

6.3.2 Lower production of CO₂

Oil consumption has a heavy environmental impact: each kilogramme of oil used results in 3.1 kg of CO₂ being discharged into the atmosphere. The gradual increase in atmospheric CO₂ levels is associated with global warming, and is one of humanity's main challenges in the 21st century. If nothing is done, the Earth's temperature could rise by several degrees Celsius, which would have dramatic consequences for humanity and the ecosystems.

The production and use of organic hydrocarbons will help reduce greenhouse gas emissions. While fossil-based hydrocarbons follow a linear trajectory, from underground (in the form of oil) to the atmosphere (as CO₂) via refineries then engines, the trajectory of hydrocarbons produced by the Company should be viewed as a cycle: CO₂ is absorbed by plants which transform it into sugars, which are converted into hydrocarbons by the process, then burned in engines, releasing CO₂, which is then re-absorbed by plants.

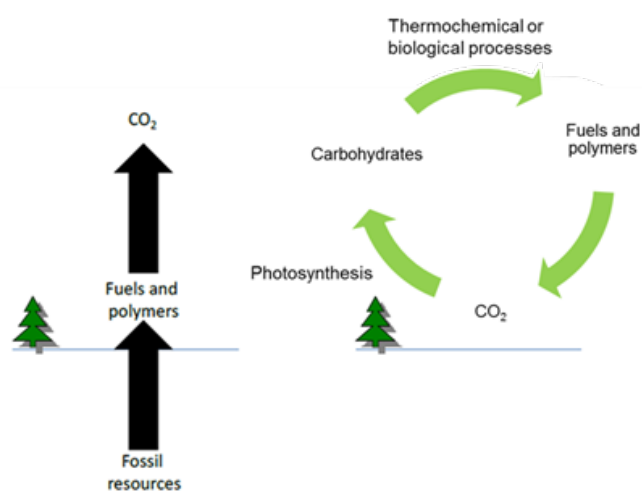


Diagram of the linear route of fossil carbon and the cyclical route observed in biofuels and biomaterials.

If the cycle were perfect, there would be no net production of CO₂. However, this cycle is, of course, imperfect, due to the fuel consumption of tractors, and the use of fertilisers, etc. Generally speaking, 50 to 80% less greenhouse gas is released compared to using oil (depending on the biomass resource used); the savings are calculated using a universal method known as "life cycle analysis". The best greenhouse gas savings are made using sugar cane in Brazil. The actual CO₂ savings will need to be assessed site by site and will depend on the plant resource used (sugar, grains, waste, etc.) and on the source of the electricity and steam used by the process.

As part of the project for the first IBN-One plant, an initial site-specific study was conducted that found a 69% reduction in CO₂ emissions as compared with fossil pathways, These findings will need to be confirmed after an on-site audit once the site goes into production.

6.3.3 Marketing advantage

Final products incorporating so-called 'green' compounds will be an advantage to the brand image of mainstream industrial companies. It will then be able to sell the product at a higher price and/or increase market share: the end consumers of products such as plastic water bottles, tyres, plastic bags, nappies, etc. are increasingly aware of environmental issues because they do not want to behave environmentally irresponsibly.

For example, ethylene produced by Braskem from ethanol has been marketed with a large price premium that is generally accepted in niche markets with high added value, where a direct contact with the consumer is established, such as packaging of food products with high added value (nutraceuticals) or cosmetics. The field of cosmetics is also recognised to be at the forefront of naturalness.

6.3.4 Suitability for existing infrastructures

Products derived from the bio-isobutene produced by Global Bioenergies are identical to those produced from petroleum-derived isobutene.

In the road fuels sector this concerns isooctane in particular, which unlike ethanol is miscible in fossil gasoline in high proportions. This property, which is known as "drop-in" in the United States reflecting the idea of the ability to blend a high proportion of the biofuel, has value in itself.

This gasoline, similar to fossil-sourced gasoline, has the advantage of not requiring the duplication of storage and distribution facilities. As the properties are similar, it would not even be obligatory to indicate its presence to consumers through specific labelling (as is the case for ethanol, - stamped "E10" -), and the current infrastructures (pipelines, service station pumps) may be used.

By using both derivatives of bio-sourced isobutene simultaneously, i.e. both isooctane and ETBE, Global Bioenergies has been able to produce a batch of gasoline containing 34% biofuel, which complied with the European gasoline standard. This batch of gasoline has been used to power a car for the first time, a standard-model Audi A4, on the Montlhéry circuit near Paris, as part of the partnership with the carmaker. This was the first time that a gasoline containing more than 15% biofuel was used in compliance with standards. This 34% renewable gasoline could be used in any gasoline-powered automobile without modification when it is available on a broad scale.

The application of the Isobutene process to kerosene production is also being studied, and has similar advantages of compatibility with existing infrastructures.

The same argument for complete compatibility holds true for isobutene derivatives in plastics and rubbers.

The fact of producing a compound identical to that already used by many industrial companies also facilitates marketing efforts.

6.4 TARGET MARKETS

Isobutene and its derivatives have very diverse markets, from cosmetics to speciality fuels and including gasoline, kerosene, plastics and rubber. This diversity of markets is a strength because it will keep the plants that use the Company's process from depending on a single application and so allows them to develop as these various markets expand and contract.

6.4.1 The cosmetics market

6.4.1.1 *The existing market for isobutene derivatives*

Isobutene derivatives are used in cosmetics as emollients, i.e., texture agents.

Facial, body and hair care, sun protection, hair colouring, antiperspirants and deodorants—the cosmetics market encompasses a wide variety of products. For each of these products, the formulators must choose skilfully from a wide variety of ingredients and combine them in a perfect balance. In doing so, they create the texture, overall performance and the appearance of the emulsion.

The cosmetic emollients market represents over 300,000 tonnes per year, about one third of which is for high-performance products. Functionally they provide softening, hydrating, lubricating, protective, film-forming, conditioning, hydrolysing and dispersive properties. Traditionally, cosmetic products are formulated with a mixture of emollients carefully chosen for their physico-chemical properties and sensory profile as well as their origin and their availability.

The cosmetics market is growing rapidly at over 5% per year globally, i.e., faster than general growth. This is true as well for emollients.

Isobutene derivatives are high-performance emollients. They help the products that contain them to spread in a uniform layer and are often added to products such as mascara, lip gloss and eye-liner. They help the product spread on the skin. They are also currently used in anti-ageing serums and in under-eye correctors, where the ability to spread the product uniformly is important due to the uneven surface created by lines and wrinkles. These ingredients are extremely light to the touch, which is an ideal feature in “weightless” cosmetic products that are supposed to feel invisible.

Another reason why they are used in cosmetic products comes from their non comedogenic properties. This means that they do not block the pores and do not contribute the development of acne.

The company believes that the volume of isobutene derivatives presently used in cosmetics is about 20,000 tonnes per year¹³.

6.4.1.2 *Replacement of silicones*

The cosmetic emollients market was shaken up in April 2018 when the European Commission decided to ban the principal volatile silicones D4 and D5 from all rinsed products such as shampoos and soaps, with an effective date of February 2020. Isobutene derivatives, which are the leading substitutes for these silicones, are expected to see their market explode.

¹³ There are no official complete market data on the market for high-performance emollients. The figures given in the paragraphs that follow derive from various cross-checked sources published by a number of sector participants and from discussions with certain market participants. The Company cannot guarantee their accuracy

Silicones were first proposed as ingredients in cosmetic products some 50 years ago. Their primary function was to replace oils and to make protective creams water-resistant. Since then a range of silicones of varying molecular weight and viscosity have been developed.

The cyclomethicones D4 (cyclotetrasiloxane) and D5 (cyclopentasiloxane) have turned to be the most useful. Cyclomethicones are volatile but once incorporated in an emulsion, they improve its spreading properties and feel soft and silky on the skin. The silicones D4 and D5 took over cosmetics and until recently were found in most products whether rinsed (shampoos, soaps) or non-rinsed (creams, mascaras).

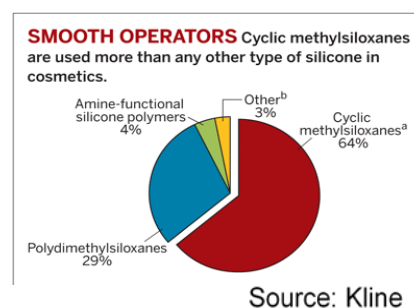
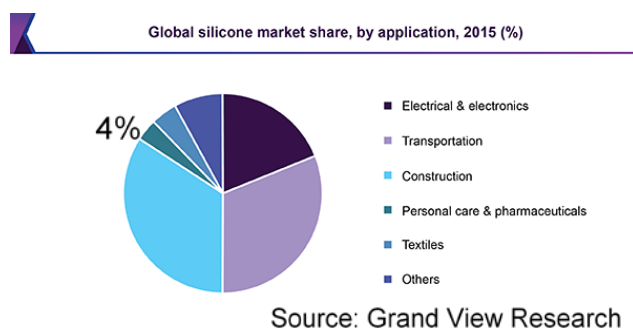
But the environmental effects of these cyclomethicones D4 and D5 were examined by the Canadian authorities and then in the European program REACH. D4 accumulates in the environment with a stability of thousands of years and unforeseeable long-term effects. D5 can also be harmful to the environment, mainly because it can contain D4, the two compounds being very difficult to separate and differentiate.

In early 2017 the European Commission (EC) suggested banning D4 and D5 in rinsed cosmetic products. This prohibition on including more than 0.1% of these compounds was officially promulgated in April 2018 and covers such products as shampoos, conditioners, shower gels, etc. The prohibition will take effect 1 February 2020.

Also being debated is the possibility that silicones promote acne by gradually blocking the skin's pores. More and more, companies in the market are seeking alternatives to all products containing silicones.

The total market for silicones was 2.4 million tonnes in 2015, of which 4% was used for “health and beauty” care, or a little under 100,000 tonnes. Cosmetics alone accounted for 72,000 tonnes.

The cyclic silicones D4 and D5 represent the majority (64%) of silicones, or 50,000 tonnes in 2015. The strong growth in the skin care market (8-9% per year) leads the experts in the field to assess the need at 90,000 tonnes by 2022, assuming that regulations still authorised them, which no longer seems a likely scenario.



Factors influencing the total market for silicones and the cosmetics segment

It has been established that plant extracts will not be enough to reach the product performance desired. A cosmetics laboratory (IMCD) and several Italian universities systematically researched the possible alternatives and quickly focused on branched hydrocarbon molecules, which have a chemical structure resembling that of silicones which explains their similar functional behaviour. The formula finally identified is a mixture of isobutene derivatives (over 50%) and other branched hydrocarbons.

The annual market for isobutene derivatives in cosmetics would therefore grow from about 20,000 tonnes today to 100,000 tonnes between 2022 and 2026.

6.4.1.3 A new product: bio-sourced isobutene derivatives

The only drawback to the isobutene derivatives used in cosmetics presently is their origin. They are produced from petroleum and thus do not meet the environmentally-friendly and natural criteria sought by the big cosmetics companies. After the era of all-chemical products, consumers now want organic, healthful and sustainable products. Consumers want products that are not only healthy but also environmentally-friendly. The hashtags #cleancosmetics and #greenbeauty are among the most frequently used in this field. Mobile applications like Yuka help consumers to put their wishes into practice, in other words to buy products that match their preferences and their ethics.

The brands realize this and are striving to modify their products in the new directions consumers want them to go. This affects every product category and is a new area for innovation by the brands. A natural product does not mean “technology-free.”

The bio-sourced isobutene derivatives from the Global Bioenergies process thus provide a two-fold solution to the question of replacing cyclic silicones and to the need for naturalness expressed across the cosmetics field.

The Company has been working with L’Oréal since 2016 with a first objective of validating products in different cosmetics applications.

Interest from the field is strong, as shown by the letters of intent to purchase, representing 10,000 tonnes of isobutene derivatives per year that have been received from several leading manufacturers, with in some cases an indicated price two to five times greater than that in fuels.

6.4.2 Speciality fuels

Speciality, or non-road, fuels encompass the auto-racing, outboard motor and helicopter markets. Each of these areas has its own set of forces and tries to combine the use of biofuels with performance. The energy density and high octane rating are the key parameters, and isobutene derivatives are positioned ideally on them.

But the biggest volume is found in two-stroke engines used in forestry operations and park maintenance. Professionals in these fields are exposed for long periods of time to the emissions of their machines (mowers, chain saws, etc.) since they are so close to where the fumes escape. Fuels that limit the emission of particles are used so as to limit the health effects from frequent use of these tools by professionals.

Isobutene derivatives are currently used in this industry, under the name of “alkylates.” Isooctane, obtained through the chemical combination of two isobutene molecules, is the best compound in this family.

Incorporating biofuels in speciality fuels is happening now; all energy vectors will gradually have to include renewable products. Two-stroke engines are generally incompatible with ethanol, and the only option is therefore to include advanced biofuels.

Letters of intent representing 5,500 tonnes have been received by the Company, with price indications 1.5 to 4 times greater than the estimated price for road fuels.

The health impact on professionals gives this market a significant value-added, reflected in the price of the product. This second market niche will be useful in establishing a high profitability for the first production plants.

6.4.3 Bio-kerosene

The kerosene used by airplanes today represents a market of 250 million tonnes per year, almost exclusively derived from petroleum. It grew at 5% per year over the last decade, and actually reached 6.1% in 2018.

Turbine aviation engines (turbo-jets and turbo-props) use kerosene-based fuels. In civil aviation, the most widespread fuel is Jet A-1, defined by the AFQRJOS international standard (Aviation Fuel Quality Requirements for Jointly Operated Systems).

Air transportation is one of the last few energy segments not to include renewables. The technical constraints are very significant and preclude incorporating the solutions found for road fuels such as ethanol or electricity. The sole option is to set up bio-kerosene production based on renewable hydrocarbons.

Biofuels from just three approaches have been flight-tested so far:

- the first family of technologies consists of hydro-processing vegetable oils such as palm, jatropha, camelina or algae oil. A first test flight took place in 2008 on an Air New Zealand Boeing 747-400, one of whose engines was supplied 50% with Jet A-1 and 50% with a fuel based on jatropha. Many more tests followed. Those production processes based on oils proved to be difficult to use, sometimes because the resource is associated with deforestation, such palm oil; sometimes because the species employed are not cultivated on a large scale, such as jatropha, camelina, algae; and sometimes, as in the case of spent oils, because the supply is limited;

- the second approach is based on plant pyrolysis. These processes, based on a thermo-chemical approach, have not yet been scaled up and so are not used commercially;

- the third approach is based on the fermentation of sugars, broadly defined to include residual sugar beet and cane sugars as well as sugars from wood or straw waste. The U.S. Company Amyris produces a 15-carbon compound that may be blended in kerosene and has been flight-tested. Gevo produces isobutanol, which can be transformed after several stages into compounds identical to those produced by the Company. This approach, which is indirect and thus much less economical, has been tested in flight by Air Alaska after regulatory approval by ASTM and allows isobutene derivatives to be blended up to 50% into kerosene.

Global Bioenergies fits into this last family of technologies (“sugars into kerosene”) and believes that its approach, the direct fermentation of isobutene, will have the lowest costs associated with it.

Under current market conditions, the economic attractiveness of biofuels depends on tax incentives. Europe is the region of the world that is most strongly promoting bio-kerosene, and justifies its goal by the fact that biofuels produce 2 to 10 times less CO₂ than their fossil equivalent, which will limit the greenhouse gas effect and global warming. One country so far, Norway, has introduced a mandate to incorporate 0.5% bio-kerosene starting in 2020. All Europe is expected to follow and then increase the portion of biofuels in kerosene from this initial amount.

The Company's isobutene process will have to be registered with regulatory bodies. The Company has taken the first steps in this direction as part of what is called a fast-track process.

The entire French aviation industry has been enlisted to encourage options for renewable kerosene. A letter of intent has already been received by Global Bioenergies from one of the largest firms in the sector for a maximum of 10,000 tonnes of bio-kerosene per year.

6.4.4 Biofuels in gasoline

Generally, Global Bioenergies promotes the development of a “drop-in” biofuel value chain, characterized by high energy density and high blending potential in current petroleum fuels to avoid the need for new storage, transport and distribution infrastructures. This would allow the industry to go beyond the ethanol blend limit in gasoline.

Because they can be blended in any proportion and have a high octane rating, isobutene derivatives offer the best opportunity for complementing and eventually replacing fossil-based gasoline. If isobutene is produced competitively with oil in large quantities, it could take a central place in the fuel industry for gasoline engines, representing several hundred billions of dollars.

Road biofuels today represent 1.7% of the 4,331 million tonnes of oil consumed each year¹⁴. Global production of biofuels has already multiplied by 3.8x in 10 years, and this trend is expected to go on.

In Brazil, ethanol represents about half of the fuel consumed. Engines have been adapted so that they can accept either gasoline, ethanol, or a mix of both of these products in any proportion. This adaptation is based on the increased popularity of “flex-fuel” vehicles that allow the measurement of the ethanol content of the fuel and the adjustment of the combustion parameters. The strengthening of many engine components is also required to address the corrosive properties of ethanol. Storage and distribution infrastructures also had to be adapted.

Even though many drivers in France installed flex-fuel tanks, which resulted in the recent increase in consumption of E85, a fuel containing up to 85% ethanol, no other country besides Brazil has yet invested significantly in the widespread acceptance of flex-fuel cars. Very few mass-produced flex-fuel cars are available in France and Europe.

The main trend in Europe and the United States is the use of a low level of ethanol, but which increases over time. It is currently about 10% in volume. This 10% in volume represents 7% in energy content. In the United States, a fuel containing 15% ethanol is authorised, but to date its commercial success has been very limited. Beyond these values of 10 or even 15%, engines will need to be adapted.

In France, the Finance Law of 2019 provides for an increase in biofuels (as a quantity of energy) to 7.9% in 2019 and then to 8.2% in 2020. They are expected to account for 15% of road consumption in 2030. This figure cannot be reached with ethanol alone unless the flex-fuel approach gains wide acceptance, which seems impossible:

- carmakers are not planning to market mass-produced flexfuel vehicles;
- the infrastructure costs would be significant: new pumps, new channels of distribution, etc.

France is planning to impose a penalty on gasoline producers and distributors, the TIRIB (French acronym for incentive tax for the inclusion of biofuels), today representing about €1,350 per tonne of missing biofuel on the distributors who do not attain the lawful percentage of blend. Other countries in Europe have tax incentive systems.

The use of alternative biofuels has already begun in order to meet the growing blending objectives, particularly with the use of palm oil and cooking oil derivatives, two production methods with serious drawbacks.

A non-corrosive biofuel, such as renewable isobutene derivatives, could be used in substitution for, or in addition to ethanol, so as to achieve a higher biofuel incorporation rate and to meet regulatory requirements.

¹⁴ British Petroleum – Statistical review of World Energy 2014

Two isobutene derivatives compete in this market: isooctane, obtained by combining two isobutene molecules with each other and already described in the section on speciality fuels, and ETBE, obtained by combining isobutene and ethanol.

We are just at the start of biofuels, which can only be produced today because of the tax benefits and subsidies associated with them. The development of biofuels, however, will be crucial to reduce atmospheric CO₂ emissions and so combat global warming.

The use of biofuels will take place in parallel with the use of electric vehicles, which offer additional technical, economic and environmental advantages to those of biofuels. France has all that is necessary to deploy these two supply chains together and drastically reduce the proportion of fossil energy in road transportation.

6.4.5 Other applications of isobutene

Isobutene can also be supplied to customers as is, un-transformed. It will be stored in pressurized cylinders so as to remain in a liquid state and be transported by rail or road.

The simplest use of isobutene consists of blending it with household gas, i.e., in the butane or propane bottles distributed throughout the country. These sources of energy will gradually incorporate renewable solutions, and the isobutene produced by the Company is one of the very few options there are for doing this. A partnership in this area with Butagaz was signed; successful technical tests were carried out, and bottles containing 15% renewable isobutene were test-marketed in 2018.

Isobutene can also be converted into a multitude of compounds, using sometimes complex processes. Customers will be supplied with liquefied isobutene, leaving it to them to perform the conversion step that leads to a final product.

Pilot or demonstration conversion tests for isobutene have been performed by Arkema in paints and by Arlanxéo in rubber. The fabrication of plastics (particularly Plexiglas®) and lubricants will also be possible, with existing markets in the hundreds of thousands of tonnes.

6.5 TECHNOLOGICAL DEVELOPMENT

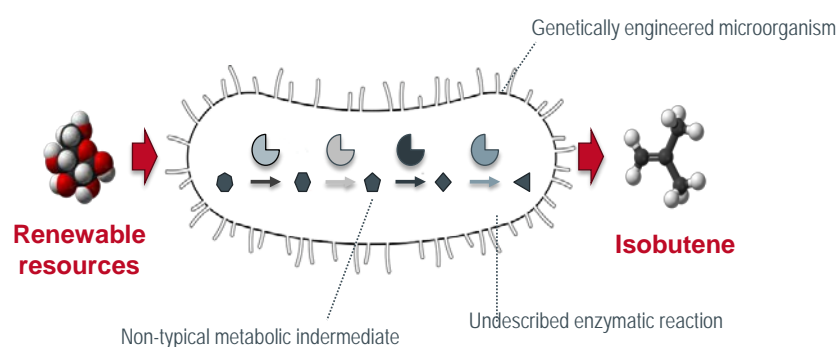
The Company has been committed to the isobutene programme since its founding. Several stages were successfully conducted, from exploratory research to laboratory development and finally, scaling up.

6.5.1 First phase: exploratory research

Biological production of isobutene by direct fermentation was not considered an option a few years ago because natural micro-organisms do not produce gaseous hydrocarbon. There is no natural metabolic pathway to rely on. To produce them, it was necessary to piece together new metabolic pathways, a task which had never previously been contemplated.

The necessary breakthrough innovation was successfully achieved by Global Bioenergies in its earliest years. The Company is the first in the world to have created such an artificial metabolic pathway and thereby access a compound that does not exist in nature.

This approach, invented by Philippe Marlière, co-founder of Global Bioenergies, is based on integrating into a micro-organism a series of enzymes whose natural function has been modified and which are capable of catalysing new enzymatic reactions. Building a chain of these enzymatic reactions constitutes the so-called artificial metabolic pathway.



Diagrammatic representation of an artificial metabolic pathway introduced into a micro-organism and enabling glucose to be converted into isobutene

Imagining such artificial metabolic pathways requires a "biological retrosynthesis" approach, namely, identification of the best access pathways to a compound, respecting the constraints posed by chemistry and enzymology.

Intellectual property in this area was almost non-existent when the Company started its activity. A large portfolio of intellectual property, to which Global Bioenergies holds exclusive rights, has been built up since 2008, and places the Company in a strong position today (see Chapter 11).

The Company believes that the creation of artificial metabolic pathways represents a major milestone in the evolution of industrial biology, since it radically opens up the field of opportunities, until then strictly limited to pathways forged by Nature.

6.5.2 Second phase: pre-industrialisation in a laboratory

The second phase started with the Global Bioenergies' IPO in June 2011. The funds raised were used to improve the performance of the process.

Improvements were achieved by acting simultaneously on several parameters: increasing the activity of the enzymes constituting the artificial metabolic pathway, rearranging the central metabolism of the micro-organisms, adjusting the fermentation conditions, etc.

The process's optimal parameters were set as follows:

- a yield of 260 grams of isobutene produced per kilogram of sugar. Put another way: 3.8 kilograms of sugar per kilogram of isobutene produced;
- Productivity of 2.9 grams per litre per hour (2.9 g.h-1.L-1). Thus a reactor of 451 [xxx] m³ will produce around 7,200 tonnes per year. This data allows the size of the plant, and therefore the investment required, to be calculated.

The Company's R&D is organized into three departments, dedicated to:

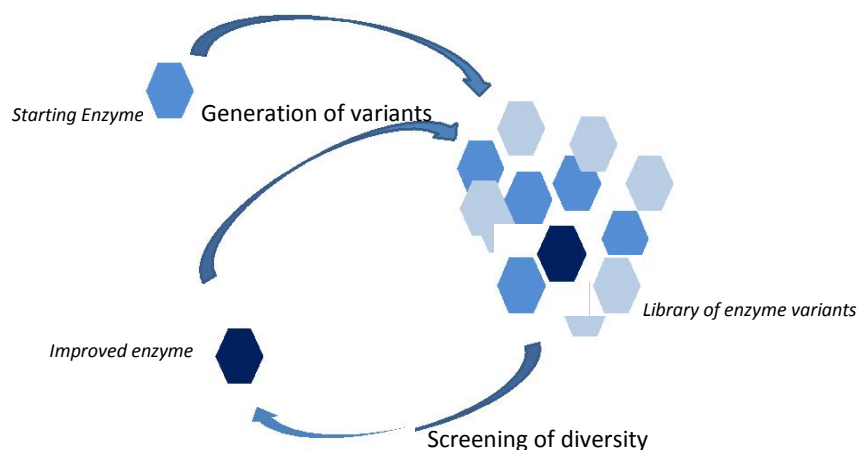
- enzymology (identification of new activities and their optimisation);
- construction of strains; and
- development of the fermentation process.

The discovery of new enzymatic activities and their improvement represents the furthest upstream part of our R&D. The success of these discovery activities requires in-depth understanding of the enzymatic mechanisms, scientific creativity to develop a large number of hypotheses, and the ability to test these hypotheses using platforms combining genetic manipulation and precise enzymology.

Numerous previously undescribed enzymatic activities have been identified by the Company. In general, the activity level of natural enzymes is, initially, extremely low. Significant improvement work is therefore necessary.

Improving the efficiency of enzymes is now a proven field in the scientific and industrial community. A large number of enzymatic variants (or mutants) are generated, each one presenting one or more modifications to the original sequence. Each of these variants is then tested using the high-throughput screening platform. Variants presenting increased activity are used as the starting point for a new improvement cycle.

To some extent this process mimics the natural evolution of enzymes. It is accelerated here, in the laboratory, by the use of modern enzyme engineering tools.



Enzyme engineering: a process with a number of cycles, each one comprising two stages (mutant generation and screening)

The Company has created a complete enzyme engineering platform, specially adapted to the high-throughput characterisation of gas samples. This platform currently comprises a team of dedicated employees who monitor an array of robotic equipment enabling them to test more than 20,000 samples per day.



Some of the equipment on the high throughput gas sample screening platform.

Once enhanced, the genes coding for these enzymes are implanted into the microbial strains. Various genetic manipulation technologies are used.

The relative quantity of each enzyme in the metabolic pathway must be precisely balanced in order to avoid the occurrence of constriction that may lead to the toxic accumulation of metabolic intermediates.

The metabolic framework must also be optimised in order to channel the flow of carbon towards the implanted metabolic pathway. Major efforts at rearranging the central metabolism were successfully undertaken.

The strains produced must then be tested using fermentation units on a laboratory scale. The Company has developed a fermentation platform which currently includes 30 1-litre glass fermenters and four steel fermenters (three with a 10-litres capacity and one of 42-litres).

The fermenters are connected to measuring equipment (chromatography and spectrometry equipment) for precise, real-time analysis of the gases produced during fermentation.



Some of the equipment on the fermentation platform.

Adjustments are made on the smallest scales using different generations of strains. New strains are produced and tested each week on this platform under a wide range of operating conditions: nature of the medium, agitation level, pH, temperature, pressure, etc. These tests allow the fermentation conditions to be gradually refined.

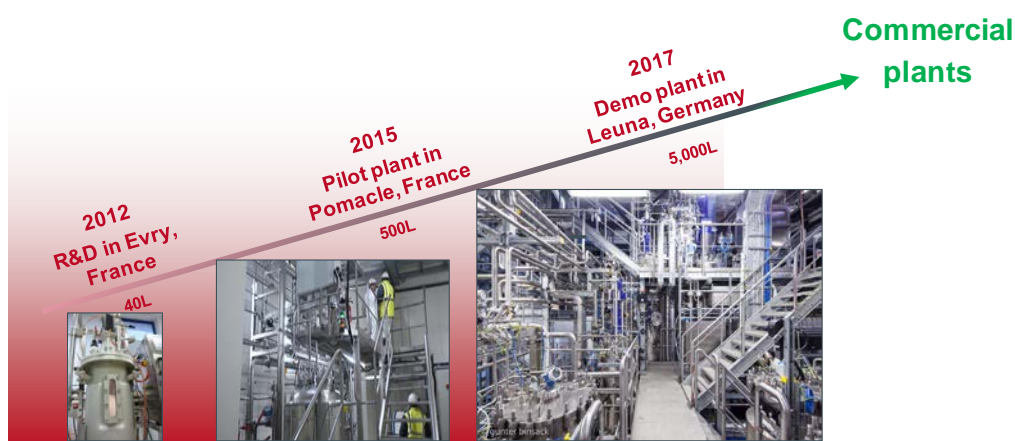
Very significant progress was achieved in the laboratory in recent years. If a commercial plant were in operation today and if the laboratory performance were replicated, the plant would produce a quantity of isobutene and derivatives sufficient to reach profitability on the high value-added niche markets such as cosmetics and speciality fuels.

Performance continues to improve significantly, month after month.

Alongside this lab work, the manufacturing phase of the process was launched. This meant industrially scaling up the process, in several stages, in order to prepare for its commercialisation.

6.5.3 Third phase: industrialisation

The third phase of the Isobutene programme effectively started in mid-2013 with the raising of €3 million in capital, of which a large part was devoted to work towards industrialisation. Major public financing in France and Germany has also been granted to Global Bioenergies to support this industrialisation phase, which was planned to be structured in two stages: an industrial pilot plant in France (at the Pomacle-Bazancourt site), and a demo plant in Germany (in Leuna, near Leipzig and close to one of the country's largest refineries).



Development stages for the isobutene programme

6.5.3.1 Pilot in Pomacle-Bazancourt

The Company has chosen to install its pilot on the BioD mo platform on the Pomacle-Bazancourt site, which brings together a number of leading agro-industrial players. BioD mo is run by Agro-Industrie Recherche et D veloppement (ARD), a joint subsidiary of Vivescia and Cristal Union, and specialised in the industrialisation of fermentation processes.

Global Bioenergies' pilot plant comprises a fermentation unit of 500 litres, providing a maximum annual production capacity of 10 tonnes per year. This project was supported by the French government's Investissements d'Avenir (Investing for the Future) programme. The pilot site was launched in early 2014 and the first batch was delivered in May 2015.



Pressurised containers of liquefied bio-sourced isobutene

Batches have been used to produce isooctane, one of the best fuels for gasoline engines. The first samples of liquid fuels derived from isobutene were available in May 2015 and were delivered to Audi under a partnership agreement set up in late 2011.



Vial containing isooctane derived from bio-sourced isobutene

The pilot plant is now operating by "campaigns", during which different types of feedstock are tested (such as corn glucose, sugar beet sucrose, hydrolysates of straw and wood chips), various isobutene-producing strains and varied protocols that may result in improved performance.

6.5.3.2 *Leuna Demo Plant*

The demo plant is the final stage in scaling up the fermentation process prior to large-scale commercialisation.

The Leuna refinery is one of the principal refineries in Germany. This site brings together a large number of players in the petrochemicals industry (Total, Linde, Thyssen-Krupp, etc.), and a Fraunhofer Institute specialised in industrial biotechnology processes is located nearby. Global Bioenergies' demo plant is installed in this Fraunhofer institute.

The German Federal Ministry of Education and Research (the BMBF) financed €6.1 million of the construction of the demo plant. A consortium of four French banks (BNP Paribas, Société Générale, CIC and Bpifrance) financed the balance through a €4.4 million loan.

The demo plant combines a 5,000-litre fermenter and a complete purification unit. The diagram of the process shows a simple purification system based on an absorbing-desorbing method. This involves using proven petrochemical technologies and re-working them to suit the specific context of a fermentation process. The demo plant's nominal production capacity is 100 tonnes of isobutene per year.



Global Bioenergies demo plant in Leuna

The demo plant is operated by Global Bioenergies GmbH, a wholly-owned subsidiary of Global Bioenergies, and Fraunhofer CBP. 15 operators will rotate in a 5/8 shift pattern to run it.

The main purpose of this demo plant is a technical one: to enable validation of the operation of the process on a scale ten times higher than the pilot plant and in this industrial setting. Demo plant tests will lead to the creation of a full process book specifying the operating conditions in an industrial environment.

The unit will also be used to simulate industrial operation: validation of the process within its configuration limits, prevention of incidents, etc. It will also serve as a training centre for the teams who will later operate the plants using this process.

The demo plant has enabled the production of isobutene at tonne scale. The production of batches of isobutene has made it possible to supply the Company's partnerships with manufacturers in different sectors and in particular with Butagaz, Audi and L'Oréal:

- batches of isobutene have been sent to Butagaz, which performed tests on a variety of equipment, such as cook stoves, water heaters, etc. Because these tests were satisfactory, a market test was carried out in January 2018 by distributing gas bottle containing 15% bio-sourced isobutene to a number of private individuals. This was the first time anywhere in the world that gas bottles containing a portion that was bio-sourced were distributed;

- some of the isobutene produced in the demo plant was converted to isooctane and ETBE, and given to the auto maker Audi as part of a collaboration begun in 2011. Engine tests were conducted that showed that isobutene-derived fuels perform very well, and that they result in fewer fine particle emissions compared with standard, commercially-available fuels. This effect on human health associated with Global Bioenergies' biofuels represents an important value. A first track test was conducted in May 2018 to validate these preliminary results;

- batches of isobutene derivatives were also supplied to L'Oréal as part of a project sponsored by the French government to validate that this renewable product can be incorporated into various formulations.

A batch of isobutene derivatives was specifically produced to undergo the first phases of regulatory approval of the product, such as bio-kerosene intended for air transport.

The Company has received many requests for batches of isobutene and its derivatives from manufacturers in a variety of sectors who want to validate the specifications for isobutene resulting from the process, and consider purchasing large quantities of isobutene from the first plant.

6.6 BUSINESS STRATEGY

Strictly speaking, the commercial phase began with the creation of the IBN-One joint venture with Cristal Union. Making this first plant a reality, from financing to construction, is the Company's major objective in the next few years.

6.6.1 IBN-One: towards the first commercial plant

A first plant based on an innovative process is always a special case. It retains some technical risk while exploiting high value-added niche markets—in this case, cosmetics and speciality fuels.

Global Bioenergies and Cristal Union have been working on the IBN-One project since early 2015. Each party contributed about €1 million to the project. The studies were entrusted to IPSB, an engineering company specialising in sugar and industrial biology, and to TechnipFMC, one of the global leaders in oil and gas engineering, to prepare a design for a plant with 30,000 tonnes annual capacity.

In June 2016, Global Bioenergies and IBN-One were awarded €9 million under the French Government's *Investissements d'Avenir* (Investments for the Future) Programme. This programme also involves Cristal Union and L'Oréal and supports the development of the isobutene process, the engineering of the plant and the validation of batches.

IBN-One will produce not only isobutene but its derivatives as well. A conversion module (number 4 in the chart below) will produce these final compounds.

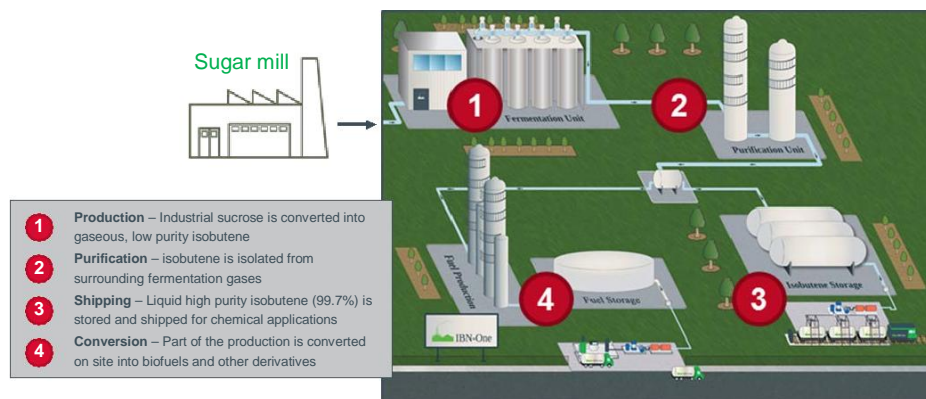
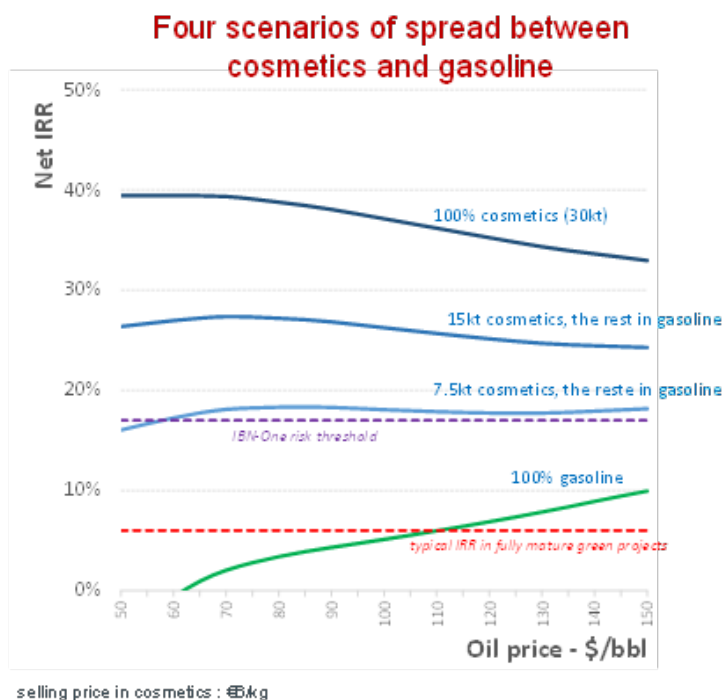


Diagram of IBN-One

Economic studies were carried out. To simplify the starting assumptions, only two markets were assumed:

- a premium market: cosmetics; and
- a high-volume market: road gasoline.

The chart below shows the internal rate of return (IRR), calculated for four different plant configurations and on different prices for oil.



Economic calculations for a plant operating at full capacity, depending on the fraction for cosmetics

It is immediately clear that a plant operating at full capacity and producing 100% gasoline would be profitable, when including tax incentives, from \$60 per barrel. The IRR, however, would only reach the 7% threshold at approximately \$110 per barrel.

An IRR of 7% is the rate typically sought for industrial projects with no technical risk. For a project such as IBN-One, the first plant of its category, a higher IRR would be required to compensate this level of risk, estimated by the Company at 18%. If the plant produced 75% gasoline and 25% isobutene derivatives for cosmetics, this level would be met, regardless of the oil price.

If the fraction of cosmetics represented one half of plant capacity, the IRR would be 25% and 40% if the plant produced only this compound, an unprecedented rate anywhere in the chemicals sector.

The first plant will focus primarily on the premium markets. The success of the first plant will greatly reduce the risk for subsequent plants, even while devoting a significant share of output to the high premium markets, which will not have been saturated by the first plant.

Market research and field activities have continued and have resulted in letters of intent to purchase 10,000 tonnes for cosmetics, signed by several large manufacturers in that sector. Those 10,000 tonnes come from companies representing 25% of the cosmetics market. The immediate market for IBN-One can be extrapolated to 40,000 tonnes, which is more than plant's maximum capacity.

In the preceding chart, the sales price was set at €6 per kg, a realistic number in that the letters of intent contain a range of prices from €4 to €10 per kg.

Looking ahead to large-scale expansion for road and aviation biofuels, it will still be important, starting with the first plant, to reserve a portion of production for these markets in order to test them commercially at large scale. The challenge for society is immense, and the first plant will be the time to prepare for these new avenues of production.

The preceding calculations were produced for a plant operating at 100% capacity. There is no guarantee at this point that the Company can take the process up to that performance level from the plant's commissioning. Economic performance assumptions equal to an operating level below the nominal capacity have been produced. If the performance of the process observed by the Company in the lab were replicated at the plant scale, the plant would already be profitable by focusing on the premium markets.

The budget needed to build and commission the plant is estimated at €140 million, which will need to be raised by IBN-One from its current shareholders, governmental bodies, banks and infrastructure funds. Exploratory discussions with potential investors were held in 2018 and will continue in 2019.

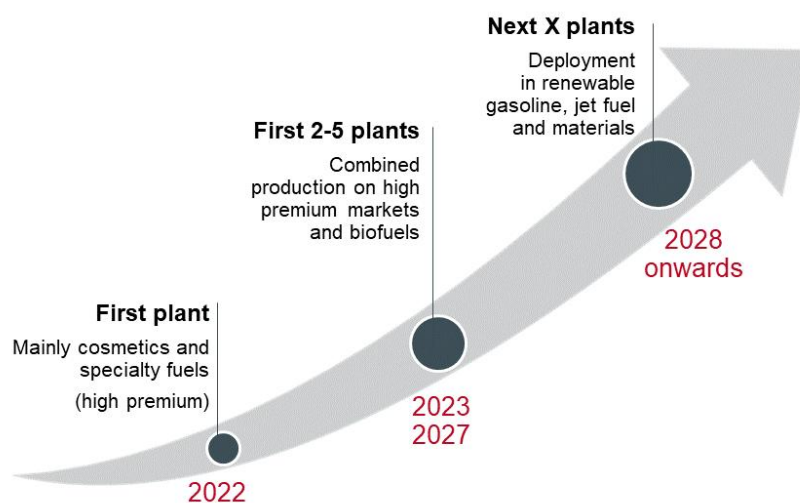
An isobutene process operating licence was granted by Global Bioenergies to IBN-One against milestone payments and licence fees.

Under the baseline assumption and assuming Global Bioenergies maintains its 25% equity investment in IBN-One, the annual revenue expected for the Company would be €3 million, including €6.5 million in licensing fees and €6.5 million in dividends.

This first plant alone will enable Global Bioenergies to reach break even.

6.6.2 Business model for the roll-out phase

The potential for replicating this first plant will be significant in that huge markets exist for aviation and road fuels, as well as commodity materials. The roadmap for spreading the technology is presented below.



Outlook for the industrial deployment of the process

The business model first consists of granting licensing.

A plant with a production capacity of 100,000 tonnes of isobutene per year in the United States has been modelled. This plant, three times greater than IBN-One, will benefit from economies of scale. It will require \$206 million to build and cost about \$23.7 million per year to operate. It will convert 384,000 tonnes of feedstock into 100,000 tonnes of isobutene and derivatives.

Its profitability level may be very high, depending on assumptions about feedstock costs and selling prices for isobutene and its derivatives.

It is planned that the licences will be granted on a plant by plant basis in exchange for:

- an advance payment equal to €1 million per 10,000 tonnes of capacity on construction of the plant, i.e., €10 million for a plant with 100,000 tonnes of capacity; and
- licence fees on operation, equal to 5% of revenue.

The advance payment of €10 million (\$13 million) for a plant of this size does not seem disproportionate with regard to the \$206 million investment. The licence fees of 5% of revenue will generate an annual income of \$10 to \$25 million for the Company.

This licensing model will enable the Company to uncouple its revenues and its costs, and leave open the possibility of significant profitability.

Global Bioenergies will also offer engineering services to its licensees. To do this, it will use the know-how accumulated during the construction of the pilot and the demo plant. Global Bioenergies GmbH, a wholly-owned subsidiary in Germany, will be responsible for this business.

The choice of the economic model depends in large part on the size of the target markets. On very large markets (millions of tonnes and tens of billions of dollars), sharing value with the licensees, inherent to the licensing model, is possible because there are many licenses to grant.

With regard to the high value-added markets, which are smaller, the model will be adapted. The Company will wish to retain an ownership interest in each of the first plants to add dividends to the licensing fees cash flow.

Each plant project will be built with an agro-industrial company based on an installation agreement and a feedstock sourcing agreement. The financial and commercial ecosystem will then gradually take shape.

A second project company, known as IBN-Two, has been created in Germany. It is currently 100% owned by Global Bioenergies. The intention is to incorporate German manufacturers and financial institutions into that structure.

6.7 SUPPORTING MARKETS

The Company's vision is to eventually become a leader in renewable energy and be a part of the broad movement out of fossil energy and materials. In the initial target markets, particularly cosmetics and speciality fuels, prices are quite disconnected from the price of oil. But the long-term outlook for renewable isobutene shows promise of becoming one of the major energy inputs for road and air transportation. It will therefore have to be produced at a price competitive with oil.

The products developed by the Company are therefore going to be positioned at the interface between two supporting markets, oil and biomass (agriculture, forestry, etc.) Tax incentives are also important matter since they will provide significant support to the development of alternative energy solutions.

6.7.1 Competition with oil

Fuels come from petroleum refining. They can take the form of:

- gasoline, comprising alkanes typically with eight carbon atoms ("octane");
- kerosene (molecules typically having 12 carbon atoms); and
- diesel (typically 16 carbon atoms).

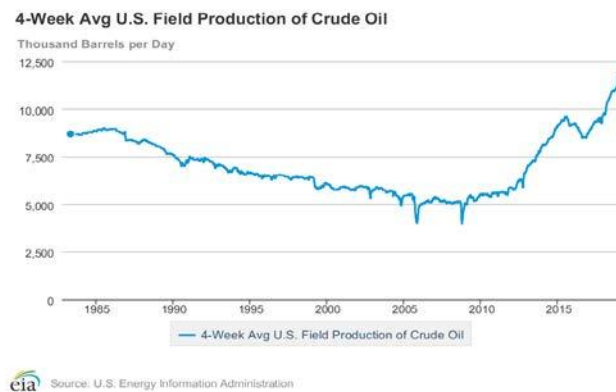
They always consist of carbon and hydrogen and exhibit high energy density, enabling vehicles to have a long range.

A major change has happened to road fuels in Europe, which is shifting from diesel to gasoline. Producing biofuels for gasoline therefore represents the best opportunity for road transportation. And this includes the renewable isobutene derivatives promoted by the Company.

Consumption of kerosene is up significantly, rising about 5% per year over recent decades. Renewable isobutene derivatives also target this very promising market.

Worldwide oil consumption is growing annually by 1.5 million barrels per day. But in recent years increased production of shale oil in the United States has largely offset this increase in demand and exerted downward pressure on the price of oil.

The current relative weakness in oil prices (at \$60 a barrel in February 2019) remains today the main factor impacting the economic equation of biofuels in general.



Oil production in the USA

How will the energy picture change in the next few years?

Some observers think that demand for oil will first plateau and then decrease in coming decades, mainly due to the increased use of electric cars, which use other primary energy sources like natural gas, coal, nuclear, hydro, wind and solar. In this view, the price of oil will not rise in the near term.

Others, by contrast, think that the production of shale oil is not sustainable and predict it will peak in the decade of the 2020s. In this view, the price of oil will then rebound, allowing profitable operation (without tax incentives) of alternative energy resources such as bituminous sands and biofuels.

The future of this energy market, fundamental to our way of life, is surprisingly uncertain. But in any event, planning for changes is required. History has shown that they can be ruthless. Perfecting a process for producing renewable gasoline and kerosene is part of that preparation.

6.7.2 Price of biomass feedstocks

The feedstocks used in industrial biology have commonly been grouped into three “generations,” a term no longer used in French and European regulations. The terminology now in use is the following:

- resources from traditional agricultural products, which are classified into two separate categories: (i) those that can be used for food, such as crystallised sugar and (ii) those that are not edible, such as residue from food processing. These two categories are treated differently by regulations. The first plants employing Global Bioenergies’ isobutene process will use these resources, and in particular non-extractible sugars;
- advanced sugars from agricultural (wheat and corn straw) or forestry (short rotation coppice, saw-mill) waste, from which fermentable sugars can be extracted. The first plants using these resources (principally to produce ethanol) are in start-up phase and their economic fundamentals may soon be assessed. The Company has already demonstrated that its isobutene process is compatible with such resources;
- resources that do not use photosynthesis, i.e., industrial CO and the CO₂ in the atmosphere or about to be released into the atmosphere by industrial sites. These resources

will ultimately be the cheapest and most environmentally-friendly.

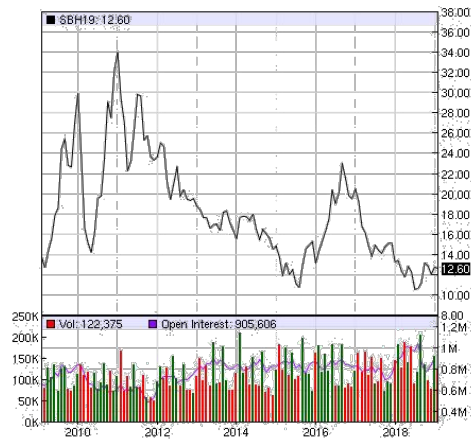
The current fermentation processes use resource from traditional agricultural channels: sugar cane or sugar beet and glucose from cereals (principally corn or wheat).

Sugar

Global sugar production (cane and sugar beet combined) has been growing since the start of the 1990s and has today reached about 170 million tonnes per year. The principal sugar-producing countries are Brazil (22% of global production), India (15%), the European Union (9%) and China (8%)¹⁵.

The end of sugar quotas in Europe has led to a surge in sugar production, which has led to price pressure on sugar in recent years.

¹⁵ FAO Statistics 2013



Source: Nasdaq.com

Change in industrial sugar prices 2009-2019, in US cents/pound

Companies in the sugar industry are looking for new outlets. The processes that make it possible to convert this industrial-quality sugar into chemical products are therefore becoming significant in the current environment.

Starch

Starch is the main constituent of cereals (principally corn and wheat) and tubers (cassava and potatoes). It is one of the principal agricultural products worldwide and one of the key resources of the fermenting industry. Starch is easily converted into glucose, which can be consumed by micro-organisms during fermentation to be converted into various products.

Global cereal production amounts to around 2,600 million tonnes per year, making up over half of global agricultural output, across all commodities.

According to the publications of the International Grains Council, cereal use breaks down as follows in 2017/2018:

- 44% of production is used for cattle fodder;
- 33% is used directly for human foodstuffs;
- Industrial uses account for 17% of demand.

Since mid-2014 the price of corn has fallen to very low levels, between \$160 and \$180 per tonne. The corn industry therefore has also been seeking new outlets for its production.

Production of cassava, the second most important agricultural commodity for the production of starch behind corn, has risen by 60% since 2000¹⁶. Cassava is the fastest growing resource and holds interesting prospects for industrial biology.

Advanced sugars

Agricultural (wheat and corn straw) or forestry (short rotation coppice, saw-mill) waste can be added to the traditional resources described above and transformed into fermentable sugars.

The pool of these resources is enormous. Global production of biomass is estimated at 220 billion tonnes¹⁷. If 5% of this were captured and transformed into glucose syrup, this would create 3 billion tonnes of additional glucose production, i.e., significantly more than the current global production from cereals.

¹⁶ FAO food outlook November 2017

¹⁷ <http://www.biocore-europe.org/page.php?optim=what-is-lignocellulosic-biomass-->

Large-scale use of sugars from farm and forest waste will depend on the success of technological developments now in progress. In particular, Clariant has developed a process called Sunliquid® to extract straw sugars and convert them to ethanol. A demo plant has been operating for several years in Germany and a first commercial plant is under construction in Romania. Other technologies have been developed, notably by the Swedish company Sekab, for extracting wood sugars.

These different approaches are compatible with the Company's processes. Global Bioenergies has entered into partnerships with Clariant and Sekab, and has already been able to demonstrate that isobutene can be produced using waste biomass.

In 2017 and 2018 the Company was awarded several types of EU funding of around €12 million by 2022, for adapting its process to use farming and forestry waste, as as part of consortia with leading European manufacturers. These projects, known as OPTISOCHEM and REWOFUEL, are detailed in section 6.9.1 below.

The industrialisation of these approaches will enable the plants using the Company's isobutene process to operate with higher profits and even more environmental benefit.

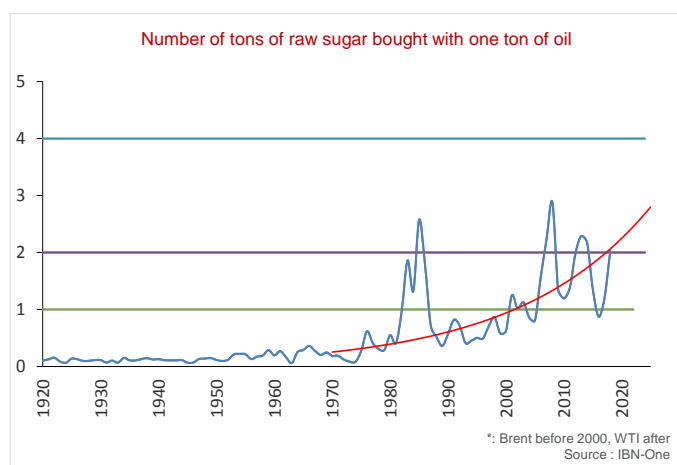
Industrial gases

The industry is preparing for the future by working to use inorganic carbon as a feedstock. This involves the use of non-photosynthetic micro-organisms to convert syngas, industrial waste gas made up of CO, CO₂ and H₂ produced in some heavy industries such as steel mills. The syngas thus produced enables the development of micro-organisms as well as sustained production of the sought-after compound. The Company acquired a Dutch start-up, Syngip, a specialist in this field, to structure its work in this area.

The technological bar here remains very high, but if successful, the economic advantages and the environmental benefit will also be very high.

6.7.3 The Oil/Sugar Ratio

The ratio between the price of oil and the price of biomass feedstock is not yet sufficient to justify directly competing with petroleum-based fuels. Nonetheless, it is rising on a regular basis.



The underlying trend for the ratio of oil/industrial sugar prices has been rising for several decades

The large-scale emergence of industrial biology will depend in part on the continuity of this trend. If the ratio between the price of oil and that of renewable materials continues to rise, it will become more profitable to produce biofuel than to extract the most expensive oil (deep off-shore, bituminous sands, etc.).

6.7.4 Tax incentives

For many years to come, national governments will need to support the energy and environmental transition through the use of special tax programmes. To date, the alternative solutions are in fact all more costly than solutions based on fossil resources.

Governments therefore support the various alternative approaches, in different ways: for electric cars, grants for purchasing vehicles and foregoing the domestic tax on electricity consumption. For biofuels, it means blending mandates on use with penalties for non-compliance.

Biofuels and electric vehicles have long been seen as rivals. However, these solutions are complementary:

- the electric car is perfectly suited to short distances and will likely win a large share of the second family car market;
- biofuels provide long range for long-distance road transport and are also the only solution for air travel.

Their environmental impacts are comparable. A “cradle to grave” analysis, i.e. one including the CO₂ produced in battery manufacture and electricity generation, which must then come from a renewable source, electric cars reduce CO₂ by a factor of 3 when compared to oil-based approaches. And that factor of 3 is also the benchmark value for biofuels.

Governments see a different potential in the two approaches. Norway, for example, heavily promotes the use of electric vehicles because of its surplus production of hydraulic electricity. Brazil, by contrast, prioritises biofuels, because sugar cane grows profusely there. Some countries, like France, emphasize both approaches together.

The French policy on biofuels is based on the TIRIB tax, a heavy penalty for fuel distributors that do not comply with the blending mandates, and succeeded in raising the blend rate to 7.5% in 2018. France's latest finance law raises this percentage to 7.9% in 2019 and 8.2% in 2020. This is rapid progress, and the objective of 15% in 2030 looks reasonable today.

A number of European countries have established similar tax incentives. Finland now has an objective of 30% biofuels in road fuel in 2030. Norway has established world's first mandate for aviation: in 2020 all Norwegian airports will include 0.5% biofuels in the kerosene distributed.

All Europe is taking action to reduce the consumption of fossil products and the associated production of CO₂, which is responsible for global warming. This governmental support, which may take different forms, will be necessary for an effective energy transition to occur and will make it possible for the Company's fuels, which fit perfectly into the overall trend of increasing blend ratios beyond the ethanol blend ratio, to be adopted on a large scale.

6.8 COMPETITION

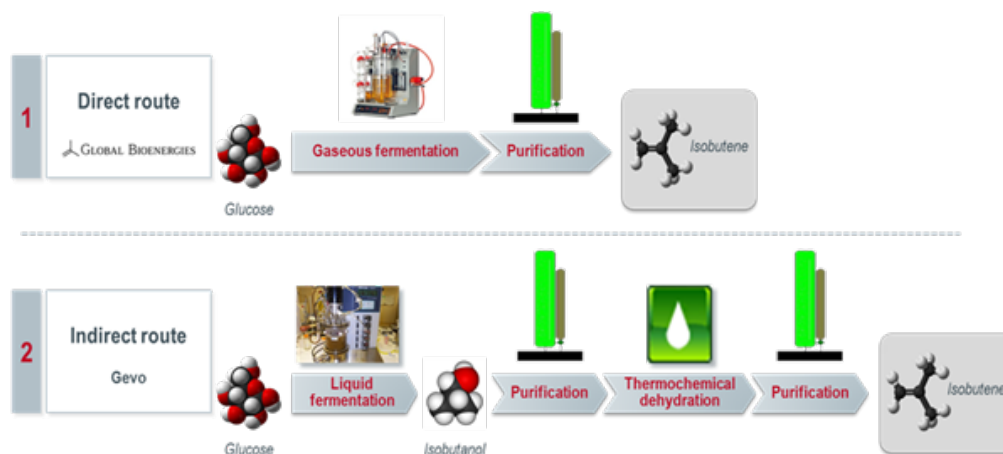
6.8.1 Competition on biological isobutene

No competitive approach to isobutene fermentation has been identified to date. A patent application for the biological production of isobutene was made by the American company Invista in 2012. According to Global Bioenergies, this patent application does not call into question the freedom to operate the Global Bioenergies Isobutene process, and equally is not, in itself, a credible alternative for the biological production of isobutene.

Isobutene can be also obtained by thermo-chemical dehydration of isobutanol, an industrial solvent also usable as a biofuel blended with gasoline. Two companies, Gevo in Colorado, USA, and Butamax, a US-UK joint venture between DuPont and BP, compete with us in the organic production of isobutanol. The first has a former ethanol plant in Luverne, Minnesota, which it has modified to produce isobutanol using a proprietary micro-organism. The second acquired an ethanol plant in Kansas and plans to modify it in a similar fashion.

Gevo has announced that it has converted batches of isobutanol into isobutene in a demo plant in Texas and thereafter produced isobutene derivatives used in a variety of applications, including speciality fuels and kerosene.

This pathway by hemisynthesis, consisting of producing isobutanol by fermentation, purifying it and then dehydrating it at high temperatures, is indirect. Production costs will also be higher than for the isobutene process developed by the Company, since each step generates costs and product loss.



Comparison of direct and indirect methods for producing biological isobutene

6.8.2 Competition in the area of silicone replacement in cosmetics

Biosourced isobutene derivatives are the natural solution to replace silicones in the cosmetics industry. The petroleum-based equivalents only provide a flawed solution because the cosmetics industry is looking for naturalness.

Gevo is the only company known to be able to produce biosourced isobutene derivatives from indirectly obtained isobutene, as described above.

Other companies are looking for alternatives. Some research indicated that molecules from sunflowers or olive oil could provide solutions. These solutions would not totally reproduce performance and so would involve a change of formulation, which is a big risk factor in the identity of a product. Since the isobutene derivatives are known emollients in wide scale use in the cosmetics industry, using these compounds to replace silicones entails no reformulation risk.

6.8.3 Competition within biofuels

Looking more generally at the field of "drop-in" road and aviation biofuels, we can see three major approaches.

6.8.3.1 *The thermochemical route*

Historically, the Fischer-Tropsch process was developed to allow the conversion of coal into liquid hydrocarbons. This method vaporises coal by heating it at very high temperatures (900°C), under pressure.

The adaptation of these processes to the use of biomass seems possible but currently remains an industrial challenge due to the variability and the high water and oxygen content of this resource. The significant production of ash was also cited as an obstacle to large-scale exploitation. Several companies, such as Choren, Ineos Bio and Kior in the USA have not succeeded in industrialising their process.

Similar approaches based on the gasification of various resources or obtaining pyrolysis oils have been developed by Virent (now acquired by the oil group Tesoro) Fulcrum, Ensyn and Anellotech.

6.8.3.2 *The long-chain alcohols route*

Long-chain alcohols have intermediate properties between those of gasoline and those of ethanol. For various technical reasons, isobutanol has been selected as the best candidate. Compared to ethanol, isobutanol is miscible in greater proportion in gasoline (16% compared with 10%). Isobutanol is also associated with a higher energy density than ethanol.

Gevo and Butamax are developing bio-processes for producing isobutanol from sugars. These two firms have already been described above. They therefore compete with the Company in two ways: the manufacture of isobutene and, indirectly, on the gasoline additives market, where they promote isobutanol.

6.8.3.3 *The terpenes route*

Terpenes are a family of molecules containing several isoprenyl patterns having five carbons. The derivatives of terpenes and of isobutene (a 4-carbon based pattern) are completely different but nevertheless likely to be competitive with each other in certain applications.

Amyris (California, USA) is developing a process based on this five-carbon brick, and has in particular derived a 15-carbon molecule from it, farnesene, which can be used in diesel engines and in kerosene mixtures. The Company is not targeting the diesel market but competes with Amyris in the specific segment of bio-kerosene. Our unique gas fermentation process will give the Company a lower production cost.

6.8.3.4 *Use of fatty acids*

The NEXBTL process of the Finnish oil company Neste enables oils to be converted into hydrocarbons for diesel. It also results in a small amount of a renewable gasoline as a co-product known as bio-naphtha and of renewable kerosene. The process is used on a large scale in several plants worldwide, producing millions of tonnes of renewable diesel per year. Bio-naphtha and renewable kerosene represent tens of thousands of tonnes and compete directly with the renewable gasoline and kerosene promoted by the Company. As the markets are sufficiently large, this competition does not pose a major difficulty.

A plant based on a similar process is also in the pipeline for France: the Total Group wishes to convert its La Mède refinery into a plant to transform oils, primarily palm oil, into biodiesel and co-products, including bio-naphtha.

The use of palm oil, which is very directly associated with the destruction of primary forest in Malaysia and Indonesia, is rejected by the NGOs and the resident populations. Moreover, in its Finance Law of 2019, the French national assembly voted in favour of the gradual disappearance of palm oil from the mix of fuels in France.

6.9 R&D PIPELINE

While the Company prepares to roll out sales of the isobutene process, our R&D teams and their work have been diversifying in two areas. The first involves broadening the range of feedstock which can be used in the Isobutene process. The second aims to develop new processes leading to other chemical compounds.

6.9.1 First area: diversification of feedstock

The large-scale deployment of the Company's isobutene process depends on its compatibility with as broad a range of feedstock as possible. This diversity will enable it to be used by industrial operators of different kinds in different geographical locations: the Company's processes could be of interest to a range of operators, such as European sugar beet companies, North American starch producers, Scandinavian forestry operators and sugar cane producers in Latin America and Asia.

Production strains were initially developed to use corn glucose and sugar beet sucrose. These resources will be used in the first plants based on the Company's process.

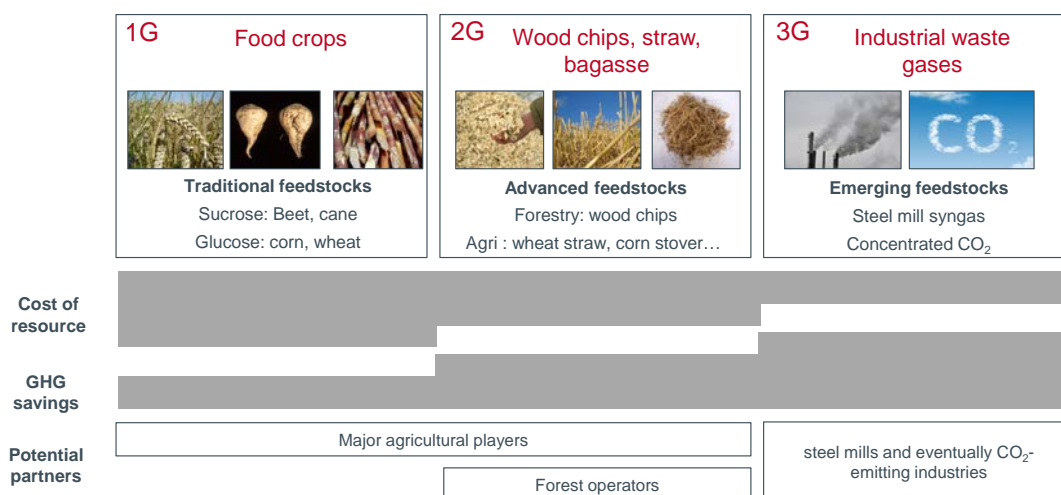
Subsequent plants will rely on agricultural and forestry waste.

The Company has created two large consortia of French and European manufacturers. These consortia, financed under the European programme Horizon 2020, are intended to prepare for the establishment of new supply chains:

- the OPTISOCHEM consortium combines technology from Clariant, INEOS and the Company to produce isobutene derivatives for chemical/material applications using wheat straw. Clariant and INEOS are among Europe's leading chemicals companies. This consortium has received €9.8 million in financing, including €4.4 million for the Company. Global Bioenergies is the coordinator of the consortium;

- a second European project called REWOFUEL received €13.9 million of European Union financing, including €5.7 million for the Company, with the objective of implementing and testing the value chain for producing biofuel from softwood forest residues. This brings together 11 partners from eight member States, including SkyNRG, Repsol, Ajinomoto, Granulinvest, Sekab, Neste Engineering Solutions, Technip and IPSB. Global Bioenergies is also the coordinator of this consortium.

The Company participates in another consortium called SWEETWOOD, whose purpose is to use hard woods as a resource, and has also received financing from Europe of about €1.4 million.



Diversification of feedstock: technology deployment and economic and environmental (GHG: greenhouse gas) potential enhancement tool

The Company's efforts in this are on building specific production strains that will enable the commercialisation of these different resources.

The economic and environmental potential offered by syngas, a by-product of certain industries, also appears to be great. The Company has structured its activity in the sector by acquiring Syngip, a specialist company in this area. Work done in this area is also supported by the European Commission, in the BIORECOVER project.

These developments will enable the Company to continue deploying its process over the long term by benefiting from the least costly and environmentally-friendlier resources.

6.9.2 Second area: diversification of products - The C3 programme

The Company's financial resources are mainly focused on developing and industrialising the isobutene process. However, along with that the Company is developing a process known as C3. A few details concerning the C3 process are given in the following paragraphs.

6.9.2.1 Market

This process aims to produce acetone, isopropanol and propylene, three molecules which can be converted between themselves via simple chemical reactions, but which are of interest to different markets:

- acetone is a key intermediary in petrochemistry, and enjoys a 7 million tonnes market. It is used mainly as a solvent (33%), to produce organic glass (28%) and in the plastic industry (25%). A small part of this market may value a renewable origin;

- isopropanol has a smaller market (2 million tonnes) with applications in solvents, cosmetics, pharmaceuticals and agrochemicals. The nature of the markets makes it a choice target for the Company's C3 process, as its renewable nature may be of high value there;

- propylene is a simple hydrocarbon. Global production of propylene is more than 90 millions tonnes, which represents a market of around \$100 billion. Some propylene applications seem suited to a premium related to the product's bio-sourced origin, and major propylene users have announced in recent years the strategic importance that renewable polypropylene represents for them.

6.9.2.2 Results and objectives

The C3 process has undergone rapid technological development and at the end of 2017, the Company announced the launch of its industrial scaling up. A successful initial fermentation test at pilot plant scale took place at ARD, the Group's long-standing subcontractor. A first test at demo plant scale was made in 2018 at the BPF site in Delft, Netherlands.

Unlike the isobutene process, which will require dedicated units to be built, the C3 process may be used in more conventional fermenters.

6.9.2.3 Competition

In 2010, Braskem announced that it wanted to build a unit for the production of biological propylene from bioethanol with a capacity of 30,000 thousand tonnes per year, but construction was cancelled in 2013.

Green Biologics is developing a process to produce acetone (amongst other products). This process, which is at the first commercial plant stage, is probably the Company's main competitor for this C3 process.

6.9.2.4 Partnerships

The Company could ally itself with one of the many industrial manufacturers of propylene, isopropanol or acetone. Discussions are underway with some of them in the various application domains.

Development of the C3 process in coming years will depend on the Company's ability to strike a co-development agreement with one of these industrial groups.

6.10 CONCLUSION AND OUTLOOK

Since its founding, Global Bioenergies has managed to transform a theoretical vision into a proof of concept, then into a laboratory scale process. The Company then made the process work at the pilot scale and then in an industrial demo plant. Plans for the first full-scale plant are progressing, in a joint venture with Cristal Union, one of the top European sugar companies.

The breakthrough innovation developed by Global Bioenergies will allow the Company to be the sole player producing isobutene by direct fermentation, with a very high entry barrier. This process fits into sustainable development because it is based on renewable resources and produces two to five times less CO₂ than fossil processes.

This renewable isobutene will find its first outlets in large niche markets, namely cosmetics and speciality fuels, big enough to absorb the production from the first several plants. Letters of intent have already been received in these markets from large manufacturers: about 5,500 tonnes of intended purchases in speciality fuels and 10,000 tonnes in cosmetics. The cosmetics industry is systematically looking for natural products and is also in need of replacing volatile silicones, which are phased out from the market and for which isobutene derivatives are the natural substitutes. The indicated prices in the letters of intent suggest that the plant will be highly profitable. The first plant alone will put Global Bioenergies at break even, with cash flow from licensing fees and dividends.

This first plant will also provide an opportunity to test the large markets for renewable gasoline and kerosene, for which letters of intent have been received for a total volume of approximately 40,000 tonnes and which will ultimately allow the large-scale deployment of the technology:

- in France the blending ratio of biofuels in gasoline continues to increase year after year and should reach 15% in 2013. Finland has just decided it will 30% in 2030. Many other countries have adopted the same path of gradually increasing the rate of biofuels. Commercialisation of a genuine gasoline from biomass will not require investing in extra infrastructure or installing flexfuel tanks on engines. The renewable gasoline produced by Global Bioenergies also produces many fewer fine particles, which are harmful to the health of the public, as compared to fossil-based gasolines;

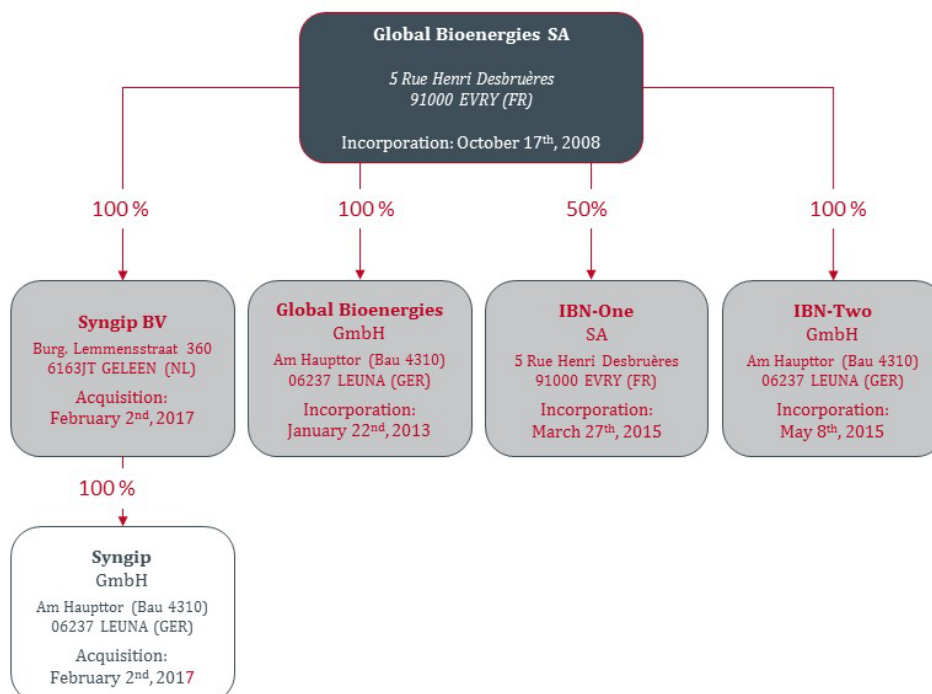
- Europe also plans to impose a mandate for incorporating renewable products in kerosene, following Norway, the first country to do so. The Company's process is one of the rare options in the world for supplying this market.

Besides the first plants whose short-term operation is uncorrelated with oil prices, long-term prospects will depend on the change in overall conditions. If oil begins to be scarce and insufficient to supply the entire planet and/or if national governments truly rally themselves to combat global warming, then the process developed by the Company can be expanded at a very large scale and contribute significantly to the energy and environmental transition.

7 ORGANISATION CHART

7.1 LEGAL ORGANISATIONAL STRUCTURE

At 31 December 2018, the Group's legal organisational structure was the following:



7.2 GROUP COMPANIES

Global Bioenergies SA based in Evry (91000), France, set up on 6 October 2008.

Global Bioenergies GmbH based in Leuna, Germany, a wholly-owned subsidiary of the Company. Founded on 22 January 2013, it had seven employees on 31 December 2018. This subsidiary houses the Group's demo plant on the Leuna site. It is headed by Ales Bulc. The construction of the Leuna demo plant, costing a total of €1.4 million, was completed in the autumn of 2016 and depreciation began on 1 April 2017, for a period of 48 months. It should be noted that Global Bioenergies GmbH invoices Global Bioenergies SA for the depreciation of that demo plant, since it is not the German subsidiary's business to sell the operating licenses for technologies developed by the Group. In addition to the operation of the demo plant, Global Bioenergies GmbH aims to offer engineering services to companies to build and operate plants that implement the Group's processes.

Overview of the Global Bioenergies GmbH balance sheet at 31 December 2018

Assets (€ thousands)	31/12/18	31/12/17	Liabilities (€ thousands)	31/12/18	31/12/17
Assets	6,599	9,429	Capital	25	25
Assets under construction	-	16	Balance carried forward	-963	-303
NON-CURRENT ASSETS	6,599	9,445	Profit (loss)	-1,937	-660
Receivables and inventories	563	3,998	EQUITY	-2,875	-938
Cash	88	506	Current account advances	8,365	11,839
Prepaid expenses	8	8	Trade accounts payable	1,726	3,036
CURRENT ASSETS	659	4,512	Other payables	42	20
TOTAL ASSETS	7,258	13,957	PAYABLES	10,133	14,895
			TOTAL LIABILITIES	7,258	13,957

The total of current account advances granted by Global Bioenergies SA to Global Bioenergies GmbH amounted to €1.8 million at 31 December 2017; this item in 2018 (€8.4 million) decreased due to the fact that services invoiced in 2018 by Global Bioenergies GmbH to the Company were deducted from the current account, despite the additional payments of €2.75 million made in 2018. Trade accounts payable included, in particular, unpaid invoices relating to services provided in the last quarter by the Fraunhofer Institute, which is in charge of operating the Leuna demo plant.

Receivables represent in particular the invoicing to Global Bioenergies SA for R&D services on behalf of the Company during the second half of the year. Continued depreciation of the demo plant resulted in a reduction in fixed assets.

Overview of the Global Bioenergies GmbH profit and loss statement at 31 December 2018

€ thousands	from 01/01/18 to 30/12/18	from 01/01/17 to 31/12/17
Operating income	4,327	5,671
Revenue	4,159	3,623
<i>Services provided to the SA</i>	1,261	1,460
<i>Inv. SA demo depreciation</i>	2,897	2,163
Operating subsidies	162	2,041
Other income	6	6
Operating expenses	6,086	6,129
Staff costs	554	681
Industrialisation expenses	2,356	3,126
Amortisation	2,908	2,168
Other	268	154
Operating profit (loss)	-1,760	-459
Financial income	-177	-201
Net profit (loss)	-1,937	-660

Revenue corresponds to the invoicing for R&D services performed by the subsidiary for the parent company and invoicing for the depreciation costs of the demo plant. Subsidies recorded in 2017 and 2018 correspond respectively to two different programmes. In 2017, it was the balance of the €5.7 million subsidy granted in 2013 by the Germany Ministry of Education and Research for the construction of the demo plant. In 2018, it was a portion of the subsidy granted in 2017 by the European Commission as part of the OPTISO-CHEM project. Besides personnel costs, operating expenses are mainly comprised of subcontracting expenses related to the demo plant; depreciation of the demo plant, which began on 1 April 2017, represented €2.9 million, or nearly half of operating expenses for 2018.

IBN-One SA based in Evry 91000, France, IBN-One SA was set up on 27 March 2015 for the construction and operation of a plant dedicated to transforming renewable resources into valuable molecules, in particular isobutene and its derivatives, as well as marketing of this product. It recognised a loss of €1.14 million at the end of its first financial year, which ran from 27 March 2015 to 31 December 2016. In fiscal year 2017, the net loss amounted to €578,000. In 2018, the recorded loss was €333,000.

On 18 May 2015, a historical partner and shareholder of the Company, Cristal Union, subscribed for shares as part of a capital increase of IBN-One SA, which is now 50% owned by Cristal Union, via its subsidiary Cristal Financière, and 50% by the Company. On Cristal Union's acquisition of a stake in IBN-One SA, a shareholders' agreement was signed between the Company and Cristal Financière, in order to define the governance of IBN-One SA, as well as said company's share transfer terms. The shareholders' agreement provides that the Board of Directors shall be composed of a maximum of four members, with each party choosing two members. At 31 December 2018, the Board of Directors of IBN-One SA was composed of (w) Bernard Chaud, Chairman of the Board of Directors and CEO, chosen by the Company, (x) Global Bioenergies SA whose permanent representative is Marc Delcourt, (y) Cristal Financière whose permanent representative is Jérôme Bignon and (z) Xavier Astolfi, chosen by Cristal Financière.

The shareholders' agreement provides that a certain number of governance decisions shall be adopted unanimously by the directors chosen from among the candidates proposed by Cristal Union and the Company prior to their adoption by the Chairman, the Deputy CEO or the company's general meeting. This particularly concerns the decisions relative to the adoption and modification of the annual budget, any loans, borrowings, investments or divestments exceeding the company's annual budget by more than 20%, the signing of regulated agreements, the appointment or dismissal of the CEO or Deputy CEO or the modification of their remuneration, any external growth operation, and any change in the company's business.

Under the terms of the partnership described above, the Company granted IBN-One a licence for the exploitation of its Isobutene process, for the construction and operation of a plant in France with a production capacity of 50,000 tonnes per year of isobutene and its derivatives. An agreement was signed on 18 May 2015 between the Company, Cristal Union and IBN-One, in the aim of laying down the terms and conditions of their collaboration, initially focusing on defining the key stages of the process targeting the construction of the IBN-One plant. The second stage will focus on the conduct of additional studies to be identified during the first stage.

Overview of the IBN-One SA balance sheet at 31 December 2018

Assets (€ thousands)			Liabilities (€ thousands)		
	31/12/18	31/12/17		31/12/18	31/12/17
Assets	-	-	Capital	1,000	1,000
Assets under construction	-	-	Balance carried forward	-1,715	-1,137
			Profit (loss)	-533	-578
NON-CURRENT ASSETS	-	-	EQUITY	-1,248	-715
Receivables and inventories	-	-	Conditional advances	501	501
Cash	203	265	Current account advances	923	507
Prepaid expenses	-	-	Trade accounts payable	96	76
			Other payables	-	1
CURRENT ASSETS	314	394	PAYABLES	1,562	1,109
TOTAL ASSETS	314	394	TOTAL LIABILITIES	314	394

The balance sheet of IBN-One SA shows financing received to begin the initial plant pre- engineering work: in addition to the original capital, IBN-One benefited from current account advances from its two shareholders for €900 thousand and an initial conditional advance of €501 thousand, paid by ADEME as part of the ISOPROD project; in the long term, IBN-One could receive up to €3.3 million via this project.

Overview of the IBN-One SA profit and loss statement at 31 December 2018

€ thousands	from 01/01/18 to 30/12/18	from 01/01/17 to 31/12/17
Operating income	-	-
<i>Revenue</i>	-	-
Operating expenses	505	545
Operating profit (loss)	-505	-545
Financial income	-29	-33
Net profit (loss)	-533	-578

The expenses recognised by IBN-One since its creation have enabled it to secure the design and layout specific to the industrial site of the future plant; as a reminder, IBN-One has no employees, no equipment and rents the offices it occupies in Evry from Global Bioenergies SA. Expenses also include management fees invoiced by Global Bioenergies SA.

IBN-Two GmbH the Company's wholly-owned subsidiary based in Munich, Germany. This subsidiary was set up on 8 May 2015 for the construction and operation of a plant to transform renewable resources into hydrocarbons in Germany. The Company is contemplating partnerships with investors on a similar model as that used with IBN-One. It has no employees.

Syngip BV A wholly owned third-generation industrial biology start-up, it was founded in 2014 in the Netherlands. It is developing a process for converting gaseous carbon resources, such as CO₂, CO, or industrial wastes such as syngas into chemical compounds of industrial value. Its main targets are light olefins and large petrochemical molecules, including isobutene. It was acquired by Global Bioenergies SA on 2 February 2017. It had seven employees at 31/12/2018.

Overview of Syngip BV profit and loss statement at 31 December 2018

€ thousands	from 01/01/18 to 30/12/18	from 01/02/17 to 31/12/17
Operating income	595	537
Revenue	384	503
Subsidies	211	34
Operating expenses	604	774
Staff costs	243	276
Industrialisation expenses	-	35
Laboratory costs	206	306
Hire and maintenance	61	37
Amortisation	38	24
Other	58	97
Operating profit (loss)	-9	-238
Financial income	-12	-15
Exceptional profit (loss)	-13	-
Net profit (loss)	-34	-253

Note that in the revenue, €384 million is re-invoiced to Global Bioenergies SA for research activities, carried out by the Dutch entity, the results of which will be commercially exploited by Global Bioenergies SA, not by Syngip BV. The cost structure is similar to the observable cost structure of Global Bioenergies SA in its first years of existence: Syngip BV can be considered as an upstream "offshoot" of the Evry laboratory, tasked with all research related to so-called third-generation substrates. In order to maximise synergies, these activities are expected to be repatriated to the Evry site during fiscal year 2019.

Overview of Syngip BV balance sheet at 31 December 2018

Assets (€ thousands)	31/12/2018	31/12/2017	Liabilities (€ thousands)	31/12/2018	31/12/2017
			Capital	0.1	0.1
Intangible assets	-	13	Balance carried forward	-570	-318
Assets	185	138	Profit (loss)	-34	-253
NON-CURRENT ASSETS	185	151	EQUITY	-604	-570
Receivables and inventories	202	734	Current account advances	567	1,285
Cash	27	48	Trade accounts payable	121	87
Prepaid expenses	-	-	Other payables and prepaid income	329	132
CURRENT ASSETS	229	783	PAYABLES and PRE-PAID INCOME	1,017	1,504
TOTAL ASSETS	413	934	TOTAL LIABILITIES	413	934

The Company enhanced its equipment fleet through acquisition of new equipment in 2018. Current account advances declined due to the fact that services invoiced to the Company in 2018 were restated from the aforementioned account in this same year. In 2018, Syngip BV cashed the first advance payment for the European project BIORECOVER, of which a part was recognised as Pre-Paid Income ("PPI").

Syngip GmbH is a German company, based in Frankfurt and wholly-owned by Syngip BV. It was created in November 2015, with the aim of facilitating financing for Syngip BV from German investors. It has no employees.

7.3 MAIN INTRA-COMPANY FLOWS

A cash management agreement was signed between the Company and its subsidiary Global Bioenergies GmbH. From the creation of Global Bioenergies GmbH until 31 December 2018, the Company granted a total of €14.61 million in current account advances at the maximum tax-deductible rate of interest of the associates' current accounts¹⁸. The balance of the current account stood at €8.36 million at 31 December 2018, due to the fact that services invoiced by Global Bioenergies GmbH to the Company were deducted from the current account.

In fact, Global Bioenergies GmbH also carries out various R&D services on behalf of the Company, for which the Company is invoiced. These services were represented by total invoices of €80,000 in 2015, €45,000 in 2016, €1,451,000 in 2017 and €1,261,000 in 2018. Moreover, since 2017, Global Bioenergies GmbH re-invoiced Global Bioenergies SA the depreciation costs of the demo plant (€1.4 million depreciated over 48 months beginning on 1 April 2017, or €2.16 million invoiced in 2017 and €2.90 million in 2018), whose initial utility is to demonstrate that the technology perfected by the Evry lab may be replicated on an industrial scale, enabling Global Bioenergies SA over time to sell its operating licenses for its technology.

A cash management agreement has also been established between the IBN-One subsidiary and the Company, which first granted €250,000 in current account advances to IBN-One in September 2016, then €200,000 in October 2018, also at the maximum tax-deductible rate of interest of the associates' current accounts. Rent and management fees are furthermore invoiced to IBN-One by the Company. The total amount invoiced since the creation of IBN-One in 2015 is €404,000.

Finally, a third cash management agreement has been established between Syngip BV and the Company, which granted a total of €1.45 million in current account advances also at the minimum tax-deductible rate of interest of the associates' current accounts. The balance of the current account at 31 December 2018 stood at €0.57 million due to the fact that services invoiced in 2018 by Syngip BV to the Company were deducted from the current account. Management fees and molecular biology services are invoiced to Syngip BV by the Company. The total invoiced in 2018 for those various items is €88,000. Conversely, Syngip BV invoices Global Bioenergies for the research it conducts (€384,000 in 2018) because the results obtained would be commercially marketed by Global Bioenergies SA, not Syngip BV

¹⁸ Articles 39 and 212 of the French General Tax Code

8 PROPERTY, PLANT AND EQUIPMENT

The Group leases the sites on which it operates. The buildings leased at 31 December 2018 are described in the table below:

Address	Surface area	Rent	Lessor/Main tenant	Start of lease	Lease expiry date
5, rue Henri Desbruères 91000 EVRY	Offices and labs 2,315 sq. m.	€155,000 excl. tax per quarter (including charges)	SEM Genopole	15 March 2010 and 1 January 2015	14 March 2019 and 31 December 2029
Am Haupttor Leuna Germany	Offices and technical facilities	€6,000 excl. tax per quarter (including charges)	Infra Leuna GmbH	-	-
Burg. Lemmensstraat 360 6163JT Geleen Netherlands	Offices and labs 100 sq.m.	€10,000 excl. tax per quarter (including charges)	Chemelot Campus Vastgoed CV/ DBSL BV	1 September 2015	-

9 REVIEW OF THE FINANCIAL SITUATION AND RESULTS

The information which follows relates to the Group's financial situation and operating income, and must be read and studied against all the information in the Registration Document, particularly the Group's audited consolidated financial statements, which can be found in Chapter 20 of the Registration Document, entitled "Financial Information about the Group's assets, financial situation and results".

9.1 MAIN FACTORS INFLUENCING THE GROUP'S RESULTS

The Group specialises in industrial biology and its main activity is research into and development of innovative bio-processes to convert renewable resources into molecules of interest, in particular, hydrocarbons which currently result from the petrochemical industry.

Given the progress of its programmes, the Group is currently in a research, development and industrialisation phase, which requires appropriate human and material investments, particularly through the use of highly-qualified research and development teams, and scientific equipment specific to its activity. It also devotes a significant part of its resources to protecting its intellectual property base by filing international patent applications (see Chapter 11 of the Registration Document).

After successfully completing the first discovery phase of the Isobutene bio-process, the Group is focusing mainly on developing and industrialising its technologies, then licensing them to industrial partners who will exploit them on a large scale. The Group will then generate the first operating income from its business *model*, which consists of royalties related to licensing agreements. The objective is for exclusive licence agreements to be drawn up on a per-application basis, according to different markets and geographic areas.

Since it was established, the Group has been making significant losses. These losses are related mainly to the research and development expenses required to make progress on the programmes conducted by the Group. The Group has opted to record its research and development costs under operating expenses. For this reason, they do not appear as assets in the balance sheet.

For eight years, the parent company, Global Bioenergies SA has benefited from Young Innovative Company (JEI) status, which enables it to reduce social security contributions for employees involved in research and development activities. This scheme cannot be extended beyond eight years of existence. The fiscal year ended 31 December 2015 was therefore the last year that the Company could benefit from this status.

Due to the Company's significant research and development expenditures and the nature of its operations, Global Bioenergies SA is also eligible for Research Tax Credit (CIR), a refundable tax credit. The methods used to calculate the CIR are based on the Company's scientific and/or technological expenses: these mainly include personnel costs for researchers and technicians involved, related operational expenses, expenditure on research and development outsourced to public or approved bodies, universities or public interest foundations, technology surveillance expenses up to €60,000, as well as patent protection costs. The Research Tax Credit is granted as a reduction in corporation tax equal to 30% of total eligible expenses. When the company has a tax deficit, the CIR is reimbursed the following financial year.

In 2018, Company expenditures covered by the Research Tax Credit amounted to €7,938,000 after deduction of received subsidies.

To meet the financing needs of its research and development work, the Group also received funding packages and innovation support from the French and German governments or European funds. All of the assistance granted to the Group is outlined in Chapter 10 of the Registration Document.

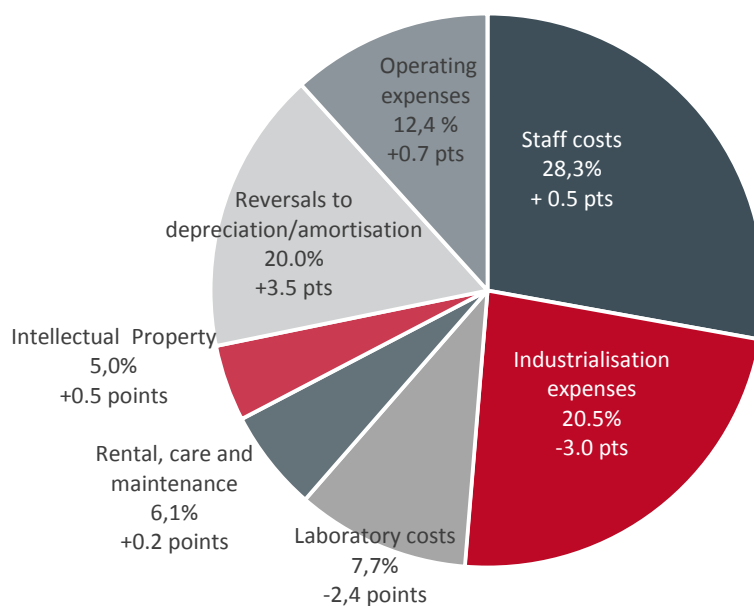
9.2 GENERAL INTRODUCTION TO THE DIFFERENT ITEMS IN THE GROUP'S PROFIT & LOSS ACCOUNT

9.2.1.1 Operating income

Operating income recorded in the profit and loss account is made up of two components: income from agreements entered into with its industrial partners and subsidies received by the Group to finance its research and development projects.

9.2.1.2 Operating expenses

*Breakdown of 2018 operating expenses
(change compared with 2017)*



Staff **costs constituted** the Group's largest expense item. Eight out of ten employees are directly involved in R&D work. The average number of employees was 69.3 at the Group level in 2018 and 66.4 in 2017.

The second-largest expense item was **industrialisation expenses**.

The Group subcontracted to ARD (a subsidiary of the Cristal Union sugar group) the operation of the pilot plant at Pomacle-Bazancourt and a series of fermentation runs have continued since the first *runs* carried out in late 2014. The results from these runs are used to continue the work to select the best possible strains and protocols.

In Germany, due to the construction of the demo plant, expenses in 2015 and 2017 were mainly recognised on the balance sheet (increase in Global Bioenergies GmbH non-current assets: +€4.3 million in 2015, +€6.2 million in 2016, +€1.2 million in 2017). The charges included in the Global Bioenergies GmbH profit and loss account correspond mainly to the services provided by the Fraunhofer Institute, which operates the demo plant. These services include, in particular, the provision of about fifteen employees from the Institute to operate the demo plant.

The subsidiary IBN-One, which is carrying out the project to build the first plant to operate the processes developed by the Group, has recognised industrialisation expenses related to preliminary engineering work.

Lastly, several chemical engineering companies with which Global Bioenergies has been working since 2013 continue to assist in optimising process operating protocols on an industrial scale.

The third largest expense since 2017 has been **amortisation**. This item has seen a significant increase due to the amortisation of the Leuna demo plant began on 1 April 2017; over 2018, the impact is for a "full year." This item also includes depreciation allowances for Evry and Syngip laboratory equipment and equipment for the Pomacle pilot plant. It also includes an allowance calculated for leased equipment, as part of the restatements made due to the consolidation of the Group's financial statements.

Laboratory **costs consist** mainly of purchases of consumables necessary for research and development work such as: chemical products, disposable materials and high-value consumables to be installed on equipment. These products are purchased from specialised suppliers. Certain specific products are custom made by specialist chemical or genomics subcontractors. As a result, different subcontractors produce the chemical compounds specific to the metabolic pathways studied by the Group (synthesis chemistry), or perform analyses of the samples produced by using them (analytical chemistry). Several companies also specialise in the manufacture of custom oligonucleotides (DNA fragments useful for genetic manipulation) or in gene sequencing.

Rental, **care and maintenance expenses** are related to rents on the premises occupied by the Group to conduct its activities and the rental and lease of laboratory equipment in Evry, as well as its care and maintenance.

Intellectual **property expenses** correspond mostly to the fees of the German firm Vossius, one of the largest intellectual property law firms in Europe, and to the royalties paid by the Group to SCIENTIST OF FORTUNE SA under two licensing agreements with Philippe Marlière, who controls this company (see Section 11.2 for more details). The significance accorded to this expense item reflects the crucial importance for the Group of protecting its intellectual property rights to continue its business development.

Finally, structural **costs** include other expenses categories that include:

- consultancy expenses: the Group subcontracts business development support, financing application design *and* specialist scientific work to different companies;
- IT services: the Group subcontracts the management of its computer network;
- fees paid to lawyers, the Statutory Auditors, the accounting consultancy firm and public relations companies;
- expenses for documentation, technology surveillance and seminars and conferences attended by the Group's key members;
- assignment and travel expenses, participation in conferences and seminars;
- miscellaneous costs, including a certain number of administrative and general costs required for the Group's operation (insurance premiums, financial fees, office expenses, etc.);
- various taxes such as the apprenticeship tax, continued training tax, business tax, registration fees and stamp duty.

9.2.1.3 *Financial income*

The Group's financial income come from:

- remuneration from the Group's cash investments and their sale. The Group manages its liquid assets carefully; it only uses limited-risk money market funds (SICAVs) and term accounts;
- exchange rate gains, for small amounts.

9.2.1.4 *Financial expenses*

The Group's financial expenses come from:

- interest recognised on loans with lending institutions;
- interest recognised on repayable advances received;
- exchange rate losses, for small amounts.

9.2.1.5 *Exceptional income and expenses*

Exceptional profit (loss) is mainly made up of the balance of treasury-share buyback transactions.

9.2.1.6 *Income tax*

Since its creation, the Group has recorded losses.

The income tax calculation includes the deduction of the Research Tax Credit (CIR), considered as income, for which the Company has been eligible since its creation. The methods for calculating the CIR are described above in the section "Main factors influencing the Group's results" in the Registration Document.

9.3 REVIEW OF THE FINANCIAL POSITION AND RESULTS OF THE CONSOLIDATED FINANCIAL STATEMENTS AT 31 DECEMBER 2017 AND 31 DECEMBER 2018

The details of the Global Bioenergies SA statutory financial statements are given in Chapter 20.2, and an overview showing the main aggregates of the profit and loss statement appears below:

€ thousands GLOBAL BIOENERGIES SA	from 01/01/17 as at 31/12/17 12 months	from 01/01/16 as at 31/12/16 12 months
Operating income	738	933
Operating expenses	15,222	13,041
Operating profit (loss)	(14,484)	(12,108)
Financial profit (loss)	(379)	(249)
Exceptional profit (loss)	(38)	(50)
Income tax	(1,999)	(1,896)
Net profit (loss)	(12,902)	(10,511)

Proposed allocation and distribution of Global Bioenergies SA profit and loss:

The Global Bioenergies SA 2017 annual financial statements report a loss of €12,902,497. Shareholders are asked to allocate the entire loss to retained earnings, which would then amount to - €51,848,053. In accordance with Article 243 bis of the French General Tax Code, no dividend was paid for the previous three fiscal years. In accordance with Articles 223 quater and 223 quinquies of the French General Tax Code, the financial statements for the past fiscal year do not include any expenses that are not tax-deductible.

The table below summarises the main aggregates of the consolidated profit and loss account¹⁹:

€ thousands GLOBAL BIOENERGIES GROUP	from 01/01/18 as at 31/12/18 12 months	from 01/01/17 as at 31/12/17 12 months
Operating income	2,412	2,369
Operating expenses	18,088	18,002
Operating profit (loss)	(15,676)	(15,634)
EBITDA	(12,059)	(12,664)
Financial profit (loss)	(570)	(708)
Exceptional profit (loss)	64	89
Income tax	(2,546)	(1,999)
Net profit (loss)	(13,637)	(14,253)

¹⁹ Expenses relating to the capital increases were deducted from the related share premiums by a transfer of expenses. In the tables below, these expenses were deducted from operating expenses and the transferred expenses were correspondingly deducted from operating income

9.3.1 Formation of the consolidated operating results

9.3.1.1 Revenue and operating income

€ thousands	from 01/01/18 to 30/12/18 12 months	from 01/01/17 to 31/12/17 12 months
OPERATING INCOME	2,412	2,369
REVENUE	692	306
OPERATING SUBSIDIES	1,706	2,053
OTHER INCOME	13	10

Revenue: €692,000 in 2018

Revenue for 2018 was generated through the partnership established with Audi. It should be noted that this revenue is not representative of the business model pursued by the Group. In fact, this revenue corresponds to remuneration for studies and research to make advances in the processes developed.

Subsidies: €1,706,000 in 2018

In 2018, Global Bioenergies received subsidies relating to various projects funded by Europe, particularly the OPTISOCHEM project focused on producing isobutene and its derivatives in chemical/material applications from wheat straw, and the REWOFUEL and SWEETWOOD projects, which are targeting production of isobutene and its derivatives in biofuel applications from forest waste.

9.3.1.2 Operating expenses

The Group has opted to record its research and development costs under expenses. Therefore, these research and development costs are not recorded on the assets side of the balance sheet.

€ thousands	from 01/01/18 to 30/12/18 (12m)	from 01/01/17 to 31/12/17 (12m)
OPERATING EXPENSES	18,088	18,002
STAFF COSTS	5,119	5,010
<i>Average number of employees</i>	69.3	66.4
INDUSTRIALISATION STUDIES	3,713	4,227
LABORATORY COSTS	1,386	1,819
RENT AND MAINTENANCE	1,106	1,067
INTELLECTUAL PROPERTY	900	802
<i>licence fees</i>	29%	32%
<i>legal fees in relation to IP</i>	71%	68%
AMORTISATION	3,617	2,970
STRUCTURAL COSTS⁽¹⁾	2,246	2,107

(1) Restated for transfers of expenses related to capital increase expenses charged to equity

Staff costs: €5,119,000 in 2018

At 31 December 2017, the Group employed a total of 69 employees, including six employed by the German subsidiary Global Bioenergies GmbH and five employed by Syngip B.V. One year later, the Group had 69 employees, including 7 employed by Global Bioenergies GmbH and 7 employed by Syngip BV.

The increase in personnel costs between 2017 and 2018 (+2.2%) is explained in particular by the increase in the workforce in terms of average workforce (+4.4%).

Industrialisation studies: €3,713,000 in 2018

This item includes expenditures related to the scaling up of processes from the laboratory. This scaling up includes three consecutive steps: the Pomacle-Bazancourt pilot plant, the Leuna demo plant; and finally the adaptation of the processes to the specifications of full-scale plants.

Laboratory costs: €1,386,000 in 2018

The expenses for this item are driven by the laboratories at Evry and Geleen, in the Netherlands (Syngip BV subsidiary). These expenses are traditionally strongly correlated with the number of employees working in the laboratory. Nevertheless, progress on the performance of the process in recent years has shown a positive evolution in this item due in particular to reduced use of some costly products or services.

Rental, care and maintenance expenses: €1,106,000 in 2018

The slight increase in expenses can be explained mostly by the signing of a new lease contract in September 2018.

Patent and intellectual property fees: €90,000 in 2018

This item was given special and precautionary monitoring. Global Bioenergies holds exclusive rights to a portfolio of 35 internationally extended patent families.

Amortisation: €3,617,000 in 2018

The increase in amortisation is related mainly to depreciation of the Leuna demo plant over a full year, recognised in the financial statements for a value of €1.4 million and amortised over four years. As a reminder, depreciation of this unit had begun on 1 April 2017, justifying the difference between 2017 and 2018.

Structural costs: €2,246,000 in 2018

The structural costs and operating expenses remain limited to 12.4% of total operating expenses, compared to 11.7% in 2017.

9.3.2 Formation of the operating profit (loss) before tax

9.3.2.1 Financial profit (loss)

<i>€ thousands</i>	from 01/01/18 to 30/12/18 12 months	from 01/01/17 to 31/12/17 12 months
FINANCIAL PROFIT (LOSS)	-570	-708
FINANCIAL INCOME	16	21
FINANCIAL EXPENSES	586	729

Improvement in the Group's financial results, still largely negative, is the consequence of a greater effort to repay various loans or repayable advances in 2018 as compared to the previous fiscal year.

9.3.2.2 Operating profit (loss) before tax

The current operating loss before tax was -€16.2 million at 31 December 2018; it was -€16.3 million at 31 December 2017.

9.3.3 Net profit (loss)

9.3.3.1 Exceptional profit (loss)

€ thousands	from 01/01/18 to 30/12/18 12 months	from 01/01/17 to 31/12/17 12 months
EXCEPTIONAL PROFIT (LOSS)	64	89
EXCEPTIONAL INCOME	267	155
EXCEPTIONAL EXPENSES	204	65

Exceptional profit (loss) is mainly made up of the balance of the treasury share buyback transactions, as well as the reincorporation, in the profit and loss account and at the pace of the depreciation of the demo plant, of equipment subsidies paid by the German government and therefore recognised in the balance sheet.

9.3.3.2 Net profit (loss) for the year

€ thousands	from 01/01/18 to 30/12/18 12 months	from 01/01/17 to 31/12/17 12 months
Operating profit (loss)	-15,676	-15,634
Financial income	-570	-708
Operating profit (loss) before tax	-16,246	-16,342
Exceptional profit (loss)	64	89
Income tax (CIR)	-2,546	-1,999
Net profit (loss)	-13,637	-14,253

9.3.4 Consolidated balance sheet

Assets (€ thousands)				Liabilities (€ thousands)			
	31/12/2018	31/12/2017	31/12/2016		31/12/2018	31/12/2017	31/12/2016
Intangible assets	1,228	1,267	69	Capital	254	224	168
Assets	7,778	11,075	12,182	Share premium	74,207	67,867	49,409
Financial assets	1,061	365	146	Retained earnings	-54,926	-40,673	-30,066
				Profit (loss)	-13,637	-14,253	-10,607
				Equipment subsidies	383	553	391
NON-CURRENT ASSETS	10,067	12,707	12,397	EQUITY	6,28	13,718	9,295
				PROVISIONS	66	57	42
Inventories - Receivables - Prepaid Expenses	4,614	4,504	5,074	Conditional advances and loans	9,356	10,213	11,482
Cash and equivalents	10,756	13,639	8,066	Trade payables and related accounts	3,356	4,622	4,120
				Other debts	6,379	2,24	597
CURRENT ASSETS	15,37	18,143	13,14	PAYABLES & PRE-PAID INCOME	19,09	17,075	16,2
TOTAL ASSETS	25,436	30,85	25,537	TOTAL LIABILITIES	25,436	30,85	25,537

9.3.4.1 Fixed assets

The decrease in this item reflects the end of the era of "major projects," which enabled the Pomacle-Bazancourt pilot and then the Leuna demo plant in particular to be constructed. These facilities are now being depreciated. The method of consolidation used recognises as non-current assets the finance-leased items. The restated net amount stood at €0.37 million, corresponding to a gross amount of €2.7 million, from which €2.32 million of depreciation already charged was deducted. Financial assets increased due to guarantees put in place as part of the various projects funded by the European Commission.

Payment schedule of finance lease fees at 31/12/2018

2018	2019	2020	2021	2022	Total
€199K	€112K	€95K	€56K	-	€263K

9.3.4.2 Current assets

Inventories were assessed at €200,000 more at 31/12/2018 than they were at 31/12/2017. Receivables with respect to entities increased due to a higher valuation of the CIR in 2018. Prepaid Expenses decreased by €60,000. The Group's gross cash position amounted to €10.8 million at 31 December 2018; it was €13.6 million a year earlier.

9.3.4.3 Equity

On 20 September 2018, the Board of Directors decided to increase capital through a private placement and issued 560,694 new shares at a unit price of €1.13, issue premium included. The gross amount of the subscription was therefore €6.24 million. In addition to this operation, 5 OCAs were converted under the Bracknor contract, representing a gross capital increase of €0.3 million, and 10,000 BSAs were exercised under the PACEO contract for a gross subscription amount of €0.19 million. Total expenses of €0.36 million related to these various transactions were deducted from the share premium.

9.3.4.4 *Payables*

In 2014, the Group contracted its first bank loan, obtaining €800,000 from BNP-Paribas to finance the 500 litre fermenter at the Pomacle-Bazancourt pilot plant as well as part of new acquisitions at the Evry laboratory. A second loan of €218,000 was also contracted in 2014 with Société Générale, to finance more laboratory equipment and site works. These two loans were repaid during the 2018 fiscal year.

In 2015, the Group obtained a new €4.4 million loan from a consortium of four French banks (BNP-Paribas, Société Générale, CIC and Bpifrance) to supplement the financing of the Leuna demo plant. It also obtained an interest-free innovation loan (PTZI) from Bpifrance amounting to €1.4 million. The amortisation of these loans continued during the 2018 fiscal year. The Group also began in 2016 and has since continued to repay Bpifrance for an interest-free innovation loan issued in 2013 to support the Isobutene programme.

Since 2014, Global Bioenergies received several payments from ADEME as repayable advances related to the BioMA+ project and received the balance of that grant in late 2016 following the success of the programme. Moreover, in 2018, the Group received a second payment from the ADEME as part of the ISOPROD project (+€1,087,000) Accrued interest not yet due increased (+€235,000 in 2018) due to the deferred repayment granted by the ADEME, despite an initial repayment related to the BioMA+ project made during the fiscal year (-€398,000).

The balance from the change corresponds to the recognition of the net value of equipment acquired through leases and capitalised due to the consolidation of accounts as loans (-€265,000 for depreciation and +€297,000 for newly recognised equipment), to the valuation of the IBN-One debt in current accounts (+€103,000 due to the new injection of €200,000) as well as to the liquidation of the balance of non-converted OCAs from the Bracknor contract at 31 December 2017 (-€300,000).

CONDITIONAL ADVANCES AND LOANS ²⁰	31/12/17	Increase	Decrease	31/12/18
BPIFRANCE	€2,351K	- €K	-€585K	€1,766K
BNP	€983K	- €K	-€515K	€468K
SOCIETE GENERALE	€792K	- €K	-€358K	€434K
CIC	€400K	- €K	-€163K	€238K
ADEME	€4,924K	+€1,615K	-€687K	€5,851K
RECOGNITION OF FINANCE-LEASED ASSETS UNDER FIXED ASSETS	€337K	+€297K	-€265K	€370K
ASSOCIATES' CURRENT ACCOUNTS	€127K	+€103K	- €K	€230K
OCA BRACKNOR II BALANCE	€300K	- €K	-€300K	- €K
Total	€10,213K	+€2,015K	-€2,872K	€9,356K

²⁰ Includes accrued interest

The change in trade accounts payable and the amounts provisioned for outstanding invoices is explained mainly by the fact that in 2017 the total for accrued invoices included services for particularly large amounts.

Furthermore, the item Other Payables and Deferred Income grew significantly due to increases in deferred income, valued at nearly €5.1 million at 31/12/2018. This was due to the receipt in 2017 and 2018 of pre-funding related to various projects funded by Europe, including some with high pre-funding rates.

<i>Company trade accounts payable of the at the end of the year</i>					
	Not yet due	1 to 30 days	31 to 45 days	45 to 90 days	Total
2014	€1,185K	€438K	€71K	€124K	€1,818K
2015	€981K	€31K	€4K	€36K	€1,024K
2016	€653K	€75K	€49K	€34K	€811K
2017	€927K	€485K	€9K	€3K	€1,423K
2018	€762K	€448K	€204K	€34K	€1,472K

10 CASH AND CAPITAL

10.1 THE GROUP'S SHORT AND MEDIUM TERM CAPITAL

Information related to the equity of the Company and the Group appear in Section 20 "Financial information concerning assets, the financial situation and profit (loss) of the issuer" of the Registration Document.

At 31 December 2018, the Group's cash position amounted to €0.8 million, compared with €13.6 million as at 31 December 2017. The Group's cash, marketable securities and liquid instruments only include limited-risk money market funds (SICAVs), term deposits or accounts and current accounts. This cash and these marketable securities serve to finance the Group's activities, particularly its research, development and industrialisation costs.

Since its creation in 2008, the Group has been financed as follows:

<i>In thousands of euros</i>	Increase in capital ²¹	Subsidies	Repayable advances	Innovation loans	Bank loans ²²	Total
From 17/10/08 to 30/06/09	637	0	0	0	0	637
From 01/07/09 to 30/06/10	600	20	330	0	0	950
From 01/07/10 to 30/06/11	8,589	40	0	0	0	8,629
From 01/07/11 to 30/06/12	1,403	75	332	0	0	1,810
from 01/07/11 to 31/12/12	3,038	59	193	0	0	3,290
from 01/01/13 to 31/12/13	23,000	20	143	740	0	23,903
from 01/01/14 at 31/12/14	1,148	1,372 ⁽¹⁾	398	0	1,018	3,936
from 01/01/15 at 31/12/15	1,882	859	1,726	1,400	4,400	10,267
From 01/01/16 at 31/12/16	12,526	3,141 ⁽²⁾	1,109	0	0	16,776
From 01/01/17 at 31/12/17	17,890	2,341 ⁽³⁾	0	0	0	20,232
from 01/01/18 to 31/12/18	6,431	1,706	1,087	0	0	9,224
Total	77,144	9,634	5,318	2,140	5,418	99,653

(1) of which €564,000 deposited in early 2015

(2) of which €391,000 in equipment subsidies recorded in the balance sheet

(3) of which €289,000 in equipment subsidies recorded in the balance sheet

10.1.1 Capital finance

Since its creation, the Group has received a total gross amount of €7.1 million through several capital increase transactions. The table below summarises the capital increases, in value, which have taken place in the last two years.

²¹ The capital increases were taken at their gross amount

²² Excluding restatements resulting from the consolidation of the financial statements concerning particularly

Date	Amount raised (1)	Transaction	Investors
June to December 2014	614 K€	Capital increase by exercise of warrants for the issue of shares	YA Global Master SPV LTD
June and October 2014	14 K€	Capital increase via the exercising of founders' warrants (BSPCE) and equity warrants (BSA)	Employees/consultants
January and July 2014	21 K€	Issue of equity warrants (BSAs)	Employees/Members of Scientific Board
January 2014	500 K€	Issue of equity warrants (BSAs)	Audi
January to June 2015	128 k€	Capital increase via the exercise of founders' warrants (BSPCE) and issuance of equity warrants (BSA)	Employees
July to September 2015	788 K€	Capital increase by exercise of warrants for the issue of shares	YA Global Master SPV LTD
October to December 2015	962 K€	Capital increase via the exercise of equity warrants (BSA)	Société Générale (Paceo®)
January 2016	6,516€	Capital increase via private placement	Institutionals
January 2016	250 k€	Issue of equity warrants (BSAs)	Audi
January to August 2016	2,310 K€	Capital increase via the exercise of equity warrants (BSA)	Société Générale (Paceo®)
September to December 2016	3,750 K€	Capital increase via conversion of OCAs ⁽²⁾	Bracknor
January to December 2017	6,900 k€	Capital increase via conversion of OCAs ⁽³⁾	Bracknor
April 2017	750 k€	Capital increase via the exercise of equity warrants (BSAs)	Audi
June 2017	10,240 K€	Capital increase via private placement	Institutionals
January 2018	190 K€	Capital increase via the exercise of equity warrants (BSA)	Société Générale (Paceo®)
September 2018	6.241 k€	Capital increase via private placement	Institutionals

(1) before recording the costs of the issue.

(2) 5 tranches issued at €750,000

(3) 6 tranches issued at €750,000 + 2 tranches issued at €1,200,000

10.1.2 Financing through loans

In 2014, the Group used a bank loan for the first time (excluding financial leasing, which the Company has been using since its creation). Two loans were taken out with banking institutions, totalling €1,018,000 to finance the fermenter at Pomacle and some of the acquisitions of the laboratory in Evry. In 2015, the Group obtained an additional loan from four French banks for a total of €4.4 million as additional financing of the Leuna demo plant.

The Group also used financial leasing to finance some of its materials acquisitions. When preparing the consolidated financial statements, the assets financed via leasing contracts were restated, and presented as amortisable fixed assets under assets, and debts from credit institutions under liabilities. Fees were split between amortisation of fixed assets and financial liabilities. The share of financial debts represented by leases stood at €370,000 at 31/12/2018.

Banking institution	Capital borrowed	Rate (fixed)	Capital already repaid ²³	Capital remaining due on 31/12/2018 ²⁴			
				Up to 1 year	1 to 5 years	over 5 years	Total
BNP (2014)	€800K	2.5%	€800K	-	-	-	-
SG (2014)	€18K	1.15%	€18K	-	-	-	-
BNP (2015)	€1,500K	2.45%	€1,031K	€11K	€158K	-	€169K
SG (2015)	€1,500K	1.15%	€1,066K	€305K	€128K	-	€434K
CIC (2015)	€800K	2.65%	€563K	€167K	€71K	-	€237K
BPI (2015)	€600K	5.23%	€180K	€120K	€300K	-	€420K
Total	€5,418K		€3,858K	€903K	€657K	- €K	€1,560K

10.1.3 Finance from government grants

Since its creation, the Group has benefited from several government grants, in the form of repayable advances, loans and subsidies.

Repayable advances and loans at 31 December 2018

Government grants	Frequency of payments	Date	Term	Value at 31/12/2018 (€K)			Amount outstanding at 31/12/2018 (excluding accrued interest, €thousand)			
				Granted	Received	Remaining to be received	Up to 1 year	1 to 5 years	at + than 5 years	Total
Repayable adv. Bpifrance ⁽¹⁾	Quarterly	02/2010	06/2015	660	523	-	-	-	-	-
Repayable adv. Bpifrance ⁽²⁾	Quarterly	09/2011	12/2015	475	475	-	-	-	-	-
Interest-free loan from Bpifrance ⁽³⁾	Quarterly	03/2013	12/2020	740	740	-	148	148	-	296
ADEME BioMA+ ⁽⁴⁾	Yearly	11/2013	12/2020	2,655	2,655	-	1,725	531	-	2,256
Interest-free loan from Bpifrance ⁽⁵⁾	Quarterly	01/2015	09/2022	1,400	1,400	-	280	770	-	1,050
ADEME ISOPROD ⁽⁶⁾	Yearly	06/2016	2029	7,400	2,195	5,205	-	22	66	88
Total				13,330	7,988	5,205	2,153	1,471	66	3,690

(1) Programme for the "development of a new metabolic pathway towards isobutene and the construction of an industrial production strain (2) Programme for "pre-industrial development at laboratory scale of a bacterial strain of isobutene production"

(3) Programme for "development grant to improve the yield of a laboratory pilot for glucose-to-isobutene fermentation"

(4) Investment for the Future (Investissements d'Avenir) programme (BioMA+), construction of a pilot plant to develop the Isobutene process. Repayable in four instalments. First repayment due on 20/12/2017.

(5) Programme for the development of an alternative route of isobutene production by direct fermentation

(6) Investment for the Future programme "ISOPROD: Renewable isobutene and derivatives, first commercial scale production unit". Total granted: €9 million, including €5.7 million to Global Bioenergies SA and €3.3 million to IBN-One, held at 50% on 31/12/2018, from an amount "granted" the Group of €7.4 million. In addition, only the amounts, for which repayment is guaranteed, according to known terms at 31/12/2018, are reported.

²³ at 31/12/2018

²⁴ excluding accrued interest

Subsidies at 31 December 2018

Body	Programme	Date	Amount granted (€ thousands)	Total recognised by the Company as at 31/12/18	Including amounts recognised in the years ending:		
					12/2016	12/2017	12/2018
Bpifrance	<i>Subsidy for the development of a new metabolic pathway towards isobutene to build an industrial production strain</i>	02/2010	100	79	-	-	-
Ile-de-France region - Grant for responsible innovation	<i>Identification of a biological means of producing propylene using renewable natural resources.</i>	11/2010	100	85	-	-	-
Bpifrance	<i>Maturation assistance for the strategic positioning and creation of a collaborative project leading to the development of a biological process to synthesise ethylene</i>	03/2012	20	20	-	-	-
Ile-de-France region	<i>Assistance for the partnership to develop methacrylic acid by fermentation processes</i>	04/2012	22	22	-	-	-
ADEME	<i>Investment for the Future (Investissements d'Avenir) programme (BioMA+), construction of a pilot plant to develop the Isobutene process.</i>	11/2013	1,328	1,328	266	-	-
BMBF ⁽¹⁾	<i>Construction and operation of an Isobutene process demo plant</i>	11/2013	5,707	5,706	2,693 ⁽²⁾	1,851 ⁽³⁾	-254
BMBF ⁽¹⁾	<i>Identification of market opportunities for the production of fuel additives from biosourced isobutene</i>	07/2016	395	353	162	191	-
EC – BBI-JU	<i>Optisochem</i>	05/2017	4,406	266	-	266	1,458
CE - INEA	<i>Rewofuel</i>	05/2018	5,700	174	-	-	174
CE – H2020	<i>Sweetwood, E4fuel, Biorecover</i>	H1 2018	2,465	326	-	-	326
Total subsidies			20,243	9,563	3,121	2,308	1,706

(1) German Federal Ministry of Education and Research

(2) Of which €391,000 of equipment subsidy

(3) Of which €289,000 of equipment subsidy

10.1.4 Off-balance-sheet commitments

The commitments received at 31 December 2018 totalled €1,550,000. The commitments given at 31 December 2018 amounted to €1,634,000 including:

- o Pledge on material: €849,000;
- o Pledge on receivables: €575,000;
- o Pledge on securities: €347,000;
- o Pledge on goodwill: €2,600,000;
- o Finance lease commitments: €263,000.

10.2 SOURCE AND AMOUNT OF THE GROUP'S CASH- FLOW

The table below summarises the Group's cash-flow at 31 December 2017 and 31 December 2018:

<i>Data in thousands of euros</i>	31/12/2018 12 months	31/12/2017 12 months
Net cash generated by operations	-7,418	-9,066
Cash-flow from investments	-974	-2,022
Net cash from finance operations	+5,259	+16,143
Change in cash position	-3,133	+5,055
Cash at start of year	12,486	7,431
Cash at year-end ⁽¹⁾	9,354	12,486

(1) By convention, accrued interest not yet due is not included in the change in working capital requirement but is restated in cash-flow.

10.2.1 Cash-flow from operations

<i>Audited data in thousands of euros</i>	31/12/2018 12 months	31/12/2017 12 months
Net profit (loss)	-13,637	-14,253
Amortisation (+)	3,457	2,857
Gain on asset disposal (-)	-	-
Cash-flow	-10,180	-11,396
Change in working capital requirement	2,762	2,330
Net cash generated by operations	-7,418	-9,066

The change in working capital requirement breaks down as follows:

<i>Audited data in thousands of euros</i>	31/12/2018 12 months	31/12/2017 12 months
Change in inventory	Inc 216	Inc 55
Change in trade receivables	Inc 31	Dec 144
Change in other operational receivables	Dec 137	Dec 603
Total change in Assets	Inc 110	Dec 691
Change in operating liabilities	Dec 1,266	Inc 375
Change in other operational liabilities	Inc 4,138	Inc 1,264
Total change in Liabilities	Inc 2,872	Inc 1,639
Change in Working Capital Requirement (Assets - Liabilities)	2,762	2,330

The change in working capital requirements (WCR) improved significantly during the 2018 fiscal year after a positive change in WCR already in 2017. Over 2018, the main elements that explain the change are on the deferred income recorded after receipt of European subsidies (increase of €4.2 million) which enabled the impact of the decrease of payables to be reduced (decrease of €1.3 million) while the valuation of inventories increased at 31/12/2018 (increase of €216,000), and liabilities have decreased overall (decrease of €106,000).

10.2.2 Cash-flow from investments

<i>Audited data in thousands of euros</i>	31/12/2018	31/12/2017
	12 months	12 months
Acquisition of fixed assets (-)	974	2,024
Sale of fixed assets (+)	-	2
Cash-flow from investments	-974	-2,022

Acquisitions of fixed assets are dominated by the recognition of the €93,000 surety bond for the Rewofuel project as a fixed financial asset.

10.2.3 Cash-flow from financing operations

<i>Audited data in thousands of euros</i>	31/12/2018	31/12/2017
	12 months	12 months
Capital increase in cash (+)	6,431	17,890
Capital increase costs charged to share premium (-)	361	736
Other changes	-	-
Equipment subsidies (+)	-	289
Repayable advances received (+)	1,087	-
Loans contracted (+)	297	300
Repayable advances repaid (-)	398	-
Loans repaid (-)	1,881	1,612
Contributions from associates' current accounts (+)	84	12
Cash-flow from financial operations	5,259	16,143

In September 2018, Global Bioenergies completed a capital increase via private placement totaling nearly €6.24 million. The equity financing contract put in place by the Société Générale (Paceo®) yielded €190,000 during the 2018 fiscal year. The Company received a new repayable advance from the Ademe as part of the ISOPROD project for €1,087,000 and moreover, it began repayment of repayable advances for the BioMA+ project for €398,000.

10.3 GROUP LOAN CONDITIONS AND FINANCING STRUCTURE

10.3.1 Bank debts

See Chapter 10.1.2 of this Registration Document.

10.3.2 Lease debts

See Chapter 10.1.2 of this Registration Document.

10.3.3 Bank overdrafts

None.

10.3.4 Bond debts

None.

10.3.5 Repayable advances

See Chapter 10.1.3 of this Registration Document.

10.4 RESTRICTION ON THE USE OF CAPITAL

None.

10.5 SOURCES OF FINANCING EXPECTED TO BE NECESSARY TO HONOUR THE MAIN ANTICIPATED FUTURE INVESTMENTS AND ASSET ACQUISITIONS

In addition to cash and current financial instruments which stood at €10.8 million at 31 December 2018, the Group relies on public financing obtained but not yet deposited for a part of its future cash. Therefore, at 31 December 2018, €5.2 million²⁵ remained to be received by the Group on the ISOPROD project financed by the French State. In the context of European projects, €3.3 million remains to be collected in the next few fiscal years on the Optisochem project, €1.4 million for the Rewofuel project and €1.5 million for the Sweetwood, Biorecover and E4Fuel projects.

The Company also believes that it should be able to continue to benefit from the Research Tax Credit scheme for a significant amount, based on the conclusions of the tax audit undertaken in 2015 and the related expert report on research tax credits for fiscal years 2012, 2013 and 2014. The summary of this expert report presented describes "a very comprehensive project not only from a technical/scientific point of view but also in terms of the financial data and supporting documents, allowing a thorough analysis of the projects and the work carried out. These can unequivocally be called R&D work, combining applied research and experimental development."

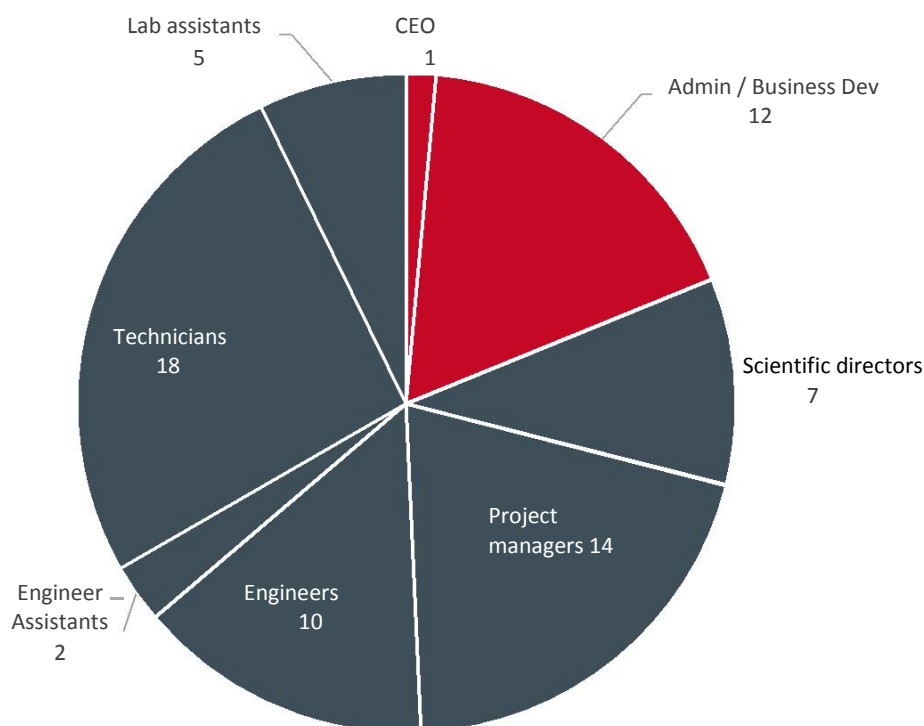
²⁵ Including €3.8 million for Global Bioenergies SA and €1.4 million for its subsidiary IBN-One (€2.8 million at 50%)

11 RESEARCH AND DEVELOPMENT, PATENTS AND LICENCES

11.1 RESEARCH AND DEVELOPMENT

The description of the Group's research and development activities can be found in Chapter 6 of the Registration Document.

The Group's workforce shows that 80% of the Group's 69 employees as at 31/12/2018 were directly involved in R&D activities:



80% of Group's staff work in R&D

During the 2018 fiscal year, expenses eligible for the Research Tax Credit amounted to €7.9 million. It should be noted that the expenses eligible for the Research Tax Credit do not include all expenses under research and development activities. The latter may include expenses for outsourcing to non-approved entities. Thus, expenses for non-European service providers cannot be used; in 2018, expenses for US service providers working on chemical engineering, scaling up and process engineering represented €0.4 million at the Global Bioenergies SA level.

At the Group level, approximately €0.8 million in staff costs and €2.5 million in lab and industrialisation expenses related to the Global Bioenergies GmbH and Syngip subsidiaries should be added to the above-mentioned expenses.

11.2 INDUSTRIAL PROPERTY

See Section 4.3.1 of the Registration Document for a description of the risks linked to the industrial property rights exploited by the Company.

11.2.1 Patent applications and Patents

The Group exploits a portfolio of 35 patent families and patent applications for processes relating to the biological production of molecules of interest from renewable resources (hereafter, the "Patent applications").

The 35 patent family applications pending, which were filed in recent years, are now at different stages of progress. Currently, 31 patent applications have been published and among these latter 90 patents were issued in numerous countries or territories including Europe, the United States, China, India, Japan and even Brazil.

The Group adds to this portfolio by regularly filing new patent applications to protect the results of its R&D programmes or its progress in terms of industrialisation and commercialisation. Accordingly, at the beginning of 2018, applications were filed concerning the fuel composition specially developed by Global Bioenergies.

Finally, when the opportunity arises, the Group prefers license agreements with third-parties holding patents likely to have a positive impact on its business. An initial example occurred in 2016, when the Company identified a patent protecting an enzymatic activity potentially useful for the production of light olefins and the production of isobutene in particular. The Company managed to enter into a license agreement with the large industrial group holding the patent. This exclusive license agreement, which was obtained in exchange for future royalties but in the absence of fixed payments, secures the Company's access to this enzymatic activity and prohibits access to any other third party.

11.2.2 License agreements

The intellectual property for which Patent applications have been filed is owned:

- exclusively by SCIENTIST OF FORTUNE SA; this applies to inventions developed by Philippe Marlière alone, who controlled such company within the meaning of Article L. 233-3 of the French Commercial Code (9 Patent applications);

- or exclusively by a large industrial group on a patent for enzymatic activities for which a particular interest was identified, related to activities developed by Global Bioenergies (1 Patent Application);

- or jointly by SCIENTIST OF FORTUNE SA and the Company; this applies to inventions developed by employees of the Company and Marc Delcourt, corporate officer, in collaboration with SCIENTIST OF FORTUNE SA (16 Patent applications);

- or exclusively by the Company (9 Patent applications).

It should be noted that:

- Marc Delcourt has passed on his contribution to said inventions to the Company pursuant to a contract which was concluded on 28 April 2011;

- in accordance with Article L. 611-7 of the French Intellectual Property Code, inventions by Company employees entrusted with an inventive mission automatically devolve to the Company, subject to payment of additional compensation;

- all contracts by which the Company calls upon the expertise of external consultants contain a assignment clause to the Company of all intellectual property rights attached to the work completed in the context of performing the contracts. Thus, inventions for which Richard Bockrath is the sole inventor were transferred to the Company under a consultancy contract entered into on 20 December 2011 with Mr Bockrath and a specific contract relating to two Patent applications filed by the Company in December 2012.

In any case, the Patent applications held by SCIENTIST OF FORTUNE SA and the share of the Patent applications co-held by SCIENTIST OF FORTUNE SA are covered by an exclusive licence granted to the Company pursuant to two separate license agreements (hereafter "Licence 1" and "Licence 2").

Licence 1:

Licence 1 relates to Isobutene processes and, more generally, the biological production of light olefins, as well as other molecules of interest. It may cover other patent applications in the course of the performance of the contract (hereafter collectively referred to as the "**L1 Patent applications**"). Licence 1 was initially concluded by Philippe Marlière and the Company on 13 February 2009. The first three amendments were then entered into on 16 October 2009, 10 December 2009 and 15 January 2010. In accordance with a contract entered into on 19 September 2011, Philippe Marlière transferred to SCIENTIST OF FORTUNE SA all of his ownership or co-ownership rights over the Patent applications, which resulted, on 20 September 2011, in additional amendment no. 4, which introduced SCIENTIST OF FORTUNE SA in replacement of all of Philippe Marlière's Licence 1 rights and obligations. Four additional amendments were subsequently concluded between the Company and SCIENTIST OF FORTUNE SA. Further details on these additional riders are provided below.

Licence 1 confers broad rights upon the Company, enabling it to exploit the L1 Patent applications:

- the licence is granted on an exclusive basis for exploitation of the L1 Patents in the field of the biological production of hydrocarbons, their precursors and derivatives, on a worldwide basis, and shall remain in force until either of the following dates, whichever is the latest: (i) expiry or cancellation of the last L1 Patent application, or, (ii) 20 years from the first time a product made using the licensed intellectual property is sold on the market or the provision of an initial service by the Company in the predefined territory;
- the licence is for L1 Patent applications, but also for improvements to L1 Patent applications, technical knowledge useful for the implementation of inventions for which L1 Patent applications have been filed, the results, experimental data and tangible and intangible achievements obtained by the Company under the licence, and biological material;
- the Company is authorised to freely grant exclusive and non-exclusive sub-licences;
- the licence is granted against a payment by the Company of the following:
 - o a fixed quarterly fee as long as the parties jointly perform development work on the L1 Patent applications,
 - o a semi-annual direct and indirect exploitation fee for L1 Patent applications;
- improvements by SCIENTIST OF FORTUNE SA as well as those developed in conjunction with the Company fall under the scope of the licence;
- in the event of infringements of L1 Patent applications by a third party, the parties agree to come together to decide on a strategy;
- should SCIENTIST OF FORTUNE SA wish to assign one or more L1 Patent applications to a third party, the Company has a right of first refusal over such L1 Patent applications and the share of the L1 Patent applications held by SCIENTIST OF FORTUNE SA;

- the Company has a right of priority over any exploitation of L1 Patent applications outside the biological production of hydrocarbons, their precursors and derivatives.

In exchange for this licence, the Company must meet the following main obligations:

- the Company must develop and exploit the L1 Patent applications in an effective, serious, fair and continuous manner for the entire duration of the licensing agreement;
- the Company must manage L1 Patent applications and pay the related costs.

Licence 1 also stipulates that the parties must work together to develop and exploit the L1 Patent applications.

SCIENTIST OF FORTUNE SA has the option of converting the aforementioned licence into a non-exclusive licence by simply notifying the Company, if the cumulative annual amounts invested in the development of L1 Patent applications and the revenue from exploiting these L1 Patent applications falls below €500,000.

Failure by one of the parties to meet its obligations shall constitute a cause for terminating the license agreement, resulting in stoppage of fee payments if the party at fault is SCIENTIST OF FORTUNE SA, or a ban on continuing the development and exploitation of the L1 Patent applications if the party at fault is the Company.

Amendment no. 1 of 16 October 2009 provides for the allocation of a fixed additional fee subject to the achievement of the objectives set and widens the scope of the licence to include three new patent applications.

Amendment no. 2 of 10 December 2009 provides clarification on the situation of a Patent application initially filed in France then "converted" into an international Patent application with France as the designated country.

Amendments no. 3 of 15 January 2010 (i) extends the object of Licence 1 to include new Patent applications, (ii) broadens the field of exploitation of a Patent application and (iii) describes a related experimental study project entrusted to the Company, the latter benefiting from exclusive exploitation rights over the results obtained, in the area of exploitation outlined in the license agreement.

Amendment No. 4 of 20 September 2011 acknowledges the transfer to SCIENTIST OF FORTUNE SA of the rights and obligations of Philippe Marlière.

The purpose of Amendments No. 5 of 12 September 2012 and No. 6 of 30 October 2012 is to include within the scope of Licence 1 new inventions and Patent applications made by Philippe Marlière jointly with Company employees. The main terms of Licence 1 remain unchanged. These amendments require the Company to make minimum investments in the development of inventions and Patent applications to which amendment no. 5 and no. 6 refer.

Amendment no. 7 of 7 May 2013 broadens the field of exploitation of the invention referred to in rider no. 3, while the financial conditions associated with such exploitation remain unchanged.

Amendment no. 8 of 18 June 2014 brings within the scope of the licence other Patent applications which have already been filed by the parties.

In accordance with a contract dated 25 March 2015, SCIENTIST OF FORTUNE SA agreed to extend the area of exploitation of the invention referred to in amendment no. 3 and no. 7. The exploitation of the latter is no longer limited to the area initially agreed in Licence 1.

In exchange, the Company agreed to engage the services of the company Isthmus to carry out research work in the name and on behalf of the Company relating to the development of the L1 Patent applications. In exchange for the payment of a fixed sum every six months, the Company owns all of the results obtained by Isthmus.

In addition, the Company granted IBN-One a license to exploit its Isobutene process using certain L1 Patent Applications for the construction and operation of a plant in France with a production capacity of 50,000 tonnes of isobutene annually and the marketing and distribution of the isobutene produced by that plant throughout the world. Under this sub-licence contract, IBN-One pays a lump sum of several million euros to the Company, as well as licence fees on IBN-One's revenue.

Licence 2:

Licence 2, concluded on 8 July 2011 with SCIENTIST OF FORTUNE SA, applies to inventions relating to the biological production of butadiene, which are protected by one or more patent applications filed by the Company in its name and/or in the name of SCIENTIST OF FORTUNE SA (hereafter collectively referred to as the "**L2 Patent applications**").

Like Licence 1, Licence 2 confers broad rights upon the Company, enabling it to exploit the L2 Patent applications:

- the licence is granted on an exclusive basis worldwide, for the lifetime of the L2 Patent applications and for at least 20 years;
- the Company is authorised to grant exclusive and non-exclusive sub-licences;
- the licence is granted subject to the Company paying either an annual lump sum or a licence fee for the direct and indirect exploitation of L2 Patent applications; only the highest of these two amounts will be paid to SCIENTIST OF FORTUNE SA;
- at the Company's request, SCIENTIST OF FORTUNE SA agrees to transfer to it all of the technology, patents and L2 Patent applications at a pre-determined price, on the understanding that, if the Company were to engage in a fund-raising operation beyond a certain threshold and sign a contract for the exploitation of L2 Patent applications with a third party, SCIENTIST OF FORTUNE SA may demand completion of the transfer;
- improvements developed by SCIENTIST OF FORTUNE SA and/or the Company fall within the scope of the licence;
- the intellectual property rights developed jointly by the Company and SCIENTIST OF FORTUNE SA are co-owned by the parties and also fall within the scope of the licence;
- the Company agrees to manage the L2 Patent applications, after consultation and in cooperation with SCIENTIST OF FORTUNE SA;
- the Company is responsible for defending L2 Patent applications, after consultation and in cooperation with SCIENTIST OF FORTUNE SA.

The Company may bring Licence 2 to an end at any time. However, SCIENTIST OF FORTUNE SA may only bring an end to the contract under limited circumstances, notably if the Company fails in its obligations and does not remedy the failings despite notification being sent to it. However, the parties may jointly agree to terminate License 2.

SCIENTIST OF FORTUNE SA has the option to convert the aforementioned licence into a non-exclusive licence by simply notifying the Company, if the latter has invested less than €450,000 in developing the L2 Patent applications or its revenue from the exploitation of these Patent applications is less than €500,000.

The Company keeps the right to enter into other sub-licences with third parties in other fields of butadiene application (particularly nylon, plastics and latex).

11.2.3 Know-how


A significant part of the Group's value comes from its know-how.

Part of this know-how, necessary for the exploitation and development of Patent applications, is granted by SCIENTIST OF FORTUNE SA to the Company under Licences 1 and 2, in the same way as the aforementioned Patent applications.


The other part of the know-how developed by the Group relates to the engineering of fermentation, purification and packaging units necessary to convert renewable resources by fermentation, and to the implementation of the fermentation processes.

11.2.4 Trademarks

The Company owns the following trademarks:

Trademark	Status	Filing date	Filing number	Renewal date	Class
AGROLEFINS	Registered	16/11/2010	3 782 567	30/11/2020	01, 04, 42
 GLOBAL BIOENERGIES	Registered	19/10/2009	3 684 715	31/10/2019	01, 04, 42
GLOBAL BIOENERGIES	Registered	13/03/2009	3,636,506	31/03/2019	01, 04, 42

International trademark designating France

Trademark	Country	Status	Priority	Filing date	Filing number	Renewal date	Class
 GLOBAL BIOENERGIES	European Union	Registered	FR 19/10/2009 93 684 715	13/04/2010	1 045 283	13/04/2020	01, 04, 42

12 INFORMATION ON TRENDS

Revenue reported in the Group's financial statements in 2018 corresponds primarily to compensation by the carmaker Audi for design and research services enabling the developed processes to progress. These services were carried out as part of an on-going partnership initiated in 2011, seeking to increase the proportion of biofuels in gasoline. Achievement of this revenue is therefore not representative of the economic model pursued by the Group, focused on a model of royalties from licences to exploit developed processes.

Last December, the National Assembly passed the 2019 finance law, which provides in particular for an increase in the portion of biofuels in road transport. The lower limit for inclusion of biofuels, which in 2018 was 7.5% in energy density (which corresponds to approximately 10% by volume of ethanol in gasoline), increases to 7.9% in 2019 and to 8.2% in 2020. The Law provides a very powerful incentive for distributors to actually incorporate biofuels up to the legal lower limit.

Moreover, lawmakers have given preference for local supplies as available resources to produce these biofuels. Additional provisions were taken in favour of biofuels created from the residual or lignocellulosic materials, a specific segment representing 0.2 points in 2019, then 0.4 point in 2020 and restricted to non-extractable sugars.

These guidelines are favourable to development of the Group's businesses. Comparable initiatives can be seen in other European countries. Finland, for example, is promoting a rate of incorporation of 40% in 2030. This trend is developing elsewhere in the jet fuel market for air transport, a market for which to date there are no regulations on incorporation of biofuels. Norway took the first initiative by recently announcing a mandate to incorporate 0.5% by 2020.

One of the interests of the process developed by Global Bioenergies lies in the versatility of molecules originating from the technology. As detailed in Chapter 6 of this Registration Document, isobutene and its derivatives are notably part of various markets with different dynamics. One of the most dynamic markets is cosmetics, in which naturalness requirements are more and more pressing.

In April 2018, the European Commission decided to ban an ingredient traditionally used by the industry, namely volatile silicones, called D4 and D5, from all rinsed products (shampoo, soaps...), with an effective date of February 2020. Isobutene derivatives, which are the leading substitutes for these silicones, have thus seen their market explode.

Silicones were first proposed as ingredients in cosmetic products some 50 years ago. Their primary function was to replace oils and to make protective creams water-resistant. The silicones D4 and D5 took over cosmetics and until recently were found in most products whether rinsed or non-rinsed (creams, mascaras). But the environmental effects of these silicones were examined by the Canadian authorities and then in the European program REACH. D4 accumulates in the environment with a stability of thousands of years and unforeseeable long-term effects. D5 can also be harmful to the environment, mainly because it can contain D4, the two compounds being very difficult to separate and differentiate. It is this toxicity that led the European Commission to ban D4 and D5 in rinsed cosmetic products, pushing market players to find alternatives for all products containing silicone.

13 PROFIT FORECASTS OR ESTIMATES

The Group does not intend to make any profit forecasts or estimates.

14 ADMINISTRATIVE, MANAGEMENT, AND SUPERVISORY BODIES AND GENERAL MANAGEMENT

14.1 GENERAL INFORMATION ABOUT THE FOUNDERS, OFFICERS AND DIRECTORS

The Company's officers and members of the Board of Directors are as follows:

Full name, Age	Business address	Mandate and functions	Duration of the mandate	Mandates and functions outside the Company	Other mandates held in the last five years, but not currently held
John Pierce	5, rue Henri Desbruères 91000 EVRY	Chairman of the Board of Directors and director	First appointment: 28 August 2015 Term expiry date: General Meeting to approve the financial statements for the year ending 31 December 2020	- Chairman of Devenir Consulting LLC - Member of the CTC Brazil Scientific Committee - Member of the Sofinnova Investments Strategic Committee	
Marc Delcourt	5, rue Henri Desbruères 91000 EVRY	Director	First appointment: 13 February 2009	- Chairman of Schmilblick Ventures SAS - Director of IBN-One SA	- Director of Heurisko
		Chief Executive Officer	Term expiry date: General Meeting to approve the financial statements for the year ending 31 December 2019		

Philippe Marlière	5, rue Henri Desbruères 91000 EVRY	Director	First appointment: 13 February 2009 Term expiry date: General Meeting to approve the financial statements for the year ending 31 December 2019	- Chairman, Heurisko USA Inc - Director, SCIENTIST OF FORTUNE SA - Director, Enuma Holding	- Manager, Marlière Technologies société civile - Manager, Isthmus EURL - Director, Dendrics SAS - Director, Alderys SAS
Seventure Partners, represented by Sébastien Groyer	5 - 7 rue de Monttessuy 75007 PARIS	Director	First appointment: 23 October 2012* Term expiry date: General Meeting to approve the financial statements for the year ending 31 December 2019	- Director Balyo - Director, Domain Therapeutics - Director, Eligo Biosciences - Director, Skinjay	- Director Holding ISF Masseran Technologie - Director Proviciel - Director, Lucane Pharma
CM-CIC Innovation, represented by Karine Lignel	28, avenue de l'Opéra 75002 PARIS	Director	First appointment: General Meeting of 6 November 2013 Term expiry date: General Meeting to approve the financial statements for the year ending 31 December 2018	- Member of the Antidot Strategic Committee - Director of Oncodesign - Member of the Coldway Supervisory Board - Director of Gecko Biomedical - Director, Maat Pharma - Director, Krono-Safe - Director, Silios - Member of the Medincell Supervisory Board - Member of the Forcity Strategic Committee - Member of the Endodiag Strategic Committee	- Member of the Nanobiotix Supervisory Board - Director of Ariana - Member of the Rhônes Alpes Création Supervisory Board - Director of ImmuniD - Director of EyeBrain - Director of Polyplus - Director of Endocontrol

John Pierce – Chairman of the Board of Directors: John Pierce has devoted his career to integrating biology with chemistry, engineering and materials science to create biotechnology applications for agrochemistry, plant genetics and industrial biology. He holds a PhD from MSU in carbohydrate chemistry and enzymology. After a long time at DuPont, during which he oversaw the successful commercial development of many biotechnology applications, he was until recently Chief Bioscientist at BP plc.

Marc Delcourt – Director, Chief Executive Officer: co-founder of Global Bioenergies, Marc Delcourt is a graduate of the Ecole Normale Supérieure, biology section. After completing his thesis in North America, he became involved in research activities in the area of bioprocesses and in 1997 set up his first industrial biology company, which he left in 2008 to found Global Bioenergies.

Philippe Marlière – Director: co-founder of Global Bioenergies. A graduate of the Ecole Normale Supérieure, he devoted his time at university to launching synthetic biology. He then continued his scientific activities by founding biotechnology companies.

Sébastien Groyer – Permanent representative of Seventure Partners: Sébastien Groyer is Partner at Seventure, a subsidiary of Natixis, BPCE Group. Active since 1997, Seventure Partners has already made a number of investments in numerous technological domains. Sébastien Groyer, holds an Engineering degree in Biotechnologies from the Université Technologique de Compiègne and a Masters (DEA) in Politic and Economic Philosophy from Université Paris 1 Panthéon Sorbonne. He has participated in the investment in, the administration, the IPO or sale of about 20 innovative companies, mostly in the domain of life sciences.

Karine Lignel – Permanent representative of CM-CIC Innovation: Karine Lignel is a director at CM-CIC Innovation, a subsidiary of CM-CIC Investissement, Crédit Mutuel Group. CM-CIC Investissement targets its investments particularly on entrepreneurial companies, and has invested €2.6 billion in a portfolio of 620 companies. Karine Lignel has seven years of experience in the food industry, mainly in technical functions. A trained engineer (ENSIA – École Nationale Supérieure des Industries Agricoles et Alimentaires), Karine Lignel also has a Master's Degree in Finance (IGIA, ESSEC). She joined venture capital in 2000 and invested mainly in Life Sciences. Since 2000, she has held numerous positions in the Boards of Directors and Supervisory Boards.

On the date of the Registration Document, and as far as the Company is aware:

- none of the directors have been convicted of fraud in the last five years;
- none of the directors have been associated with a bankruptcy, sequestration or judicial liquidation in the last five years;
- none of the directors have been accused of a criminal offence or subject to an official public sanction pronounced by the statutory or regulatory authorities (including the designated professional bodies) in the last five years;
- none of the directors have been prevented by a court from being members of administration, management or supervisory bodies of an issuer or from being involved in the management or conduct of an issuer's affairs in the last five years.

There are no family ties between the members of the Company's Board of Directors.

14.2 CONFLICTS OF INTEREST WITHIN THE ADMINISTRATIVE AND GENERAL MANAGEMENT BODIES

As far as the Company is aware, there is nothing likely to generate a potential conflict of interest between the duties to the Company of any of the corporate officers and their private interests or duties.

As far as the Company is aware, there is no agreement in place between the Company's main shareholders under which a corporate officer would be selected as a member of an administrative or management body or as a member of general management.

15 REMUNERATION AND BENEFITS

Of the members of the Board of Directors, only Marc Delcourt has a role within the Company, as Chief Executive Officer.

15.1 TOTAL REMUNERATION AND BENEFITS IN KIND ALLOCATED TO MEMBERS OF THE BOARD OF DIRECTORS AND OFFICERS

Summary table showing gross remuneration and options and shares allocated to each corporate officer

John Pierce Chairman of the Board of Directors	31/12/2016 (12 months)	31/12/2017 (12 months)	31/12/2018 (12 months)
Remuneration due for the year	13,200 USD*	13,200 USD**	13,200 USD***
Value of multi-year variable remuneration allocated over the year	NA	NA	NA
Value of options allocated during the fiscal year	NA	NA	NA
Value of restricted stock	NA	NA	NA
Total	13,200 USD*	13,200 USD**	13,200 USD***

*

* the euro equivalent recorded in the financial statements is €11,915

** the euro equivalent recorded in the financial statements is €11,697

*** the euro equivalent recorded in the financial statements is €11,110

Marc Delcourt Chief Executive Director	31/12/2016 (12 months)	31/12/2017 (12 months)	31/12/2018 (12 months)
Remuneration due for the year	€170,000*	€170,000**	€155,000***
Value of multi-year variable remuneration allocated over the year	NA	NA	NA
Value of options allocated during the fiscal year	NA	NA	NA
Value of restricted stock	NA	NA	NA
Total	€ 170,000	€ 170,000	€ 155,000

*of which €35,000 variable portion

**of which €35,000 variable portion

***the definitive amount of the variable portion for 2018 was not fixed at the time the Registration Document was released.

Summary table of the remuneration paid to each corporate officer

John Pierce Chairman of the Board of Directors	31/12/2016 (12 months)		31/12/2017 (12 months)		31/12/2018 (12 months)	
	Amounts due	Amounts paid	Amounts due	Amounts paid	Amounts due	Amounts paid
Fixed remuneration	13,200 USD	13,200 USD	13,200 USD	13,200 USD	13,200 USD	13,200 USD
Multi-yr. var. remuneration	NA	NA	NA	NA	NA	NA
Multi-yr. var. remuneration	NA	NA	NA	NA	NA	NA
Excep. remuneration	NA	NA	NA	NA	NA	NA
Attendance fees	NA	NA	NA	NA	NA	NA
Benefits in kind	NA	NA	NA	NA	NA	NA
Total	13,200 USD	13,200 USD	13,200 USD	13,200 USD	13,200 USD	13,200 USD

Marc Delcourt Chief Executive Officer	31/12/2016 (12 months)		31/12/2017 (12 months)		31/12/2018 (12 months)	
	Amounts due	Amounts paid	Amounts due	Amounts paid	Amounts due	Amounts paid
Fixed remuneration	€135,00	€135,00	€135,00	€135,00	€155,00	€155,00
Multi-yr. var. remuneration	€35,00	€7,500*	€35,00	€5,000**	To be set***	€5,000^^
Multi-yr. var. remuneration	NA	NA	NA	NA	NA	NA
Excep. remuneration	NA	NA	NA	NA	NA	NA
Attendance fees	NA	NA	NA	NA	NA	NA
Benefits in kind	NA	NA	NA	NA	NA	NA
Total	€170,000	€212,500	€170,000	€170,000	€155,000	€190,000

* Variable remuneration for 2014 (€40,000) and 2015 (€37,500) approved in principle but whose payment depends on the improvement of the Company's financial visibility; the payment was made in February 2016

** Variable remuneration related to fiscal year 2016 paid in April 2017

*** The definitive amount of the variable portion for 2018 was not fixed at the time the Registration Document was released.

^^ Variable remuneration related to fiscal year 2017 paid in January 2018

The meeting of the Board of Directors on 15 January 2015 determined the remuneration of Marc Delcourt in the capacity of the Company's Chief Executive Officer and set it at €135,000 beginning on 1 January 2015. At their 16 February 2016 and 22 February 2017 meetings, the Board of Directors maintained this fixed remuneration for the 2016 and 2017 fiscal years respectively. During the meeting of 28 February 2018, this remuneration was raised to €155,000 for the fiscal year 2018, taking effect on 1 January 2018.

In addition, the meetings of the Board of Directors of the Company held on 16 January 2016, 22 February 2017 and then 28 February and 17 April 2018, respectively, agreed to allocate a variable component to Marc Delcourt, in addition to his fixed remuneration for each financial year. This variable component is to be determined by the Board of Directors based on the Company's business, financial, R&D and human resources objectives.

Table of attendance fees and other remuneration received by non-director corporate officers

Non-director corporate officers	31/12/2016 (12 months)	31/12/2017 (12 months)	31/12/2018 (12 months)
	Amount paid	Amount paid	Amount paid
Philippe Marlière			
Attendance fees	-	-	-
Other remuneration	-	-	-
Seventure Partners, represented by Sébastien Groyer			
Attendance fees	-	-	-
Other remuneration	-	-	-
CM-CIC Innovation, represented by Karine Lignel			
Attendance fees	-	-	-
Other remuneration	-	-	-
Total	€0	€0	€0

At the date of this Registration Document, John Pierce, Chairman of the Board of Directors, is the only member of the Board of Directors or corporate officer of the Company to have benefited from allocations of Company equity securities, debt securities or options.

On 16 February 2016, the Board of Directors decided to issue founders' warrants (BSPCEs) to John Pierce in his capacity as Chairman of the Board of Directors with the following characteristics:

Total number of BSPCEs issued: 30,000

Total number of shares that can be subscribed following the exercise of all the BSPCEs: 30,000

Exercise conditions of the BSPCEs: the option to subscribe for shares after the exercise of the warrants is subject to the presence of John Pierce as a corporate officer of the Company on the first day of each of the three exercise periods defined below. It is understood that in the event of a departure from the Company prior to the first day of one of the three exercise periods, John Pierce may not exercise all of the BSPCEs allocated to him and may not exercise any at all in the event of a departure before the first day of the first exercise period.

Exercise periods: the BSPCEs will be exercisable in three tranches of one third of the total BSPCEs allocated (10,000 BSPCEs per tranche) after a period of one year from the allocation date, i.e. starting 16 February 2017, the date marking the beginning of the first exercise period. The second exercise period will begin on 16 February 2018 and the third exercise period will begin on 16 February 2019. Each of the three exercise periods will end on 15 February 2026.

Subscription price: the BSPCEs were allocated at no cost, and the subscription price of a share resulting from the exercise of a BSPCE was set at €3.70; this price corresponds to the price of the shares issued as part of the capital increase carried out on 21 January 2016, in accordance with the 13th resolution of the General Meeting of 3 June 2015.

At the date of this Registration Document, no shares have been subscribed. In addition, no BSPCEs have been cancelled or have lapsed.

As this allocation is the only one that concerned a corporate officer, Tables 6, 7, 8 and 10 of Appendix 2 of AMF Position/Recommendation No. 2014-14 are not applicable.

Allocation of securities giving access to capital to employees who are not corporate officers

At the date of this Registration Document, several Group employees who are not corporate officers have received securities giving access to capital.

The total number of shares issued to non-corporate officer employees is 186,404, of which 8,450 are equity warrants (BSAs) issued to employees of Global Bioenergies GmbH, 32,857 are BSAs issued to employees of Syngip BV, 133,783 founders' warrants (BSPCEs) issued to employees of Global Bioenergies SA and 11,314 free shares to be issued to the employees of Global Bioenergies SA.

Of the 133,783 BSPCEs issued to Company employees, 4,407 have been exercised to date (400 in 2014 and 4,007 in 2015) and 18,762 BSPCEs were cancelled due to the departure of employees. 43,449 BSPCEs also lapsed at the end of their exercise period. There thus remains 67,165 BSPCEs issued to non-corporate officer employees in circulation. In addition, of the 41,307 BSAs issued to Global Bioenergies GmbH and Syngip BV to date, none has been exercised. 30,607 BSAs have lapsed due to the departure of employees.

SHARE SUBSCRIPTION OR PURCHASE OPTIONS AWARDED TO THE FIRST TEN NON-CORPORATE OFFICER EMPLOYEES IN 2017	Number	Number per plan	Exercise price per warrant
Options awarded, during the year ended 31 December 2018, by the issuer and any company included in the scope of the options plan, to the 10 employees of the issuer and of any company within this scope awarded the highest number of options (overall information)	-	-	-
Options held in the issuer and the companies referred to previously, that were exercised during the year ending 31 December 2018 by the 10 employees of the issuer and of these companies holding the highest number of options purchased or subscribed (overall information)	-	-	-

Furthermore, some non-corporate officer employees were also awarded restricted stock. These awards occurred in 2009, 2010 and 2011. At the time of this Registration Document, there are no remaining shares to issue in the context of the share allocation plans of 2009, 2010 and 2011.

Table 11 of Appendix 2 of AMF Position/Recommendation No. 2014-14 is not applicable since no corporate officers have an employment contract with the Company or a supplementary pension plan. In addition, no remuneration is provided for any executive officer in the event of termination or change of duties.

Lastly, no indemnity relating to a non-competition clause is provided for any corporate officer.

15.2 AMOUNTS PROVISIONED OR RECORDED BY THE COMPANY TO PAY PENSIONS, RETIREMENT BENEFITS OR OTHER BENEFITS TO DIRECTORS AND OFFICERS

The Company has not provisioned amounts to pay pensions, retirement benefits or other benefits to directors and officers.

The Company has not granted any arrival or departure bonuses to these individuals.

15.3 REMUNERATION AND BENEFIT COMPONENTS OWED OR LIKELY TO BE OWED DUE TO, OR FOLLOWING, THE CESSATION OF FUNCTIONS OF COMPANY OFFICERS

None.

15.4 LOANS AND GUARANTEES GRANTED TO OFFICERS

On the date of the Registration Document, no loans or guarantees had been granted to the Company's corporate officers.

16 BOARD AND MANAGEMENT PRACTICES

16.1 BOARD OF DIRECTORS

See Section 14.1 of the Registration Document for the composition of the Company's Board of Directors and information concerning the current mandates of the corporate officers and members of the Board of Directors.

16.1.1 Composition of the Board of Directors (Article 14 of the Bylaws)

The Company is governed by a Board of Directors comprising three to eighteen members, subject to the exemptions provided by law in the case of a merger.

The directors' term of office is a maximum of six (6) years. The General Meeting may decide to appoint directors for shorter periods.

Directors may be dismissed by the Ordinary General Meeting at any time.

A director's duties end at the close of the General Meeting having ruled on the financial statements of the past fiscal year and held during the year in which the mandate of said director expires.

Should one or more directors' seats become vacant due to death or resignation, the Board may, between two General Meetings, make temporary appointments in the conditions laid down by law.

However, if the number of directors in office falls below the minimum legal requirement, the remaining directors, or failing that, the Statutory Auditors, shall immediately convene an Ordinary General Meeting to make up the required number.

Temporary appointments made by the Board of Directors are subject to approval at the next General Meeting.

Should certain temporary appointments fail to be approved by the General Meeting, the decisions made and actions accomplished by the temporarily appointed directors or performed with their assistance, shall nevertheless remain valid.

A director appointed to replace another shall only remain in office for the remaining duration of his predecessor's term of office.

All members reaching the end of their terms of office may be re-elected. Notwithstanding the preceding provision, the number of directors, either natural persons or permanent representatives of legal entities, over the age of 70 may not, at the end of each Ordinary General Meeting convened to approve the Company's financial statements, exceed one third (rounded up, if required, to the nearest integer) of the directors in office. If this limit is reached, the oldest director or permanent representative shall be considered to have resigned automatically at the end of that meeting.

16.1.2 Powers of the Board of Directors (Article 16 of the Bylaws)

The Board of Directors determines the Company's business strategy and monitors its implementation. Subject to the powers expressly assigned to shareholder meetings and within the limit of the corporate purpose, it deals with all issues affecting the proper functioning of the Company and settles all matters concerning the Company through its decisions.

In its relationships with third parties, the Company is bound by the actions of the Board of Directors, even if they are not within the scope of the corporate purpose, unless the Company can prove that the third party was aware that the action was outside the remit of the corporate purpose or that it could not have been unaware of this fact in the circumstances, with the understanding that the mere publication of the Bylaws does not constitute a proof to that effect.

The Board of Directors performs the checks and verifications it deems appropriate. Each director receives all the information required for the accomplishment of his duties and may obtain any documents he considers useful.

The Board of Directors may adopt internal rules of procedure.

The Board of Directors may decide to create committees tasked with examining issues submitted by the Board or its Chairman and issuing an opinion on such issues. It sets the composition, duties and responsibilities of the committees which carry out their activities under its responsibility.

The Board of Directors may also, if it deems it useful, appoint from among its members a Vice-Chairman tasked with chairing the Board meetings in the Chairman's absence. Should the Vice-Chairman also be absent, the most senior director shall chair the meeting.

16.1.3 Deliberations of the Board of Directors (Article 15 of the Bylaws)

The directors are convened to the Board meetings by the Chairman by any means, even verbally. The meetings may be held at the registered office or any other place stated on the notice of meeting.

Decisions are taken subject to the conditions of quorum and majority provided for by law. In the event of a tie, the meeting Chairman has the casting vote.

Except for Board meetings held to examine the Company's accounts, annual financial statements, Registration Document or annual report, the Board's internal rules of procedure may provide for the inclusion, for quorum and majority calculation purposes, of directors attending the meeting via videoconferencing or any other means of telecommunication allowing their identification and ensuring their effective participation, in the conditions laid down by applicable laws and regulations.

16.2 GENERAL MANAGEMENT

The Company's general management is assumed, under the Board's responsibility, by the Chairman of the Board of Directors, or by another natural person appointed by the Board of Directors, bearing the title of Chief Executive Officer (CEO).

The Board of Directors chooses one of these general management options in accordance with the following conditions:

- the option is chosen by the Board of Directors acting by a majority of its members;
- the chosen option may only be reviewed upon the renewal or replacement of the Chairman of the Board of Directors or upon expiry of the CEO's term of office.

Shareholders and third parties are informed of the choice made by the Board in the conditions laid down by applicable laws and regulations.

Where the Company's general management is assumed by the Chairman of the Board of Directors, the provisions relating to the CEO apply to the Chairman.

At the date of the Registration Document, the Company's general management is assumed by Marc Delcourt.

16.2.1 Chairman of the Board of Directors (Article 17 of the Bylaws)

The Board of Directors elects from among its members, a Chairman who is a natural person. It determines the Chairman's remuneration and the duration of his term of office.

The Board of Directors may dismiss the Chairman at any time.

The Chairman is appointed for a period which may not exceed that of his term of office as director. The Chairman may be re-elected.

The age limit for the office of Chairman of the Board of Directors is set at 75. If the Chairman reaches that age during his term of office, he shall be deemed to have automatically resigned. However, his mandate shall continue until the Board meeting appointing his successor, with the understanding that a Board meeting to that effect shall take place as soon as possible following the date on which the Chairman has reached the age limit and, at any rate, within seventy (70) days following that date.

The Chairman of the Board of Directors organises and directs the Board's work, on which it reports to the General Meeting. He sees to the proper functioning of the Company's administrative bodies and ensures, in particular, that the directors are fit to perform their duties.

At the date of the Registration Document, the Company's chairman is John Pierce.

16.2.2 Chief Executive Officer (CEO) and Deputy CEOs (Article 18.2 of the Bylaws)

The Company's general management is assumed by the CEO. On the CEO's proposal, the Board of Directors may appoint one or more natural persons tasked with assisting the CEO and bearing the title of Deputy CEO. The number of Deputy CEOs may not exceed five.

The age limit for the office of CEO and Deputy CEO is set at 65. Upon reaching that age limit, the CEO or Deputy CEO is deemed to have automatically resigned. However, their mandates shall continue until the Board meeting appointing their successors, with the understanding that a Board meeting to that effect shall take place as soon as possible following the date on which the CEO or Deputy CEO has reached the age limit and, at any rate, within seventy (70) days following that date.

The CEO may be dismissed at any time by the Board of Directors. The same applies to the Deputy CEOs, on the CEO's proposal. If the dismissal is decided without just cause, it may give rise to the award of damages, except if the CEO is also Chairman of the Board of Directors.

Where the CEO ceases to carry out his duties or is prevented from doing so, the Deputy CEOs shall, unless otherwise decided by the Board, continue to perform their duties until the appointment of a new CEO.

The Board of Directors determines the remuneration of the CEO and Deputy CEOs.

The CEO is vested with the broadest powers to act on behalf of the Company in all circumstances. The CEO exercises his powers within the limit of the corporate purpose, subject to the powers expressly assigned by law to shareholder meetings and to the Board of Directors.

The CEO represents the Company in its relationships with third parties. The Company is bound by the actions of the CEO, even if they are not within the scope of the corporate purpose, unless the Company can prove that the third party was aware that the action was outside the remit of the corporate purpose or that it could not have been unaware of this fact in the circumstances, with the understanding that the mere publication of the Bylaws does not constitute a proof to that effect.

Decisions of the Board of Directors limiting the powers of the CEO are unenforceable against third parties.

In agreement with the CEO, the Board of Directors determines the extent and duration of the powers conferred on the Deputy CEOs. With respect to third parties, Deputy CEOs have the same powers as the CEO.

The CEO and Deputy CEOs may, within applicable legal limits, delegate to any proxy the powers they deem appropriate, for one or more specific purposes. Such proxies may include third parties, which may be individuals or grouped together within committees or commissions. These powers may be permanent or temporary, and may or may not include the possibility of substitution. Such delegations of power shall remain in force despite the expiration of the delegator's term of office.

16.3 INFORMATION ON SERVICE AGREEMENTS BETWEEN THE MEMBERS OF THE BOARD OF DIRECTORS AND THE COMPANY OR ONE OF ITS SUBSIDIARIES

On 1 September 2015, the Company entered into a services agreement to set the conditions under which Devenir Consulting Services LLC, which is headed and controlled by John Pierce, Chairman of the Board of Directors, undertakes to exclusively provide the Company with services for business development, searches for potential partnerships, implementation of occasional strategic market studies and representation of the Company in its relationships with potential investors.

To the Company's knowledge, there are no other service agreements between the members of the Board of Directors and the Company or any of its subsidiaries providing for benefits upon the termination of such an agreement.

Agreements coming under Article L. 225-38 of the French Commercial Code are covered in Chapter 19 of the Registration Document.

16.4 STATEMENT REGARDING CORPORATE GOVERNANCE

The Company has initiated an overall assessment of its corporate governance practices, in particular in the prospect of a change in its shareholding structure and free float.

In this regard, the Company intends to refer to the MiddleNext Code of Corporate Governance for small and mid caps, insofar as its principles are compatible with and relevant to the Company's organisation, size, resources and shareholding structure.

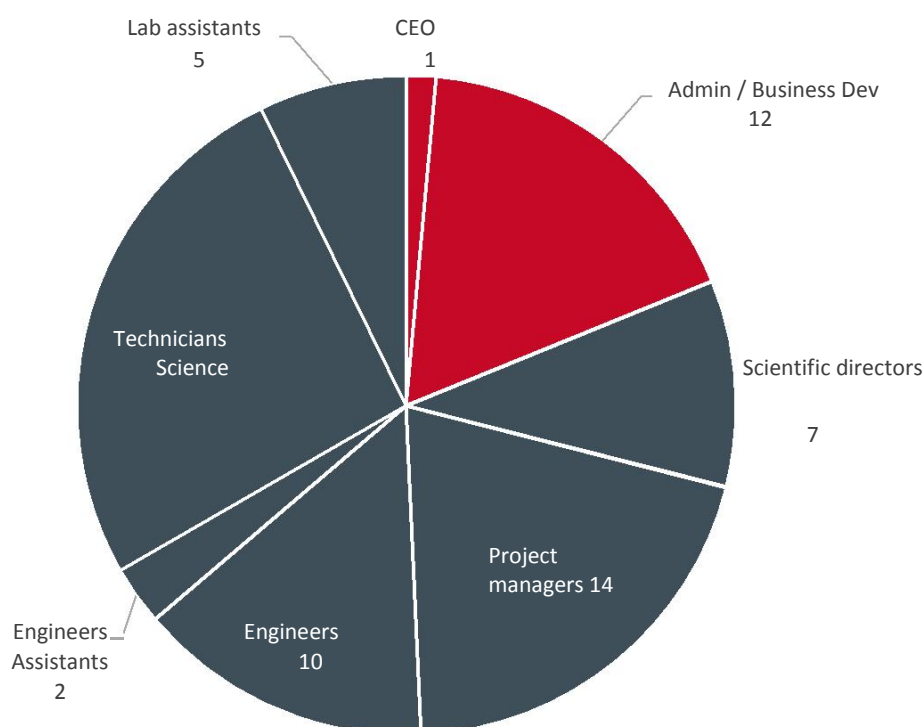
In August 2015, the Company separated the functions of Chairman and Chief Executive Officer. Chairmanship of the Board of Directors was entrusted to Mr. John Pierce, an independent director, on 31 August 2015; Mr. Marc Delcourt continues to perform the duties of Chief Executive Officer of the Company.

Even though the Company is not currently in compliance with all of the recommendations set out by this Code, the Company intends to promote the implementation of good governance practices, in addition to those that currently exist, that will be consistent with its development ambitions.

17 EMPLOYEES

17.1 NUMBER OF EMPLOYEES AND BREAKDOWN BY ROLE

At 31 December 2018, the Group had 69 employees and the average number of employees was 69.3 during the year.



The tables below show the structure and changes in headcount within the Group.

Headcount by role	31/12/2018	31/12/2017	31/12/2016
Global Bioenergies SA	55	58	54
Global Bioenergies GmbH	7	6	6
Syngip BV	7	5	-
Chief Executive Officer	1	1	1
Admin. / business dev.	12	13	12
<i>Scientific personnel</i>			
Department heads	7	7	6
Project managers	14	14	12
Engineers	10	10	10
Assistant engineers	2	2	2
Technicians	18	18	14
Lab assistants	5	4	3
Total	69	66	61
Average number of employees	69.3	66.4	61.3

At 31 December 2018, the Group employed 78% of its staff on permanent contracts. On the same date, the percentage of employee managers amounted to 57%. The Group counted 35 men and 34 women. The average age is 36.8 years at 31 December 2018 and the average seniority of the employees is 4 years and 2 months.

The table below shows the breakdown of the workforce at 31 December 2018 by age group:

	under 21 years old	21 to 30 years old	31 to 40 years old	41 to 50 years old	over 51 years old
at 31 December 2018	-	20	29	13	7
as % of total headcount	-	29%	42%	19%	10%

The Company is not obliged to produce a human resources report, which is required only for companies with at least 300 employees.

Organisational structure of the Company

The Company is structured around a team of experienced professionals with a high level of training, led by Marc Delcourt.

Name	Entry into the Company	Operational roles	Training/Experience
Marc Delcourt	2008	Co-founder. Director Chief Executive Officer	Molecular Biologist, Ecole Normale Supérieure. Has been leading industrial biology companies for over 20 years.
Macha Anissimova	2009	Chief Scientific Director	Doctor of Enzyme Engineering at the Université de Technologie de Compiègne. Has 10 years' experience at the French atomic energy commission (CEA) and the natural product chemistry institute (ICSN).
Jean-Baptiste Barbaroux	2011	Chief Corporate Development	Completed a doctoral thesis in Biology at Imperial College London. Former researcher at King's College London.
Bernard Chaud	2015	Chief Industrial Strategy	A career to date split between the chemicals industry (plant manager), the sugar industry (director of biofuels) and the French civil service (ministry of agriculture)
Samuel Dubruque	2014	Chief Financial Officer	Formerly management controller and financial analyst in the Suez and Total industrial groups.
Luc Mathis	2017	Chief Business Development	Scientific training (Institut Pasteur, CalTech). Former head of commercial agro-chemical development at Collectis then Chief Executive Officer of Calyxt.
Frédéric Pâques	2013	Chief Operations Officer	Doctor of Molecular Genetics. Former researcher at the French centre for scientific research (CNRS) then Scientific Director at Collectis.

Charles E. Nakamura	2012	Vice President, Metabolic engineering	Former head of research at DuPont. Awarded the "Heroes in Chemistry" prize in 2007 by the American Chemical Society.
Richard E. Bockrath	2012	Vice President, Chemical engineering	Doctor of Chemical Engineering. Former technical director at DuPont.
Claudia Erning	2014	Vice President <i>Investor Relations</i>	15 years of experience in investment banking and corporate finance.

MANAGEMENT HOLDINGS AND STOCK OPTIONS

On the date of the Registration Document, the officers and directors owned the following stakes in the Company's* share capital:

	Number of shares held	% of the share capital
John Pierce, Chairman of the Board of Directors:	-	-
Marc Delcourt, Director and Chief Executive Officer:	363,385	7.2%
Philippe Marlière, Director	345,000	6.8%
Various funds managed by Seventure Partners, represented by Sébastien Groyer, director	386,792	7.6%
Various funds managed by CM-CIC Innovation, represented by Karine Lignel, director	422,304	8.3%
Total	1,517,481	29.9%

* Capital at the date of this Registration Document: 5,079,455 shares

17.3 EMPLOYEE HOLDINGS IN THE COMPANY'S SHARE CAPITAL

The Company issued 133,783 founders' warrants to employees of the Company, 4,407 of which have been exercised. 18,762 shares lapsed due to the departure of employees and 43,449 lapsed because they had not been exercised before the end of their exercise period. The Company also issued 8,450 equity warrants (BSAs) to employees of the German subsidiary Global Bioenergies GmbH. Furthermore, the Company issued 32,857 equity warrants for the employees of Syngip B.V. Of these 32,857 BSAs, 30,607 lapsed upon departure of the employee.

Lastly, the Company awarded a total of 49,054 free shares to several of its employees, of which 11,314 are yet to be issued.

In accordance with the provisions of Article L.225-102 of the French Commercial Code, it is stated that at the end of the fiscal year, no shares in the Company's share capital were held as part of a collective management by Company staff.

17.4 INCENTIVE PLANS AND PROFIT SHARING

As the Company has over fifty employees, it is required to implement a profit-sharing agreement. It has not implemented any incentive plans.

18 PRINCIPAL SHAREHOLDERS

18.1 BREAKDOWN OF CAPITAL AND VOTING RIGHTS

The Company's capital and voting rights break down as follows:

Shareholders	31/12/2018		31/12/2017		31/12/2016	
	Number of shares	% capital and voting rights	Number of shares	% capital and voting rights	Number of shares	% capital and voting rights
Marc Delcourt ²⁶	363,385	7.2%	358,860	8.0%	358,860	10.7%
Philippe Marlière ²⁷	345,000	6.8%	358,635	8.0%	358,635	10.7%
Funds managed by Seventure Partners	386,792	7.6%	670,296	14.9%	815,546	24.3%
Funds managed by CM-CIC Innovation	422,304	8.3%	422,304	9.4%	363,129	10.8%
Public float	3,561,974	70.1%	2,677,406	59.7%	1,457,457	43.5%
Total	5,079,455	100.0%	4,487,501	100.0%	3,353,627	100.0%

To the Company's knowledge, on the filing date of the Registration Document no other shareholder holds more than 5% of the Company's capital or voting rights.

In September 2018, Global Bioenergies completed a capital increase via private placement. On that occasion, 560,694 new shares were issued at a price of €1.13 per share, for a total amount of €6.24 million.

The 2018 launch of the equity financing agreements signed with the Bracknor Investment Fund and Société Générale through the PACEO agreement raised an additional €0.6 million for a total of 31,260 new shares issued during the fiscal year.

18.2 VOTING RIGHTS OF PRINCIPAL SHAREHOLDERS

Except in cases where the law provides otherwise, each shareholder is entitled to as many votes as he or she owns fully paid-up shares.

18.3 CONTROL OF THE COMPANY

On the writing date of this document, no shareholder directly or indirectly controls the Company within the meaning of Article L. 233-3 of the French Commercial Code. Furthermore, no shareholder has a blocking minority at the Company's General Meetings.

The shareholders have not informed the Company of any intention to enter into a shareholders' agreement, and to the Company's knowledge, there is no concerted action among shareholders.

In August 2015, the Company separated the functions of Chairman and Chief Executive Officer. Chairmanship of the Board of Directors was entrusted to Mr. John Pierce, an independent director, on 31 August 2015; Mr. Marc Delcourt continues to perform the duties of Chief Executive Officer of the Company. This measure, strengthened by the choice of an independent director to chair the Board of Directors, makes it possible to prevent any risk of abusive control.

²⁶ Shares directly and indirectly held by Schmilblick Ventures, of which it is the sole shareholder

²⁷ Shares held indirectly by Enuma Holding SA, of which it is the sole shareholder

18.4 AGREEMENTS THAT MAY RESULT IN A CHANGE OF CONTROL

To the Company's knowledge, there is no agreement whose implementation could, at a date following the filing of the Registration Document, result in a change of control.

18.5 PLEDGE OF THE COMPANY'S SHARES

To the Company's knowledge, on the filing date of the Registration Document, no shares of the Company have been pledged or used as a guarantee or surety.

19 RELATED-PARTY TRANSACTIONS

19.1 SIGNIFICANT AGREEMENTS WITH RELATED PARTIES

Licence 1 and Licence 2, as detailed in Chapter 11.2.2 above, are agreements signed between the Company and SCIENTIST OF FORTUNE SA, a company controlled by Philippe Marlière. They thus come under Article L. 225-38 of the French Commercial Code. During the course of fiscal year 2018, sums invoiced by SCIENTIST OF FORTUNE SA under these agreements amounted to €259 thousand.

The tripartite agreement between the Company, SCIENTIST OF FORTUNE SA and Isthmus, both controlled by Philippe Marlière, signed on 25 March 2015, is detailed in Chapter 11.2.2. It ended on 31 August 2018. Sums invoiced by Isthmus as part of services provided amounted to €100,000 for the fiscal year 2018.

As part of the financing of the Leuna demo plant, the Company entered into a loan agreement with Crédit Industriel et Commercial on 30 April 2015 jointly with CM-CIC Innovation. During fiscal year 2018, the expenses recognised for that loan agreement amounted to €71,000 (namely, €62,000 of capital repaid and €9,000 of interest).

As part of the joint venture with Cristal Union, which led to the creation of IBN-One SA, on May 18, 2015, the Company entered into a licensing agreement with IBN-One SA and a collaboration agreement with IBN-One SA and Cristal Union to ensure the development and operation by IBN-One SA of the first isobutene bioproduction plant that implements the processes developed by the Group. No amount was billed to or by the Company in fiscal year 2018 under the licensing agreement and the collaboration agreement.

On 1 September 2015, the Company concluded a contract for services whose purpose was the provision of services by Devenir Consulting Services LLC, headed and controlled by John Pierce. These exclusive services include commercial development, the search for potential partnerships, implementing studies of one-time key markets and representation of the Company to potential investors. The amounts invoiced by Devenir Consulting Services LLC amounted to €79,000 for the fiscal year 2018.

Lastly, the Company entered into a services agreement with IBN-One on 25 November 2015, under which the Company provides IBN-One with legal, administrative, accounting and financial services. The amounts received by the Company for this purpose in 2018 amounted to €20,000.

**19.2 SPECIAL STATUTORY AUDITORS' REPORT ON REGULATED AGREEMENTS FOR THE YEAR
ENDED 31/12/2018**

GLOBAL BIOENERGIES

Société Anonyme

5 rue Henri Desbruères

91000 EVRY

Special Statutory Auditors' report on regulated agreements

Fiscal year ended 31/12/2018

**FRANCE AUDIT CONSULTANTS
INTERNATIONAL**

10, allée des Champs Elysées

91042 Evry

GLOBAL BIOENERGIES

Société Anonyme

5 rue Henri Desbruères

91000 EVRY

Special Statutory Auditors' report on regulated agreements

Fiscal year ended 31/12/2018

Dear GLOBAL BIOENERGIES shareholders,

In our capacity as Statutory Auditors of your Company, we hereby present our report on regulated agreements and commitments.

It is our responsibility to inform you, based on the information given to us, of the main characteristics and provisions of, and the reasons for the interest of the Company in, the agreements and commitments of which we have been informed or that we have discovered during our mission without having to express an opinion on their usefulness or appropriateness or seek the existence of other agreements and commitments. It is your responsibility, under the terms of Article L. 225-31 of the French Commercial Code, to assess the benefits resulting from these agreements and commitments for their approval.

In addition, it is our responsibility, where necessary, to provide you with the information referred to in Article R. 225-31 of the French Commercial Code relating to the performance, during the past fiscal year, of the agreements and commitments already approved by the General Meeting.

We have performed the due diligence that we have deemed necessary in light of the professional standards of the French National Institute of Auditors (Compagnie Nationale des Commissaires aux Comptes) relating to this mission. These procedures consisted of verifying the consistency of the information given to us with the basic documents from which it came.

1. AGREEMENTS SUBJECT TO APPROVAL BY THE GENERAL MEETING

New agreements:

We inform you that we have not been given notice of any new agreement entered into during the past fiscal year to be submitted for the approval of the General Meeting, pursuant to Article L. 225-38 of the French Commercial Code.

2. AGREEMENTS ALREADY APPROVED BY THE DELIBERATIVE BODY

Agreements approved in prior years which remained in force during the year

Moreover, pursuant to Article R. 225-30 of the French Commercial Code, we were informed that the following agreements, approved by the General Meeting in prior years, remained in force during the year just ended.

▪ **Licence 1 agreement with Scientist of Fortune SA**

- Purpose of the agreement: Operation and development of research work targeting the bioproduction of isobutene and other molecules.
- Licence Agreement No. 1 was amended by eight riders signed on 16 October 2009, 10 December 2009, 15 January 2010, 19 September 2011, 10 September 2012, 30 October 2012, 7 May 2013 and 18 June 2014.

The duration of this agreement corresponds to the following dates, whichever is the latest:

- the expiry of the most recent patent, or
- 20 years after the initial marketing of a product or the first performance of a service,

With the following financial conditions:

- Fixed quarterly fee of €25,000 excluding taxes, revised annually on the basis of the inflation index as published by the INSEE, i.e. a fixed quarterly fee of €26,917 excluding taxes;
- and variable revenue-based fees of 1% for direct use and 5% for indirect use.

Licence Agreement No. 1 was authorized by the Board of Directors on 13 February 2009 and approved by the Ordinary General Meeting of 16 December 2010. Riders 1 to 3 were authorised by the Board of Directors

on 4 November 2010. Rider 4 was authorised by the Board of Directors on 20 October 2011. Riders 5 and 6 were authorised by the Board of Directors on 30 October 2012. Rider 7 was authorised by the Board of Directors on 29 April 2013. These riders were ratified by the Ordinary General Meeting. Rider 8 was authorised by the Board of Directors on 14 May 2014 and ratified by the Annual Ordinary General Meeting of 3 June 2015.

- Director concerned: Philippe Marlière
- On 31 December 2018, the Company recognised an expense of €107,668 excluding taxes for the fixed fee and €31,500 excluding taxes for the variable fee for this agreement.

This licence agreement is important to the company because the processes that it develops are derived from the intentions covered by the licence agreement.

▪ **Licence 2 agreement with Scientist of Fortune SA**

- Purpose of the agreement: Operation and development of research work on biological butadiene

The duration of this agreement corresponds to the following dates, whichever is the latest:

- the expiry of the most recent patent, or
- 7 July 2031;

With the following financial conditions:

- fixed quarterly fee of C120,000 excluding taxes;
- And variable revenue-based fees of 2% for direct use and 10% for indirect use.

Licence Agreement No. 2 was authorised by the Board of Directors on 8 July 2011 and ratified by the Annual Ordinary General Meeting of 6 December 2012.

- Director concerned: Philippe Marlière
- On 31 December 2018, the Company recognised an expense of €120,000 excluding taxes for this agreement.

This licence agreement is important to the company because the processes that it develops are derived from the intentions covered by the licence agreement.

▪ **Scientist of Fortune and Isthmus concession and research agreement of 25 March 2015**

- Purpose of the agreement: Extension, for a period of three years, by Scientist of Fortune, of the exclusive usage rights of one of the inventions in Licence No. 1 by the Company in all fields and performance by Isthmus of related research to perfect said invention.

The term of the agreement is three years starting 1 March 2015 ^{with} tacit renewal on a semi-annual basis.

This agreement was authorised by the Board of Directors on 2 October 2015.

- Director concerned: Philippe Marlière

- On 31 December 2018, the Company recognised an expense of €100,000 excluding taxes for the research conducted by Isthmus.

This usage rights concession and research agreement represents an interest for the company since it allows it to outsource its R&D activities, diversify its portfolio of programmes, developed in house and potentially, enter into new R&D agreements with third parties. This agreement ended on 31 August 2018.

▪ **Loan agreement with Crédit Industriel et Commercial of 30 April 2015**

- Purpose of the agreement Loan of €800,000 for the construction of an industrial demo plant in Leuna (Germany) for a period of 60 months at a fixed rate of 2.65%, a processing fee of €2,750 and guarantee costs of €12,864.56

This agreement was authorized by the Board of Directors on 8 April 2015.

- Director concerned: CM-CIC Innovation

- In 2018, the Company recognised interest and insurance expense on the loan of €9,085 and repaid capital of €162,376.

This loan agreement is of interest to the company as it made it enabled the construction of the Leona demo plant to be financed; which is necessary for the industrial and commercial development of the company.

▪ **Cooperation agreement with Cristal Union and IBN-One of 18 May 2015, as amended by a rider dated 26 November 2015**

- Purpose of the agreement: Completion of the front-end engineering design for the construction of an isobutene bioproduction plant by IBN-One.

This one-year agreement is renewable tacitly and contains the following financial conditions:

- Payment of a maximum amount of €400,000 by IBN-One to Cristal Union or the Company based on the work that will be entrusted to them as part of the collaboration;

This agreement and its rider were authorised by the Board of Directors on 11 May 2015 and 24 November 2015.

- Director concerned: Marc Delcourt
- This agreement did not result in the recognition of any accounting entries for the year ended 31 December 2017.

This cooperation agreement is of interest to the company because it advances the industrial scaling-up of the commercialisation of the processes and know-how that it develops.

▪ **Licence Agreement with IBN-One of 18 May 2015**

- Purpose of the agreement licence to use the technology and know-how developed by the Company for the organic production of isobutene for the purpose of constructing and operating a plant in France with an annual production capacity of 50,000 tonnes and the global marketing and distribution of the isobutene produced
- Duration: until all of the licensed technology is in the public domain
- Financial conditions:
 - Lump sum of €5,000,000 excluding taxes paid in three instalments: 10% and 2% during the fundraising for the construction of the plant and the balance at the start of the production subject to technological results achieved
 - and up to 5% of the net sales made by IBN One. For the variable portion, a new agreement, will be signed.

This agreement was authorised by the Board of Directors on 11 May 2015.

- Director concerned: Marc Delcourt
- This agreement did not result in the recognition of any accounting entries for the year ended 31 December 2017.

This licence agreement is of interest to the company because for the first time: it will allow the technology developed by the company on an industrial scale to be implemented.

▪ **Consulting agreement with Devenir Consulting Services of 1^{September} 2015**

- Purpose of the agreement: Provision of exclusive services for business development, searches for potential partnerships, implementation of occasional strategic market studies and representation of the Company in its relationships with potential investors and industrial partners.

This agreement was signed for an indefinite period with the option of unilateral termination at any time, with the following financial conditions:

- US\$4,450 per month for exclusivity commitments;

- US\$2,560 per working day;
- And reimbursement of travel expenses to Devenir Consulting Services.

This agreement was authorised by the Board of Directors on 31 August 2015.

- Director concerned: John PIERCE
- The company recognised an expense of €178,592, including fees and costs, on 31 December 2018.

This service provision agreement is of interest to the company as it ensures better visibility for the company with investors and stakeholders in the industrial biology sector, especially in the North American market.

▪ **Service provision agreement with IBN-One of 25 November 2015**

- Purpose of the agreement: Provision by the Company to IBN-One of legal, administrative, accounting and financial services for a period of one year renewable by tacit agreement.

This agreement was signed with the following financial conditions:

- Payment of a maximum amount of €11,000 excluding taxes per month to the Company.

This agreement was authorized by the Board of Directors on 24 November 2015.

- Director concerned: Marc Delcourt
- On 31 December 2018, the Company recognized income of €120,000.

This service provision agreement is of interest to the company as it enables it to cover all costs incurred in the administration of its subsidiary IBN-ONE.

Such are the agreements which took place in the year ended 31 December 2017 and which come under Articles L. 225-38 et seq. of the French Commercial Code.

Evry, on 1st March 2019

The Statutory Auditors

France Audit Consultants International

Max PEUVRIER

20 FINANCIAL INFORMATION ON THE GROUP'S AND THE COMPANY'S ASSETS, FINANCIAL SITUATION AND RESULTS

At 31 December 2014, Global Bioenergies produced its first consolidated financial statements under French standards on a voluntary basis as the Group did not reach the legal thresholds for the presentation of consolidated financial statements. The financial statements presented below were prepared by In Extenso, a subsidiary of Deloitte.

20.1 CONSOLIDATED FINANCIAL STATEMENTS OF GLOBAL BIOENERGIES

Consolidated balance sheet

BALANCE SHEET - ASSETS	31/12/2018	31/12/2017	31/12/2016
Software	35 918	74 348	69 164
Initial consolidation difference	1 192 445	1 192 445	-
Buildings	132 505	147 527	166 414
Lab. Evry Technical facilities	7 441 508	10 690 915	1 866 756
Other tangible assets	203 690	220 495	179 309
Assets under construction	0	16 406	9 969 069
Financial assets	1 060 763	365 223	146 252
NON-CURRENT ASSETS	10 066 829	12 707 359	12 396 964
Inventories	597 652	381 111	326 163
Trade receivables and related accounts	55 297	24 543	168 151
Supplier receivables	-	-	6 430
Personnel costs	-	-	1 000
Income tax	2 454 605	2 080 910	1 971 676
VAT	821 776	628 611	825 567
Other receivables	332 809	976 219	1 344 675
Advances and down payments given	-	-	-
Marketable securities	411 888	307 272	870 269
Cash	10 343 411	13 331 360	7 195 528
Prepaid expenses	352 145	412 522	430 383
CURRENT ASSETS	15 369 585	18 142 548	13 139 842
Translation gains (losses)			
ACCRUALS			
TOTAL ASSETS	25 436 414	30 849 907	25 536 806

In Extenso

BALANCE SHEET - LIABILITIES	31/12/2018	31/12/2017	31/12/2016
Share capital	253 973	224 375	167 681
Share premium	74 206 457	67 866 703	49 409 197
Retained earnings	-54 925 858	-40 672 651	-30 065 547
Group profit (loss)	-13 636 735	-14 253 207	-10 607 102
Investment subsidies	382 500	552 500	391 000
NET TOTAL	6 280 337	13 717 720	9 295 229
Minority interests	-	-	-
TOTAL EQUITY	6 280 337	13 717 720	9 295 229
Conditional advances	2 196 234	1 109 004	1 109 004
TOTAL OTHER CAPITAL	2 196 234	1 109 004	1 109 004
Provisions for pensions	65 668	56 894	42 041
PROVISIONS	65 668	56 894	42 041
Convertible bonds	-	300 000	487 500
Loans from credit institutions	1 508 678	2 511 617	3 884 160
Miscellaneous financial debts	5 424 513	6 154 198	5 875 453
Associates' current accounts	226 554	138 117	125 801
Trade payables and related accounts	3 355 687	4 622 089	4 120 134
Advances received from customers	-	-	-
Tax and social security liabilities	932 219	720 697	597 484
Other operating liabilities	368 860	683 052	-
Non-operating liabilities	-	-	-
Deferred income	5 077 664	836 519	-
PAYABLES AND DEFERRED INC.	16 894 175	15 966 289	15 090 532
TOTAL LIABILITIES	25 436 414	30 849 908	25 536 807

In Extenso

Profit & loss account

GROUP PROFIT & LOSS	31/12/2018 12 months	31/12/2017 12 months	31/12/2016 12 mois
Revenue	692,044	306,304	536,304
Operating subsidies	1,706,427	2,052,498	2,749,864
Reversals of provisions and depreciation, transfers of expenses	361,151	793,560	914,410
Other operating income	13,195	-	-
OPERATING INCOME	2,772,817	3,152,362	4,200,578
Raw materials purchases	1,049,324	1,366,871	1,089,679
Change in inventory	-216,542	-54,834	-25,856
External expenses	8,504,007	9,177,326	8,960,861
Duties and taxes	73,758	71,342	95,620
Staff costs	5,132,312	4,978,806	4,556,088
Depreciation, amortisation and provisions	3,625,820	2,984,788	1,212,922
Other operating expenses	280,330	261,709	234,853
OPERATING EXPENSES	18,449,008	18,786,007	16,124,168
OPERATING PROFIT (LOSS)	-15,676,192	-15,633,646	-11,923,590
Interest and other income	15,779	21,181	46,137
Foreign exchange gains	-	-	3,465
Income from sales of marketable securities	-	-	-
FINANCIAL INCOME	15,779	21,181	49,602
Interest and financial expenses	586,009	729,166	561,179
Foreign exchange losses	-	-	18,130
FINANCIAL EXPENSES	586,009	729,166	579,309
FINANCIAL PROFIT (LOSS)	-570,230	-707,985	-529,707
Asset management income	-	-	-
Disposal price of fixed assets	-	-	2,132
Other income	97,354	27,110	33,651
Reversal of depreciation, amortisation & provisions	170,000	127,500	-
EXCEPTIONAL INCOME	267,354	154,610	35,783
Asset management expenses	203,705	65,353	83,089
NBV fixed assets sold	-	-	2,270
Other exceptional expenses	-	-	-
EXCEPTIONAL EXPENSES	203,705	65,353	85,359
EXCEPTIONAL PROFIT (LOSS)	63,649	89,257	-49,576
Income tax	2,546,037	1,999,166	1,895,769
NET PROFIT (LOSS) GROUP	-13,636,735	-14,253,207	-10,607,104
Basic earnings per share	-2.68 €	-3.18 €	-3.16 €

Operating cash flow and Statement of cash flows

OPERATING CASH FLOW	31/12/2018 12 months	31/12/2017 12 months	31/12/2016 12 months
Net profit (loss)	-13,636,735	-14,253,207	-10,607,102
Depreciation and provisions on operations	3,625,820	2,984,788	1,212,922
Financial provisions	-	-	-
Exceptional provisions	-	-	-
Reversal of depreciation and provisions on operations	-	-	-
Reversal of depreciation, amortisation & financial provisions	-	-	-
Reversal of depreciation, amortisation & exceptional provisions	-	-	-
Deferred tax	-	-	-
Book value of assets sold	-	-	2,270
Income from asset disposals	-	-	2,132
Subsidies transferred to profit (loss)	170,000	127,500	-
OPERATING CASH FLOW	-9,840,915	-11,140,919	-9,389,778

CASH FLOW	31/12/2018 12 months	31/12/2017 12 months	31/12/2016 12 months
Net profit (loss)	-13 636 735	-14 253 206	-10 607 102
Amortisation	3 457 038	2 857 288	1 212 922
Capital gains on asset disposals	-	-	138
Cash-flow	-10 179 697	-11 395 918	-9 394 042
Change in working capital requirement	2 761 704	2 330 338	115 380
CASH GENERATED BY OPERATIONS	-7 417 993	-9 065 580	-9 278 662
Acquisition of fixed assets	973 982	2 023 892	6 125 213
Sale of fixed assets	0	1 917	5 613
CASH FLOW FROM INVESTMENTS	-973 982	-2 021 975	-6 119 600
Capital increase in cash	6 430 502	17 890 390	12 526 807
Capital increase costs	361 151	736 804	908 162
Other changes	0	-416	-5 919
Investment subsidies	0	289 000	391 000
Repayable advances received	1 087 230	0	1 109 004
Loans arranged	297 166	300 000	1 018 550
Loans repaid	2 278 761	1 611 803	1 580 921
Contributions from associates' current accounts	84 384	12 316	125 801
Repayable advances repaid	0	0	0
CASH FLOW FROM FINANCING	5 259 370	16 142 683	12 550 359
Cash at start of year	12 486 352	7 431 224	10 153 326
Cash at year-end ²⁸	9 353 747	12 486 352	7 431 225
CHANGE IN CASH POSITION	-3 132 605	5 055 127	-2 847 904

²⁸ Net of accrued interest not yet due on advance and loan in the amount of €1.4 million

*Notes to the statutory financial statements
at 31/12/2018*

Consolidation principles and evaluation methods

General

They have been prepared on a voluntary basis as the Group has not yet reached the legal thresholds for mandatory presentation of consolidated financial statements.

The consolidated financial statements of the Global Bioenergies Group were prepared in accordance with the principles and methods set out in the Order of 22/06/1999 ratifying CRC Regulation No. 99-02.

The financial statements are presented in euros, unless otherwise stated.

Consolidation principles

Global Bioenergies is defined as the Group's parent company.

Subsidiaries that are more than 50% owned by the Group are fully consolidated. These subsidiaries are:

- ✓ **GLOBAL BIOENERGIES GmbH;**
- ✓ **IBN-Two GmbH;**
- ✓ **Syngip BV;**
- ✓ **Syngip GmbH.**

Subsidiaries less than 50% owned by the Group are proportionally consolidated. This subsidiary is:

- ✓ **IBN-One SA**

Reciprocal transactions and accounts

Reciprocal transactions and accounts between Group companies have been eliminated.

Goodwill

As the shares in the subsidiaries were originally subscribed by Global Bioenergies SA, no goodwill was recognised. For Syngip BV, goodwill of €1,192,568 has been recognised, corresponding to the difference between the acquisition cost (€875,000) and the equity value of Syngip BV at the time of acquisition (-€117,568). Being a recent acquisition, the goodwill has not been re-assessed, especially since all our research has progressed through the skills brought by the Syngip team.

Fixed assets

These are valued at their acquisition cost or at their production cost.

Tangible assets are depreciated on a straight-line or declining-balance basis, depending on the expected useful life of each asset.

The provisions of CRC 04-16 on assets and CRC 02-10 on asset depreciation and amortisation have been implemented since 2005.

The assets acquired under finance leasing contracts have been restated and presented as amortisable assets and debts to financial institutions. Fees were split between amortisation of fixed assets and financial liabilities.

R&D costs

The Global Bioenergies Group has chosen to expense its R&D costs rather than capitalise them.

Inventories

Inventories are valued according to the first-in first-out method.

The gross value of goods and supplies includes their purchase price and ancillary costs.

A provision for impairment is booked when the inventory value is lower than the book value.

Founders' warrants (BSPCEs) and stock options

The BSPCEs and stock options awarded have not been restated in the consolidated financial statements. Consequently, they have no impact on shareholder's equity.

Deferred tax

The deferred tax has not been restated in the consolidated financial statements.

Retirement commitments

Commitments concerning retirement benefits are valued at the year-end according to the prospective method recommended by the *Conseil National de la Comptabilité*. This method consists in prorating the rights that will be earned at the end of the employees' careers according to the length of service recorded on the valuation date for all employees present. Their salaries are projected to the end of their careers, under the assumption of 1.5% increase per year.

The other calculation assumptions used are the following:

- ✓ discount rate: 1.50% (including inflation)
- ✓ salary growth rate: 2%
- ✓ retirement age: 62 years
- ✓ mortality table: INSEE TV 88-90 Table
- ✓ turnover rate:
 - Managers : 2%
 - Non-managers : 2%

The actuarial debt measures the likely commitment discounted to 31 December 2018 in respect of the rights vested on that date. It stood at €65,668 and was recognised in the consolidated financial statements.

Innovation grants

The Group receives subsidies from the European Commission and recognises them in profit (loss) as a function of the progress of expenses.

The detail on deferred income at 31 December 2018 is the following:

Project	Amount of Deferred Income
Optisochem	77,745 €
Rewofuel	2,288,941 €
Rewofuel GmbH	2,097,310 €
Sweetwood	330,559 €
Eforfuel	77,089 €
Biorecover	206,020 €
Total	5,077,664 €

Additional information

Equity interests – consolidated companies:

Name and legal form	Registered office and SIREN No.	% control	Method of consolidation	Sector of activity
GLOBAL BIOENERGIES SA	91000 ÉVRY 508,596,012	Consolidating company		R&D
GLOBAL BIOENERGIES GmbH	LEUNA (Germany)	100%	Full consolidation	R&D
IBN-One SA	(91) EVRY 810 716 704	50%	Proportional consolidation	R&D
IBN-Two GmbH	LEUNA (Germany)	100%	Full consolidation	R&D
Syngip BV	GELEEN (Netherlands)	100%	Full consolidation	R&D
Syngip GmbH	LEUNA (Germany)	100%	Full consolidation	R&D

Fixed assets (€) at 31/12/2018

NON-CURRENT ASSETS	Balance at start of year	Changes in scope	Inputs	Outputs	Balance at end of year
Software	268 307		11 238		279 545
Other intangible assets	15 097			15 097	-
INTANGIBLE ASSETS	283 404		11 238		279 545
Buildings	461 884		4 012		465 896
Technical facilities	16 326 897		545 010	332 142	16 539 765
Other tangible assets	445 577		31 754		477 331
Assets under construction	16 406			16 406	-
TANGIBLE ASSETS	17 250 764	-	580 776	348 548	17 482 992
FINANCIAL ASSETS	365 224	-	695 539		1 060 763
TOTAL	17 899 392	-	1 287 553	348 548	18 823 300

Depreciation, amortisation and provisions (€) at 31/12/2018

DEPRECIATION/AMORTISATION	Value at start of year	Changes in scope	Expenses	Reversals	Balance at end of year
Software	207 572		36 055		243 627
Other intangible assets	1 484		767	2 251	-
INTANGIBLE ASSETS	209 056		36 822	2 251	243 627
Buildings	314 358		19 034		333 392
Technical facilities	5 632 208		3 512 623	34 968	9 109 863
Other tangible assets	225 082		48 559		273 641
TANGIBLE ASSETS	6 171 648	-	3 580 216	34 968	9 716 896
TOTAL DEPRECIATION/AMORTISATION	6 380 704	-	3 617 038	37 219	9 960 523

PROVISIONS	Value at start of year	Changes in scope	Expenses	Reversals	Balance at end of year
Inventories					
Trade receivables					
Other receivables					
Marketable securities			1 218		
TOTAL PROVISIONS	-	-	1 218	-	-

Maturities of receivables and debts (€) at 31/12/2018

RECEIVABLES	Less than one year	1 to 5 years old	> 5 years	Total
Other financial assets				-
Fixed asset receivables				-
Trade receivables and related accounts	55 297			55 297
Other operating receivables	3 609 190			3 609 190
Receivables, current assets	3 664 487			3 664 487
Prepaid expenses	352 145			352 145
Deferred tax assets				-
TOTAL	4 016 632	-	-	4 016 632

PAYABLES	Less than one year	1 to 5 years old	> 5 years	Total
Convertible bonds				
Bank overdrafts and accrued interest	1 113 157	288 395		1 401 552
Borrowings and debts with credit institutions	942 497	566 182		1 508 679
Miscellaneous financial debts	2 273 911	1 749 050		4 022 961
Trade payables and related accounts	3 355 687			3 355 687
Tax and social security liabilities	932 219			932 219
Advances received from customers				
Miscellaneous payables	368 860			368 860
Deferred income	5 077 664			5 077 664
TOTAL	14 063 995	2 603 627	-	16 667 622

Revenue (€) at 31/12/2018

REVENUE	31/12/2018
Production sold	692,044
Total	692,044

Change in net consolidated position (in €) at 31/12/2018

CHANGE IN NET POSITION	Capital	Premiums and warrants	Reserves	Net profit (loss)	Equity
Opening date	224 375	67 866 703	-40 672 649	-14 253 207	13 717 722
Capital increase	29 598	6 339 754			6 369 352
Net profit (loss) for the year				-13 636 735	-13 636 735
Allocation of previous year's profit (loss)			-14 253 207	14 253 207	
Dividends paid					
Investment subsidies					-170 000
Other changes					
TOTAL	253 973	74 206 457	-54 925 856	-13 636 735	6 280 339

Corporate officers

This information would result in the disclosure of confidential items.

Workforce

At 31 December 2018, the workforce of the six companies consists of 69 people.

Share capital

At 31 December 2018, it consists of 5,079,455 shares of €0.05 each, i.e. €253,972.5.

Events after the reporting date

None.

Profit & loss accounts at 31 December 2018 and 31 December 2017, under French standards

GROUP PROFIT & LOSS	31/12/2018	31/12/2017
	12 months	12 months
Revenue	692,044	306,304
Operating subsidies	1,706,427	2,052,498
Other operating income	13,195	9,717
OPERATING INCOME	2,411,666	2,368,519
Consumables and change in inventories	832,782	1,312,038
External expenses	8,142,856	8,393,483
Duties and taxes	73,758	71,342
Staff costs	5,132,312	4,978,806
Fees	264,302	253,023
Depreciation, amortisation and provisions	3,625,820	2,984,788
Other operating expenses	16,028	8,686
OPERATING EXPENSES	18,087,858	18,002,166
OPERATING PROFIT (LOSS)	-15,676,192	-15,633,647
Financial income	15,779	21,181
Financial expenses	586,009	729,166
FINANCIAL PROFIT (LOSS)	-570,230	-707,985
Exceptional income	267,353	154,610
Exceptional expenses	203,703	65,353
EXCEPTIONAL PROFIT (LOSS)	63,650	89,257
Income tax	2,546,037	1,999,166
TO THE GROUP	-13,636,735	-14,253,209

NB: the expenses relating to the capital increases carried out in 2018 and 2017 have been recognised as transfers of expenses. However, in the above table, they were deducted from external expenses, as in previous years.

Exceptional profit (loss) at 31/12/2018

EXCEPTIONAL PROFIT (LOSS)	Expenses	Income
Items from prior years	-	-
Asset disposals	-	-
Share buyback	190 858	97 354
Fines and penalties	-	-
Share of subsidy transferred to profit	-	170 000
Miscellaneous exceptional expenses	12 846	-
TOTAL	203 703	267 354

Off-balance-sheet commitments at 31/12/2018

OFF-BALANCE-SHEET COMMITMENTS	Amount
Commitments given	4 633 934
Pledge on goodwill	2 600 000
Pledge on material	848 610
Pledge on receivables	575 000
Pledge on securities	347 182
Finance lease commitments	263 142
Commitments received	1 550 000
BPI intervention	1 550 000

20.2 CORPORATE FINANCIAL STATEMENTS OF GLOBAL BIOENERGIES SA

Balance sheet

In Extenso

BALANCE SHEET - ASSETS	Gross	Amortisation Depreciation	Net at 31/12/2018	Net at 31/12/2017
UNPAID SUBSCRIBED CAPITAL				
Intangible assets				
R&D costs	-	-	-	-
Concessions, patents and similar rights	279,545	243,627	35,918	60,735
Other intangible assets	-	-	-	-
Assets				
Buildings	463,220	333,285	129,935	147,527
Technical facilities, equipment and tooling	2,478,228	1,866,793	611,435	1,220,969
Other tangible assets	395,122	249,287	145,835	166,509
Financial assets				
Equity investments and related receivables	10,285,614	-	10,285,614	14,444,116
Loans	-	-	-	-
Other financial assets	1,060,763	-	1,060,763	365,223
NON-CURRENT ASSETS	14,962,491	2,692,992	12,269,499	16,405,079
Inventories	574,577	-	574,577	370,111
Receivables				
Trade receivables and related accounts	150,414	-	150,414	251,457
Supplier receivables	-	-	-	-
Personnel costs	-	-	-	-
Income tax	2,454,605	-	2,454,605	2,080,910
Tax on revenue	547,604	-	547,604	306,918
Other receivables	464,403	-	464,403	261,408
Miscellaneous				
Advances and down payments given	-	-	-	-
Marketable securities	413,106	1,218	411,888	307,272
Cash	10,112,033	-	10,112,033	12,626,436
Prepaid expenses	344,360	-	344,360	404,360
CURRENT ASSETS	15,061,102	1,218	15,059,884	16,608,872
Translation gains (losses)				
ACCRUALS				
TOTAL ASSETS	30,023,593	2,694,210	27,329,383	33,013,951

BALANCE SHEET - LIABILITIES	Net at 31/12/2018	Net at 31/12/2017
Share capital	253,973	224,375
Share premium and additional paid-in capital	74,206,457	67,866,703
Balance carried forward	-51,848,052	-38,945,556
Net profit (loss) for the year	-11,665,039	-10,511,177
Investment subsidies	-	-
Regulated provisions	-	-
TOTAL EQUITY	10,947,338	18,634,345
Conditional advances	1,945,570	858,340
TOTAL OTHER CAPITAL	1,945,570	858,340
Provisions for risks	-	-
Provisions for expenses	-	-
TOTAL PROVISIONS FOR RISKS AND EXPENSES	-	-
Convertible bonds	-	300,000
Loans from credit institutions	1,138,943	2,174,413
Miscellaneous financial borrowings and debts	5,403,705	6,154,198
Trade payables and related accounts	1,472,237	5,196,497
<i>Personnel costs</i>	194,492	234,660
<i>Social security contributions</i>	229,962	251,167
<i>Tax on revenue</i>	271,320	15,129
<i>Other tax and social security liabilities</i>	71,374	67,892
Tax and social security liabilities	767,148	568,848
Other payables	2,880,108	682,112
Deferred income	2,774,334	836,519
PAYABLES	14,436,475	15,912,587
TOTAL LIABILITIES	27,329,383	35,405,272

Profit and Loss account

PROFIT & LOSS	from 1/01/18 to 31/12/2018 12 months	from 01/01/17 to 31/12/2017 12 months	Absolute change (amount)	Absolute change (%)
INCOME				
Production sold	840,588	469,012	371,576	79.23%
Operating subsidies	1,338,809	266,158	1,072,651	403.01%
Other income	408,668	801,819	-393,151	-49.03%
Total	2,588,065	1,536,989	1,051,076	68.39%
CONSUMPTION OF GOODS & MATERIALS				
Raw materials purchases	840,252	919,128	-78,876	-8.58%
Change in inventory	-204,467	-54,834	-149,633	272.88%
Other purchases & external expenses	10,448,924	10,300,930	147,994	1.44%
Total	11,084,709	11,165,224	-80,515	-0.72%
MARGIN ON GOODS & MATERIALS	-8,496,644	-9,628,235	1,131,591	-11.75%
EXPENSES				
Duties, taxes and related expenses	73,302	71,106	2,196	3.09%
Salaries and emoluments	3,045,465	2,855,691	189,774	6.65%
Social security contributions	1,268,891	1,165,900	102,991	8.83%
Depreciation, amortisation & provisions	522,872	504,948	17,924	3.55%
Other expenses	294,849	258,180	36,669	14.20%
Total	5,205,379	4,855,825	349,554	7.20%
OPERATING PROFIT (LOSS)	-13,702,023	-14,484,060	782,037	-5.40%
Financial income	178,600	239,582	-60,982	-25.45%
Financial expenses	594,148	618,943	-24,795	-4.01%
Financial profit (loss)	-415,548	-379,361	-36,187	9.54%
Joint operations				
OPERATING PROFIT (LOSS)	-14,117,571	-14,863,421	745,850	-5.02%
Exceptional income	394,520	27,110	367,410	1355.25%
Exceptional expenses	488,024	65,352	422,672	646.76%
Exceptional profit (loss)	-93,504	-38,242	-55,262	144.51%
Employee profit-sharing				
Income tax	-2,546,037	-1,999,166	-546,871	27.35%
NET PROFIT (LOSS) FOR THE YEAR	-11,665,038	-12,902,497	1,237,459	-9.59%

*Notes to the statutory financial statements
at 31/12/2018*

On the balance sheet before distribution for the fiscal year ended 31 December 2018,

- | | |
|--|-------------------|
| • of which the total is | 27,329,383 Euros |
| • and on the profit and loss account for the year, presented in the form of a list, showing a profit (loss) of | -11,665,039 Euros |

The reporting period covers the 12 months from 1/01/2018 to 31/12/2018.

The notes and tables hereunder are an integral part of the financial statements for the fiscal year.

The financial statements for the fiscal year were prepared by the Board of Directors.

The financial statements for the fiscal year ended 31 December 2018 were prepared in accordance with the French general accounting plan approved by the Ministerial Order of 8 September 2014, law no. 83-353 of 30 April 1983 and Decree 83-1020 of 29 November 1983, and in compliance with the provisions of accounting regulations 2000-06 and 2003-07 on liabilities, regulation 2002-10 on asset depreciation, amortisation & impairment and regulation 2004-06 on the definition, accounting and valuation of assets.

The accounting rules were applied with due regard to the principle of prudence, in accordance with the following underlying assumptions:

- going concern;
- consistency of accounting methods from one fiscal year to another;
- independence of fiscal years,

and in accordance with the general rules for the preparation and presentation of annual financial statements.

All accounting entries have been valued using the historic cost method.

Tangible and intangible assets

Assets are valued at their acquisition cost (purchase price and related expenses).

Amortisations for depreciation are calculated according to the straight-line or declining method as a function of the expected useful life:

- Software	1 to 5 years
Buildings on other property	1 and 10 years
- Research material	5 years
- IT equipment	3 and 5 years
- Furniture	10 years
- Fixtures and fittings	10 years

Inventories

Inventories are valued on the basis of the latest known purchase price.

An impairment provision, equal to the difference between the gross value determined as set out above and the day's price or realisable value, is recognised when the gross value is higher than the other stated value.

Receivables

Receivables are recognised at their nominal value. An impairment provision is recognised when the inventory value is lower than the book value.

Marketable securities

Marketable securities are valued using the first-in, first-out method. An impairment provision is recognised when the inventory value is lower than the book value.

Foreign currency transactions

When an asset is purchased in a foreign currency, the exchange rate used is that applicable on the acquisition date or, where relevant, the hedging rate if a hedging contract was set up before the transaction. The expenses incurred in relation to the hedging are included in the acquisition cost.

All foreign currency payables, receivables and cash are recognised in the balance sheet at their year-end counter-values. The difference resulting from the recognition of foreign currency payables and receivables at the year-end rate is booked under unrealised foreign exchange gains (losses).

Non-compensated unrealised foreign exchange losses are fully covered by a provision for risks, in accordance with applicable regulations.

R&D costs

Global Bioenergies SA has chosen to expense its R&D costs rather than capitalise them.

Subsidiaries

Name and legal form	Registered office and SIREN No.	% control	Method of consolidation	Sector of activity
GLOBAL BIOENERGIES SA	(91) EVRY 508 596 012	Consolidating company		R&D
GLOBAL BIOENERGIES GmbH	LEUNA (Germany)	100%	Full consolidation	R&D
IBN-One SA	(91) EVRY 810 716 704	50%	Proportional consolidation	R&D
IBN-Two GmbH	LEUNA (Germany)	100%	Full consolidation	R&D
Syngip BV	GELEEN (Netherlands)	100%	Full consolidation	R&D
Syngip GmbH	LEUNA (Germany)	100%	Full consolidation	R&D

On 22 January 2013, Global Bioenergies SA set up a wholly-owned German subsidiary, **Global Bioenergies GmbH**, with capital of €25,000.

At 31 December 2018, revenue of €4,159,000 and a subsidy of €62,000 were recognised, along with expenses of €6,264,000.

Global Bioenergies SA granted the subsidiary a current account advance of €8,293,000 at 31 December 2018.

Remuneration of €151,757 was paid on the advance during the year ended 31 December 2018.

The shares and receivables that Global Bioenergies SA holds in its subsidiary were not impaired for the following reasons:

- Global Bioenergies GmbH obtained a subsidy of €5.7 million at the end of 2013 and €0.4 million during 2016 from the German Federal Ministry of Education and Research, part of which has yet to be received (€0.4 million). In addition, as part of the Optisochem European subsidy granted in 2017, part of the declared costs relate to the completion of fermentation runs for the Leuna demo plant. The German subsidiary will therefore receive a portion of the €4.4 million European subsidy for Global Bioenergies;
- Global Bioenergies GmbH carries out R&D services for the parent company, for which it is invoiced. In addition, since 2017 and the start of the demo plant's operation, it has been invoiced for depreciation costs (€1.5 million depreciated over 48 months);
- the Leuna demo plant may be useful beyond its depreciation period (similar to the Pomacle pilot plant, already depreciated but still in service), which has been defined over the estimated period between now and the commissioning of the first plant;

- More specifically, it may be used to work on other molecules or other substrates;
- these differing flows should allow Global Bioenergies GmbH to reach profitability in the medium term.

On 27 March 2015, Global Bioenergies SA created IBN-One SA, a French subsidiary with capital of €37,000, in which it held 99.982% of the shares.

On 13 May 2015, IBN-One SA carried out a capital increase to bring it to €1,000,000.

In January 2016, Global Bioenergies SA purchased six shares.

Following these transactions, Global Bioenergies SA owned 50% of the share capital of IBN-One SA. At 31 December 2018, IBN-One SA did not generate any revenue and its expenses amounted to €578,000.

Global Bioenergies SA granted the subsidiary a current account advance of €462,000 at 31 December 2018.

Remuneration of €4,410 was paid on the advance during the year ended 31 December 2018.

The shares that Global Bioenergies SA holds in its subsidiary were not impaired for the following reasons:

- it is IBN One SA's second fiscal year;
- in 2016, IBN One SA received approval for a repayable advance of €3.3 million granted by ADEME as part of the *Investissements d'Avenir* programme for the Demo Plants for the Ecological and Energy Transition.

On 8 May 2015, Global Bioenergies SA set up a wholly-owned German subsidiary, **IBN-Two GmbH**, with capital of €25,000.

At 31 December 2018, IBN-Two SA did not generate any revenue and its expenses amounted to €4,000.

In February 2017, Global Bioenergies SA received a contribution of all of the shares of **Syngip BV** (see chapter on capital increase by contribution of securities).

At 31 December 2018, Syngip BV produced revenue of €384,000 consisting of the re-invoicing to Global Bioenergies SA for its research services, €206,000 in subsidies collected, and its expenses amounted to €629,000.

Global Bioenergies SA granted the subsidiary a current account advance of €568,000 at 31 December 2018.

Remuneration of €1,440 was paid on the advance during the year ended 31 December 2018.

The shares that Global Bioenergies SA holds were not impaired for the following reasons:

- in 2018, Syngip BV obtained a financing agreement for some of its research expenses as part of a European project, in a total amount of €852,000, of which €412,000 was received in February 2018;
- it also invoices Global Bioenergies SA for its research services, which will be used commercially by the parent company, not by Syngip BV.

Capital increase through the exercise of equity warrants (BSAs)

As a result of the PACEO contract, 10,000 BSAs were exercised, giving rise to the subscription of 10,000 new shares for an exercise price of €19 per share, share premium included.

Issue of bonds convertible into equity warrants (OCABSAs)

During 2016, Global Bioenergies SA carried out a private issuance of OCABSAs.

The OCABSAs were issued in various tranches, on the exercise of warrants issued free of charge, which then oblige their holder over 24 months to subscribe to an OCABSA tranche, subject to meeting certain conditions.

The issuance of the first tranche of 20 OCABSAs representing a nominal bond issue amount of €750,000 was carried out on 22 September 2016 on the basis of the 8th resolution of the Combined General Meeting of 3 June 2015.

The General Meeting of 28 October 2016 approved the 14 other OCABSA tranches, each in an amount of €750,000.

It was provided that the drawdown of each tranche would be made automatically at the end of a 20 trading day period from the drawdown of the previous tranche.

It was moreover agreed that in respect of the payment of a fixed-rate commitment fee, Global Bioenergies SA will issue an OCA with a par value of €37 (without attached BSAs) to the Investor when each tranche is drawn down.

The bonds convertible into shares (OCAs) were issued at par (€37,500), will not bear interest and will have a maturity of 12 months from their issue. When they reach maturity, OCAs still outstanding must be converted into shares. However, should a default pursuant to the contract occur, any outstanding OCAs at that date must be repaid by the Company at par value by Global Bioenergies SA.

The number of equity warrants (BSA) to be issued on the issue of each OCABSA tranche was such that, multiplied by the exercise price of the BSAs, the amount thus obtained was equal to 60% of the nominal amount of the tranche.

The BSAs will be immediately detached from the OCAs starting from their issuance.

Each BSA will give its bearer the right, during its exercise period, to subscribe for one new share of the Company.

The transaction could result in a contribution of €8,000,000: €1,250,000 corresponding to the subscription of all OCAs and €6,750,000 corresponding to the exercise of all BSAs.

During the fiscal year ended 31 December 2016, five OCABSA tranches of 21 OCABSAs each were issued, representing an amount of €3,937,500 of OCAs. 92 OCA were converted, representing a capital increase of €7,674.95, with an issue premium of €3,442,257.03.

During the fiscal year ended 31 December 2017, six OCABSA tranches of 21 OCABSAs each were issued, representing an amount of €4,725,000 of OCAs. 139 OCAs were converted, 13 of which correspond to an OCABSA tranche issued in 2016, representing a capital increase of €12,873.20, with an issue premium of €5,199,084.03.

At 31 December 2017, all OCABSAs previously issued had been converted.

During the year ended 31 December 2017, Global Bioenergies SA privately issued a second tranche of OCABSAs.

The new agreement states that the OCABSAs will be issued in 20 tranches (the "Warrants"), each in an amount of €1,188,000, without preferential subscription rights for Bracknor Investment (the "Investor"). Each Warrant, allocated free of charge to the Investor, will oblige the Investor, subject to compliance with certain conditions, to subscribe to a tranche of 20 OCABSAs.

The drawdown of each Warrant is to be exercised automatically at the end of a period of 20 trading days from the exercise of the previous Warrant. It is also provided for the Company to suspend (and resume) the drawdowns at any time.

In addition, it is agreed that as a partial payment of a fixed-rate commitment fee, the Company will issue the Investor an additional OCA with a par value of €60,000 (without BSAs attached), on the exercise of each Warrant.

At 31 December 2017, only the first two tranches for an amount of €2,520,000 had been issued. 37 OCAs had been converted, representing a capital increase of €7,497.25, with an issue premium of €2,212,369.17.

During the fiscal year ended 31 December 2018, 5 OCAs were converted, representing an increase in capital amounting to €1,063, accompanied by a share premium of €298,915.60

Following the issuance of the second tranche, Global Bioenergies SA decided to suspend the drawdowns.

Capital increase by contribution of securities

In February 2017, Global Bioenergies SA received a contribution of all of the shares of SYNGIP BV, a Dutch company. In exchange for this contribution, Global Bioenergies issued 37,240 new ordinary shares to Syngip BV's historical partners and 69,161 equity warrants (BAAs) granted free of charge that give rise to the allocation of a new share subject to the achievement by the Syngip BV teams of a technical milestone in the development of a process to convert gaseous carbon resources into isobutene.

This milestone must be reached no later than two years after the date of approval of this transaction by the general meeting of shareholders of Global Bioenergies, failing which the BAA would lapse. The 37,240 new ordinary shares represent a value of approximately €75,000, based on a share price of €23.4956. The BAAs will give rise to the allocation of 69,161 new ordinary shares, representing a value of approximately €1,625,000 at the reference price of €23.4956. The 37,240 new common shares will be subject to a lock-up period, which will end either on the achievement of the milestone mentioned above or, at the latest, two years after the date of the general meeting of shareholders of Global Bioenergies that approved the transaction.

Capital increase via private placement

During the meeting of 20 September 2018, the Board of Directors decided to launch a capital increase operation via private placement with waiver of preferential subscription rights, in accordance with the eighth resolution of the Ordinary and Extraordinary General Shareholders' Meeting of 5 June 2018. During this meeting, the Board of Directors gave full authority to the Chief Executive Officer to set the final terms and conditions of the capital increase.

By decision on 21 September 2018, the Chief Executive Officer identified the final terms and conditions of this capital increase transaction, namely the issuance of 560,694 new ordinary shares at a unit price of €1.13 for a total subscription amount of €6,240,524.22 (€28,034.70 nominal value and €6,212,489.52 share premium)

Capital increase costs

As in previous years, the capital increase costs were charged to the issue premium for an amount of €61,151.49.

Award of BSPCEs – BSAs – BEAs

Plans d'attribution	Nombre de bons restant à exercer au 31/12/2018	Nombre d'actions correspondantes	Date butoir d'exercice
BSA 06-2009	12 000	12 000	30/11/2019
BSA 12-2011	2 477	2 477	19/12/2021
BSA 10-2012	9 900	9 900	29/10/2022
BSPCE A01-2014	12 417	12 417	07/01/2019
BSPCE B01-2014	11 880	11 880	07/01/2019
BSA A01-2014	8 000	8 000	07/01/2024
BSA 07-2014	3 000	3 000	02/07/2024
BSPCE A07-2014	6 200	6 200	02/07/2024
BSPCE B07-2014	1 500	1 500	02/07/2024
BSA A01-2015	6 000	6 000	12/01/2025
BSA B01-2015	750	750	12/01/2025
BSPCE A01-2015	6 991	6 991	12/01/2025
BSPCE B01-2015	14 819	14 819	12/01/2025
BSPCE A10-2015	7 500	7 500	13/10/2025
BSPCE B10-2015	4 955	4 955	13/10/2025
BSA A10-2015	400	400	13/10/2025
BSA B10-2015	1 000	1 000	13/10/2025
BSPCE A02-2016	30 000	30 000	15/02/2026
BSA BKN T1	14 851	14 851	21/09/2021
BSA A09-2016	1 300	1 300	21/09/2026
BSA B09-2016	3 000	3 000	21/09/2026
BSPCE 09-2016	15 200	15 200	21/09/2026
BSA BKN T2	15 126	15 126	30/10/2021
BSA BKN T3	14 506	14 506	07/11/2021
BSA BKN T4&5	34 258	34 258	04/12/2021
BSA BKN T6	14 975	14 975	16/01/2022
BAA Syngip	69 161	69 161	01/02/2019
BSA BKN T7	15 592	15 592	12/02/2022
BSA 02-2017	2 250	2 250	21/02/2027
BSA BKN T8	16 728	16 728	12/03/2022
BSA BKN T9	16 666	16 666	10/04/2022
BSA BKN T10	18 450	18 450	14/05/2022
BSA BKN T11	18 518	18 518	18/06/2022
BSA BKN2 T1	14 476	14 476	26/06/2022
BSA BKN2 T2	18 182	18 182	26/07/2022
BSPCE A09-2017	8 000	8 000	28/09/2027
BSPCE B09-2017	2 000	2 000	28/09/2027
BSA 09-2017	2 000	2 000	28/09/2027
TOTAL	455 028	455 028	

Change in share capital

The share capital of Global Bioenergies SA was as follows at the end of each fiscal year:

	30/06/2009	30/06/2010	30/06/2011	30/06/2012
Capital in euros	41,800	46,600	79,009	82,830
Nbr of existing ordinary shares	41,800	46,600	1,580,180	1,656,600
	31/12/2012	31/12/2013	31/12/2014	31/12/2015
Share capital in euros	90,892.95	137,762.80	138,773.40	141,509.85
Nbr of existing ordinary shares	1,817,959	2,755,256	2,775,468	2,830,197
	31/12/2016	31/12/2017	31/12/2018	
Share capital in euros	167,681.35	224,375.05	253,972.75	
Nbr of existing ordinary shares	3,353,627	4,487,501	5,079,455	

Treasury shares

On 12 May 2011, the General Meeting authorised the Board of Directors to implement a share buyback programme. This authorization has been automatically renewed annually since 2012, with the last renewal having occurred on 26 June 2017. Such share purchases may be carried out to promote the liquidity of the Company's shares, within the limit of 10% of the Company's share capital on the purchase date.

At 31 December 2018, since signing the liquidity contract during the IPO, Global Bioenergies SA has paid out €25,000. breaking down as follows:

- 10,439 treasury shares representing 0.21% of the total number of outstanding shares, at the acquisition price of €4,963.42;
- Cash account in the amount of €28,622.34.

Licence agreement

On 13 February 2009, Global Bioenergies SA signed an exclusive licence agreement for a patent against the payment of quarterly fees.

This agreement also provides for the payment of additional fees for the direct and indirect use of patent applications, in the maximum amount of 5% of revenue.

For the year ended 31 December 2018, the quarterly fees amounted to €107,668. An additional fee of €1,500 was paid.

On 8 July 2011, the Board of Directors authorised the signing of a new licence agreement, for which the fee is payable on an annual basis.

This agreement provides that the amount of the fee to be paid annually shall be the highest of the following sums: €20,000 or 10% of indirect revenue. In view of the revenue earned in respect of this licence agreement, the fee amounts to €20,000 for the year ended 31 December 2018.

Research tax credit

During the financial year ended 31 December 2018, Global Bioenergies SA incurred expenses, net of subsidies received, that fall within the scope of the Research Tax Credit of €7,938,000, generating a Research Tax Credit of €2,381,000.

In addition, Global Bioenergies SA filed a corrected statement during the fiscal year ending 31 December for the 2017 Research Tax Credit in the amount of €164,700. This sum was fully reimbursed by Tax Authorities on 27 December 2018.

Statutory Auditors' fees

The Statutory Auditor's fees recognised in the year's profit & loss account for the auditing of the financial statements amount to €41,010 excluding tax.

Revenue

For the year ended 31 December 2018, revenue consisted of:

- achieving milestone payments;
- re-invoicing of certain costs to subsidiaries.

The geographical breakdown is as follows:

In euros	France	Rest of the world	Total
Service provision	-	631,540	631,540
Subsidiary re-invoicing	121,008	88,040	209,048
Total	121,008	719,580	840,588

Innovation aid received in previous years

Under the French "Investing in the Future" programme, the French Environment and Energy Control Agency (ADEME), acting on behalf of the French government, signed a financing agreement with Global Bioenergies SA within the framework of the Bioma + project.

This project covers a total amount of eligible expenses to be incurred by Global Bioenergies SA of €7,306,341.14.

The maximum amount of aid awarded to Global Bioenergies SA is €3,982,872.38, breaking down as follows: a maximum of €1,327,624.13 in subsidies and €2,655,248.25 in repayable advances.

During the year ended 31 December 2014, Global Bioenergies SA received an advance of 15% of the maximum amount of the aid, breaking down as follows: a subsidy of €199,143.62 and a repayable advance of €398,287.24.

During the year ended 31 December 2015, Global Bioenergies SA received a total of €2,588,867.06, which broke down into €1,725,911.37 in repayable advances and €862,955.69 in subsidies.

During the year ended 31 December 2016, Global Bioenergies SA received a total of €796,574.46, which broke down into €31,049.64 in repayable advances and €765,524.82 in subsidies.

Global Bioenergies SA therefore received all of the sums awarded.

The repayable advance will have to be refunded to ADEME according to the progress of the operation and the achievement of technical objectives.

During the fiscal year ending 31 December 2018, Global Bioenergies SA paid a sum of €87,286.71 for reimbursement of €398,287.24 of a repayable advance and €88,999.47 in interest.

The French Environment and Energy Management Agency (ADEME) signed a financing agreement with Global Bioenergies SA in the context of the Investments for the Future programme for Demo Plants for the Ecological and Energy Transition.

This project covers a total amount of eligible expenses to be incurred by Global Bioenergies SA of €2,716,141.36.

The maximum amount of aid awarded to Global Bioenergies SA is €5,722,263.61 and is entirely in repayable advances.

During 2016, Global Bioenergies SA received an advance of 15% of the maximum amount of the aid (€858,339.54).

During the year ended 31 December 2018, Global Bioenergies SA received an advance of 19% of the maximum amount of the grant, or €1,087,230.09

During the fiscal year 2017, a subsidy agreement was signed between Bio Based Industries Joint Undertaking, Global Bioenergies SA and five other partners in the context of a European subsidy project called "Optisochem."

Global Bioenergies SA is the coordinator of the Optisochem project. As such, it received €3,316,867 over the period, broken down as follows:

- guarantee fund: €487,775;
- PPCA contribution: €390,220;
- amount to be shared between the various partners, including Global Bioenergies: €2,438,872.

At 31 December 2018, Global Bioenergies SA owed an amount of €375,000 as part of sums to repay partners. This has been recognised under "Other payables".

The share of subsidy attributable to Global Bioenergies SA was €1,387,573 at 31 December 2018. The amount of expenses incurred at 31 December 2018 is €2,619,656. Given a subsidy rate of 50%, deferred income of €77,745 was recognised.

Innovation aid received during the year

During the year ended 31 December 2018, a grant agreement was signed between the European Union, Global Bioenergies SA and several academic institutions and industrial groups throughout Europe as part of the European project grant H2020 called "Rewofuel."

Global Bioenergies SA is the coordinator of the Rewofuel project. As such, it received €3,314,898 over the period, broken down as follows:

- guarantee fund: €692,815;
- Amount to be shared between various partners, including Global Bioenergies SA: €8,622,083.

At 31 December 2018, Global Bioenergies SA owed an amount of €2,505,108 as part of sums to repay partners. This has been recognised under "Other payables".

The share of subsidy attributable to Global Bioenergies SA was €2,462,958 over the period. The amount of expenses incurred at 31 December 2018 is €248,596. Given a subsidy rate of 70%, deferred income of €2,288,941 was recognised.

During the year ended 31 December 2018, a grant agreement was signed between the European Union, Global Bioenergies SA and several academic institutions and industrial groups throughout Europe as part of the European project grant H2020 called "Sweetwood."

Global Bioenergies SA received an advance in the amount of €450,692 over the period. The amount of expenses incurred at 31 December 2018 is €171,619. Given a subsidy rate of 70%, deferred income of €330,559 was recognised.

During the year ended 31 December 2018, a grant agreement was signed between the European Union, Global Bioenergies SA and several academic institutions and industrial groups throughout Europe as part of the European project grant H2020 called "Eforfuel."

Global Bioenergies SA received an advance in the amount of €77,089 over the period. As no expenses have been incurred at 31 December 2018, this sum was fully recognised in deferred income.

Detail for deferred income at 31 December 2018

Project	Deferred Income
Optisochem	77,745 €
Rewofuel	2,288,941 €
Sweetwood	330,559 €
Eforfuel	77,089 €
Total	2,774,334 €

Loans for innovation

During the year ended 31 December 2013, Global Bioenergies SA was granted an interest-free innovation loan of €740,000 by Bpifrance, with a term of 31 quarters including 12 quarters of deferred repayment. The loan will be repaid on a straight-line basis over 20 quarters.

The first repayment took place on 31 March 2016 and the last will take place on 31 December 2020.

At 31 December 2018, the amount of €296,000 remains payable as follows:

- under one year: €148,000;
- one to five years: €148.000.

During the year ended 31 December 2015, Global Bioenergies SA was granted an interest-free innovation loan of €1.400.000 by Bpifrance, with a term of 30 quarters including 10 quarters of deferred repayment. The loan will be repaid on a straight-line basis over 20 quarters.

The first repayment took place on 31 March 2017 and the last will take place on 30 September 2022.

At 31 December 2018, the amount of €1,050,000 remains payable as follows:

- under one year: €280,000;
- one to five years: €770,000.

During the year ended 31 December 2015, Global Bioenergies SA was granted an innovation loan of €600,000 by Bpifrance, with a term of 28 quarters including 8 quarters of deferred repayment. The loan will be repaid on a straight-line basis over 20 quarters.

The first repayment took place on 30 September 2017 and the last will take place on 30 June 2022.

At 31 December 2018, the amount of €420,000 remains payable as follows:

- under one year: €120,000;
- one to five years: €300,000.

This loan bears interest at the fixed annual rate of 5.23%.

Average number of employees

During the year ended 31 December 2018, the average number of employees at Global Bioenergies SA stood at 55, including 26 non-managers and 29 managers.

At 31 December 2018, the Company had 56 employees (see Note 13).

Retirement commitments

At 31 December 2018, the retirement commitments amounted to €65,668 and were not recognised in the financial statements.

The commitments were calculated for all personnel on the basis of the following parameters:

annual salary increase: 2%;
expected retirement age: 62 years;
turnover rate: 1%;
mortality rate: TV88/90.

Competitiveness-Employment tax credit (CICE)

The CICE on eligible wages paid in the calendar year 2018 was recognised in account 444 – Balance - Income tax – in the amount of €72,067. In accordance with the French accounting authority's recommendation, the corresponding income was credited to account 649 - Staff costs - CICE.

Use of the CICE

During the year, the Company used this tax credit to finance its activities through new investments in research and development, and to hire new employees.

In the following tables, all amounts are expressed in thousands of euros unless otherwise stated.

Financial information

Balance sheets at 31 December 2018 and 31 December 2017, under French standards

ASSETS	Note	31-12-18	31-12-17
Intangible assets	2	36	61
Assets	3	887	1,535
Financial assets	4	11,346	14,809
Fixed assets		12,269	16,405
Inventories	5	575	370
Trade receivables and related accounts		150	251
Other receivables and accruals	6	3,812	3,054
Short-term investments		412	6,686
Cash	7	10,112	6,248
Current assets		15,061	16,609
Total assets		27,330	33,014

LIABILITIES	Note	31-12-18	31-12-17
Capital		254	224
Share premium		74,206	67,867
Balance carried forward		-51,848	-38,946
Profit (loss)		-11,665	-12,902
Equity	1	10,947	16,243
Conditional advances	8	1,946	858
Convertible bonds		0	300
Loans	9	6,543	8,329
Trade payables and related accounts	10	1,472	5,196
Other debts	10	6,422	2,088
Payables		16,383	16,771
Total liabilities		27,330	33,014

Profit & loss accounts at 31 December 2018 and 31 December 2017, under French standards

	Note	31-12-18	31-12-17
Revenue		841	469
Subsidies		1,339	266
Other income		48	3
Total operating income		2,227	738
Consumables and change in inventories		636	864
External expenses		10,088	9,502
Duties and taxes		73	71
Staff costs	13	4,314	4,022
Fees		264	253
Amortisation		523	505
Other expenses		31	5
Total operating expenses		15,929	15,222
Operating profit (loss)		-13,703	-14,484
Financial income		179	240
Financial expenses		594	619
Financial income	11	-416	-379
Exceptional income		395	27
Exceptional expenses		488	65
Exceptional profit (loss)	12	-93	-38
Research tax credit		2,546	1,999
NET PROFIT (LOSS)		-11,666	-12,902

Cash-flow		
	31- Dec- 18	31-Dec-17
Net profit (loss)	-11,666	-12,902
Amortisation	524	505
Capital gains on asset transfers	0	0
Cash-flow	-11,142	-12,397
Change in working capital requirement	-251	5,746
Net cash generated by operations	-11,393	-6,651
Acquisition of fixed assets	843	3,646
Sale of fixed assets	297	2
Current accounts offsetting	4,160	0
Cash-flow from investments	3,614	-3,644
Capital increase in cash	6,727	18,816
Capital increase expenses charged to share premium	361	784
Repayable advances received	1,087	0
Loans arranged	0	300
Repayable advances repaid	398	0
Loans repaid	1,916	1,253
Net cash flow from financing activities	5,139	17,079
Change in cash position	-2,638	6,784
Cash at start of year	11,781	4,997
Cash at year-end ²⁹	9,143	11,781

²⁹ Net of accrued interest not yet due on advances and loans in the amount of €1.4 million

Notes

Note 1: Change in Equity

Net amount at 31 December 2017	16 243
Capital increase	30
Increase in share premium	6,340
BSA issued	0
Dividend distribution	0
Profit (loss)	-11,666
Net amount at 31 December 2017	10,947

Note 2: Intangible assets

Items	31-12-17	Increase	Decrease	31-12-18
Software and website	268	11		279
Intangible assets, gross	268	11	0	279
Depreciation/Amortisation	207	36		243
Impairment	0			0
Intangible assets, net	61	-25	0	36

Note 3: Tangible assets

Items	31-12-17	Increase	Decrease	31-12-18
Buildings	462	1		463
Research material	2,693	117	332	2,478
Fixtures and fittings	214	1		215
IT equipment	146	17		162
Furniture	18	0		19
Intangible assets, gross	3,533	136	332	3,337
Depreciation/Amortisation	1,998	487	35	2,449
Impairment	0	0	0	0
Intangible assets, net	1,536	-351	297	888

Note 4: Financial assets

Items	31-12-17	Increase	Decrease	31-12-18
Deposits and guarantees	365	696	0	1,061
Equity investments	1,425	0	0	1,425
Receivables from equity investments	13,019	3,049	7,209	8,860
Loans	0	0	0	0
Financial assets, gross	14,809	3,745	7,209	11,346
Impairment	0			0
Financial assets, net	14,809	3,745	7,209	11,346

Note 5: Inventories

Items	Gross 31/12/2018	Impairment	Net 31/12/2018
Consumable materials	574	0	574
Total	574	0	574

Note 6: Other Receivables and Accruals

Items	Gross, 31 December 2018	Provision	Net, 31 December 2018	Under 1 year	Under 5 years
Trade receivables	152	0	152	152	0
Other receivables	3,466	0	3,466	3,466	0
Prepaid expenses	344	0	344	344	0
Total	3,962	0	3,962	3,962	0

Other receivables mainly consist of various tax credits totalling €3,002,000 (CIR, CICE, VAT receivables and apprenticeship tax credit), advances to subsidiaries for €460,000 and accrued income for €4,000.

Note 7: Cash and cash equivalents and investments

At 31 December 2018, cash and cash equivalents totalled €10,111.71 million, breaking down as follows:

- bank current accounts: €10,110,300;
- short-term deposits: €1,002,000;
- fixed term deposits: €75,000.

Note 8: Conditional advances

Items	31-12-17	Increase	Decrease	31-12-18
ADEME-ISOPROD	858	1 087	0	1,946
Total	858	1 087	0	1,946

Note 9: Loans

Items	31-12-17	Increase	Decrease	31-12-18
OCA	300	0	300	0
Bpifrance	540	0	120	420
Bpifrance PTZ	1,811	0	465	1,346
BNP	978	0	512	466
SG	792	0	357	434
CIC	400	0	162	238
Ademe	2,655	0	398	2,257
Total	7,476	0	2,214	5,262

Note 10: Operating liabilities

Items	Gross amount	Under 1 year	Under 5 years
Trade accounts payable	1,472	1,472	0
Tax and social security liabilities	767	767	0
Other payables	2,880	2,880	0
Deferred income	2,774	2,774	0
Total	7,893	7,893	0

Note 11: Financial income (loss)

Items	31-12-18
Foreign exchange gains	5
Income from investments	174
Total income	179
Foreign exchange losses	13
Interest on loans	581
Impairment SICAV (Open-ended investment company)	1
Total expenses	595
Financial income	-416

Note 12: Exceptional income (loss)

Items	31-12-18
Exceptional management income	0
Proceeds from asset disposal	297
Share buyback gain	97
Total income	394
Exceptional management expenses	0
Value of assets sold	297
Share buyback loss	191
Total expenses	488
Exceptional profit (loss)	-94

Note 13: Staff costs

Workforce on		31-12-18
Managers		28
Non-managers		28
Total		56

Staff costs		31-12-18
Salaries		3,045
Social security contributions		1,269
Total		4,314

Note 14: Off-balance-sheet commitments

Items		31-12-18
Pledge on receivables		575
Pledge on goodwill		2,600
Pledge on material		849
Pledge on securities		347
Finance lease commitment		263
Other commitments given		
Total commitments given		4,634

Deposits, sureties and other guarantees received		1,550
Finance lease commitment		
Other commitments received		
Total commitments received		1,550

OTHER INFORMATION
(€thousands)

ACCRUED INCOME

Accrued income included in the following balance sheet items	31-12-18
Subsidy to be received	0
CFE rebate	4
Interest on current accounts	0
Interest on term accounts	3
Total	6

ACCRUED LIABILITIES

Accrued liabilities included in the following balance sheet items	31-12-18
Trade payables and related accounts	201
Tax and social security liabilities	350
Total	551

PREPAID EXPENSES

Prepaid expenses	31-12-18
Operating expenses	344
Financial expenses	
Exceptional expenses	
Total	344

FINANCE LEASE

	Land	Buildings	Equipment & tooling	Other	Total
Initial value			2,394,567		2,394,567
Prior years' total			2,057,404		2,057,404
Provision for the year			264,593		264,593
Depreciation/Amortisation			2,321,997		2,321,997
Prior years' total			1,978,096		1,978,096
Fiscal year			216,622		216,622
Fees paid			2,194,718		2,194,718
Up to one year			111,988		111,988
> one year and up to five years			151,154		151,154
Fees remaining to be paid			263,142		263,142
Up to one year			77,172		77,172
> one year and up to five years			0		0
Residual value			77,172		77,172
Amount for the year			216,622		216,622

20.3 VERIFICATION OF HISTORICAL FINANCIAL DATA

20.3.1 Statutory Auditor's general report on the consolidated financial statements at 31 December 2018

GLOBAL BIOENERGIES

Société Anonyme

5 rue Henri Desbruères
91000 EVRY

Statutory Auditor's Report on the consolidated financial statements

Fiscal year ended 31 December 2018

FRANCE AUDIT CONSULTANTS
INTERNATIONAL
10, allée des Champs Elysées
91042 Evry

GLOBAL BIOENERGIES

Société Anonyme
5 rue Henri Desbruères
91000 EVRY

Statutory Auditor's Report on the consolidated financial statements

Fiscal year ended 31 December 2018

To the shareholders,

Opinion

Pursuant to the mission entrusted to us by your General Meeting, we performed the audit of the GLOBAL BIOENERGIES consolidated financial statements for the fiscal year ended 31 December 2018, as appended to this report.

Since the Company was under no obligation to produce consolidated financial statements, these financial statements were prepared on a voluntary basis and approved by your Board of Directors. Our role is to express an opinion on these financial statements, based on our audit.

We certify that the year's consolidated financial statements provide a true and fair view of the results of the transactions for the past fiscal year and of the financial situation and results of the consolidated group, at the end of the financial year, in accordance with the accounting rules and principles applicable in France.

Basis for our opinion

Audit framework

We conducted our audit in accordance with the professional standards applicable in France. We believe that the evidence we have collected forms an adequate, appropriate basis for our opinion.

Our responsibilities under these standards are set out in the "Statutory Auditor's responsibilities for the audit of the consolidated financial statements" section of this report.

Independence

We conducted our audit mission in accordance with the independence rules applicable to us, for the period starting 1 January 2017 to the date of our report, and in particular, we did not provide services prohibited by the code of ethics of the auditing profession.

Uncertainty related to the going concern

Without calling into question the opinion expressed above, we would draw your attention to the uncertainty related to events or other circumstances likely to call into question the going concern described in the management report included in the Registration Document. The company is well aware of the delay in starting the construction of the plant and of the level of cash at 31/12/2018, which is less than its annual operating expenses. But on the other hand, it should be stated that development of the process is progressing, with satisfying tests completed by manufacturers, and that the company has discovered new markets with great potential and received letters of intention.

Substantiation of our assessments

Pursuant to the provisions of Articles L. 823-9 and R.823-7 of the Commercial Code concerning substantiation of our assessments, other than the point made in the part "Uncertainty related to the going concern," we draw your attention the following assessments, which in our professional judgment, were the more important for the audit of the consolidated financial statements for the fiscal year.

These assessments are made within the context of the audit of the consolidated financial statements overall and the formation of our opinion expressed above. We express no opinion on any of the contents of the consolidated financial statements in isolation.

We draw your attention to the following paragraphs in the notes:

- the goodwill of Syngip was not assessed this year because it is a recent acquisition and the team has provided support for the Company's research;
- deferred income concerns subsidies received that are recognised on the income statement depending on the progress of expenditures made on projects.

Group-specific verifications and disclosures given in the management report

We also carried out, in accordance with the accounting rules and principles applicable in France, the special verifications required by law on the information given in the Group management report included in the Registration Document.

We have no comments to make as to the fair presentation of this information, or its consistency with the consolidated financial statements.

Responsibilities of management and the persons responsible for corporate governance with respect to the consolidated financial statements

It is the responsibility of management to prepare consolidated financial statements that present a true and fair view in accordance with French accounting rules and principles and implement the internal controls that it deems necessary for the preparation of consolidated financial statements that do not contain any material misstatements, whether they are due to fraud or result from errors.

When preparing the consolidated financial statements, it is the responsibility of management to assess the ability of the company to continue as a going concern, to present in these financial statements, where appropriate, the necessary information relating to continuity of operations and apply the going concern accounting principle unless plans have been made to liquidate the company or cease its operations.

The consolidated financial statements for the fiscal year were approved by the Board of Directors.

Responsibilities of the statutory auditor for the audit of the consolidated financial statements

It is our responsibility to prepare a report on the consolidated financial statements. Our objective is to obtain reasonable assurance that the consolidated financial statements for the fiscal year contain no material misstatements. Reasonable assurance corresponds to a high level of assurance, but does not guarantee that an audit performed in accordance with the standards of professional practice can systematically detect any material misstatements. Anomalies may arise from fraud or error and are considered significant where it can reasonably be expected that they, taken individually or cumulatively, may influence the economic decisions that users of the financial statements take based on them.

As stated in Article L. 823-10-1 of the French Commercial Code, our mission to certify the financial statements is not a guarantee of the viability or the quality of the management of your company.

In the context of an audit conducted in accordance with the professional standards applicable in France, statutory auditors exercise their professional judgement throughout the audit.

In addition :

- they identify and assess the risks that the consolidated financial statements contain material misstatements whether due to fraud or error, define and implement audit procedures to address such risks and collect information that they consider sufficient and appropriate for their opinion. The risk that a material misstatement due to fraud is not detected is higher than for a material misstatement due to an error because the fraud may involve collusion, falsification, voluntary omissions, misrepresentation or circumventions of internal control;

- they review the internal control relevant to the audit to define appropriate audit procedures under the circumstances, not to express an opinion on the effectiveness of the internal control;
- they assess the appropriateness of the accounting policies used and the reasonableness of the accounting estimates made by management; as well as the information concerning them provided in the consolidated financial statements;
- they assess the appropriateness of management's application of the going concern accounting policy and, based on the information gathered, whether or not there exist material misstatements related to events or circumstances that may call into question the company's ability to continue as a going concern. This assessment is based on the information gathered up to the date of their report, but it should be noted that subsequent circumstances or events could jeopardise continuity of operations. If they conclude that there is significant uncertainty, they draw the attention of the readers of their report to the information provided in the consolidated financial statements about such uncertainty or, if such information is not provided or is not relevant, they give a qualified certification or a refusal to certify;
- they assess the overall presentation of the consolidated financial statements and assesses whether the consolidated financial statements reflect the underlying transactions and events such that the statements give a true and fair view.

Evry, on 1 March 2019

Le Commissaire aux Comptes

France Audit Consultants International

Max PEUVRIER

20.3.2 Statutory Auditor's general report on the statutory financial statements at 31 December 2018

GLOBAL BIOENERGIES

Société Anonyme

5 rue Henri Desbruières
91000 EVRY

Statutory Auditor's Report on the financial statements

Fiscal year ended 31 December 2018

FRANCE AUDIT CONSULTANT S
INTERNATIONAL
10, allée des Champs Elysées
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GLOBAL BIOENERGIES

Société Anonyme
5 rue Henri Desbruères
91000 EVRY

Statutory Auditor's Report on the financial statements

Fiscal year ended 31 December 2018

To the shareholders,

Opinion

Pursuant to the mission entrusted to us by your General Meeting, we performed the audit of the GLOBAL BIOENERGIES annual financial statements for the fiscal year ended 31 December 2018, as appended to this report.

We certify that the financial statements for the fiscal year provide a true and fair view of the results of the Company's operations over the past fiscal year, its financial position and its assets, in accordance with the accounting rules and principles applicable in France.

Basis for our opinion

Audit framework

We conducted our audit in accordance with the professional standards applicable in France. We believe that the evidence we have collected forms an adequate, appropriate basis for our opinion.

Our responsibilities under these standards are set out in the "Statutory Auditor's responsibilities for the audit of the annual financial statements" section of this report.

Independence

We conducted our audit mission in accordance with the independence rules applicable to us, for the period starting 1 January 2018 to the date of our report, and in particular, we did not provide services prohibited by the code of ethics of the auditing profession.

Uncertainty related to the going concern

Without calling into question the opinion expressed above, we would draw your attention to the uncertainty related to events or other circumstances likely to call into question the going concern described in the management report included in the Registration Document. The company is well aware of the delay in starting the construction of the plant and of the level of cash at 31/12/2018, which is less than its annual operating expenses. But on the other hand, it should be stated that development of the process is progressing, with satisfying tests completed by manufacturers, and that the company has discovered new markets with strong potential and received letters of intent.

Substantiation of our assessments

Pursuant to the provisions of Articles L. 823-9 and R.823-7 of the Commercial Code pertaining to substantiation of our assessment, other than the point made in the part, "Uncertainty related to the going concern," we can tell you that the most significant assessments we have made, according to our professional judgment, focused on the appropriate nature of applied accounting principles and on the reasonable nature of significant estimates retained and on the presentation of all the accounts, particularly as concerns:

- as stated in the notes to the financial statements, all research and development costs are recorded as expenses. We were assured that this accounting principle was respected;
- shares and receivables held in subsidiaries are not provisioned as the two main shareholders, Global Bioenergies GmbH and SYNGIP, re-invoice Global Bioenergies for their depreciation, amortization and research costs annually. We were able to verify the re-invoicing thus performed.

These assessments are made within the context of the audit of the annual financial statements overall and the formation of our opinion expressed above. We express non opinion on any of the contents of the annual financial statements in isolation.

Verification of the management report and other documents addressed to shareholders

We also carried out, in accordance with the accounting rules and principles applicable in France, the special verifications required by law.

We have no comments to make as to the fair presentation and consistency with the financial statements for the fiscal year of the information given in the Board of Directors' management report included in the Registration Document and the documents sent to the shareholders on the Company's financial position and the financial statements for the fiscal year.

In accordance the law, we were assured that the various disclosures about the identity of those who hold the capital or voting rights were communicated to you in the management report.

Information regarding corporate governance:

We certify that the Board of Director's management report contains the information on corporate governance required by Article L. 225-37-3 and L.225-37-4 of the French Commercial Code.

Responsibilities of management and the persons responsible for corporate governance with respect to the annual financial statements

It is the responsibility of management to prepare annual financial statements that present true and fair view in accordance with French accounting rules and principles and implement the internal controls that it deems necessary for the preparation of annual financial statements that do not contain any material misstatements, whether they are due to fraud or results from errors.

When preparing the annual financial statements, it is the responsibility of management to assess the ability of the company to continue as a going concern, to present in these financial statements, where appropriate, the necessary information relating to continuity of operations and apply the going concern accounting principle unless plans have been made to liquidate the company or cease its operations.

The financial statements for the fiscal year were approved by the Board of Directors

Responsibilities of the statutory auditor for the audit of the annual financial statements

It is our responsibility to prepare a report on the annual financial statements. Our objective is to obtain reasonable assurance that the financial statements for the fiscal year contain no material misstatements. Reasonable assurance corresponds to a high level of assurance, but does not guarantee that an audit performed in accordance with the standards of professional practice can systematically detect any material misstatements. Anomalies may arise from fraud or error and are considered significant where it can reasonably be expected that they, taken individually or cumulatively, may influence the economic decisions that users of the financial statements take based on them.

As stated in Article L. 823-10-1 of the French Commercial Code, our mission to certify the financial statements is not a guarantee of the viability or the quality of the management of your company.

In the context of an audit conducted in accordance with the professional standards applicable in France, statutory auditors exercise their professional judgement throughout the audit.

In addition :

- they identify and assess the risks that the annual financial statements contain material misstatements whether due to fraud or error, define and implement audit procedures to address such risks and collect information that they consider sufficient and appropriate for their opinion. The risk that a material misstatement due to fraud is not detected is higher than for a material misstatement due to an error because the fraud may involve collusion, falsification, voluntary omissions, misrepresentation or circumventions of internal control;
- they review the internal control relevant to the audit to define appropriate audit procedures under the circumstances, not to express an opinion on the effectiveness of the internal control;
- they assess the appropriateness of the accounting policies used and the reasonableness of the accounting estimates made by management, as well as the information concerning them provided in the annual financial statements;
- they assess the appropriateness of management's application of the going concern accounting policy and, based on the information gathered, whether or not there exist material misstatements related to events or circumstances that may call into question the company's ability to continue as a going concern. This assessment is based on the information gathered up to the date of their report, but it should be noted that subsequent circumstances or events could jeopardise continuity of operations. If they conclude that there is significant uncertainty, they draw the attention of the readers of their report to the information provided in the annual financial statements about such uncertainty or, if such information is not provided or is not relevant, they give a qualified certification or a refusal to certify;
- they assess the overall presentation of the annual financial statements and assess whether the annual financial statements reflect the underlying transactions and events such that the statements give a true and fair view.

Evry, on 1 March 2019

Le Commissaire aux Comptes

France Audit Consultants International

Max PEUVRIER

20.4 TABLE FOR THE LAST FIVE CORPORATE FISCAL YEARS

	31/12/14	31/12/15	31/12/16	31/12/17	31/12/18
<u>Capital at the end of the fiscal year</u>					
Share capital	138,773	141,510	167,681	224,375	253,973
Number of ordinary shares	2,775,468	2,830,197	3,353,627	4,487,501	5,079,455
Number of preference shares without voting rights	0	0	0	0	0
<u>Maximum number of future shares to be created:</u>					
<i>Through bond agreements</i>	0	0	0	0	0
<i>Through the exercise of subscription rights</i>	282,707	405,710	438,441	600,110	466,342
<i>Through awards of free shares</i>	0	0	0	0	0
<u>Operating results and profit (loss) for the year (€)</u>					
Revenue excluding taxes	1,792,743	1,363,441	642,008	469,012	840,588
Income before taxes, depreciation, amortisation & provisions	-7,870,484	-11,657,032	-11,653,157	-14,396,715	-13,688,203
Amortisation	-262,044	-497,108	-753,789	-504,948	-522,872
Income tax	-1,876,159	-1,985,059	-1,895,769	-1,999,166	-2,546,037
Earnings after taxes, depreciation, amortisation & provisions	-6,256,369	-10,169,081	-10,511,177	-12,902,497	-11,665,038
Distributed profits	0	0	0	0	0
<u>Earnings per share (€)</u>					
Earnings after taxes, but before depreciation, amortisation & provisions	-2.16	-3.42	-2.91	-2.76	-2.19
Earnings after taxes, depreciation, amortisation & provisions	-2.25	-3.59	-3.13	-2.88	-2.30
Dividend paid per share	0.00	0.00	0.00	0.00	0.00
<u>Personnel costs</u>					
Average number of employees during the fiscal year	58	59	55	54	55
Payroll amount for the fiscal year (€)	2,836,719	2,800,162	2,815,089	2,855,691	3,045,465
Amount paid for social benefits (€)	881,489	894,294	1,162,910	1,165,900	1,268,891

20.5 DATE OF LATEST FINANCIAL INFORMATION

The financial statements at 31 December 2018 are the latest financial statements audited by the Statutory Auditor.

20.6 INTERIM FINANCIAL INFORMATION

None.

20.7 PRO FORMA FINANCIAL INFORMATION

None.

20.8 DIVIDEND DISTRIBUTION POLICY

20.8.1 Distribution policy

It is not the Company's intention to pay dividends in the near or medium terms.

20.8.2 Dividends and reserves distributed by the Company over the past three years

From its date of incorporation to the filing date of the Registration Document, the Company has not distributed any dividends.

20.9 JUDICIAL AND ARBITRATION PROCEEDINGS

On the filing date of the Registration Document and to the Company's knowledge, there are no governmental, judicial or arbitration proceedings which may have, or have had over the past 12 months, a material adverse impact on the Company's financial situation.

20.10 SIGNIFICANT CHANGE IN THE COMPANY'S FINANCIAL OR COMMERCIAL POSITION

None.

21 ADDITIONAL INFORMATION

21.1 SHARE CAPITAL

21.1.1 Amount of share capital

At the date of the Registration Document, the Company's share capital stood at €253,972.75 (divided into 5,079,455 shares with a par value of €0.05 each, fully paid up and of the same class).³⁰ As at 31 December 2018, the Company's share capital was already at €253,972.75 divided by 5,079,455 shares.

Share capital authorised but not issued

The table below shows authorisations outstanding at the date of this Registration Document, as granted by the Company's General Meeting of 5 June 2018.

Purpose of the resolution adopted by the General Meeting of Shareholders on 5 June 2018.	Expiry date of the delegation (duration of the delegation)	Maximum amount authorised	Previous delegations used	Residual amount at the time this table was prepared (in €)
AGM of 5 June 2018 (6th resolution) <i>Issuance of common shares and/or securities immediately and/or eventually convertible into the Company's equity, with preferential subscription rights of shareholders</i>	04/08/2020 (26 months)	€100,000 (€50,000,000 with respect to debt securities)	-	€71,965.30
AGM of 5 June 2018 (7th resolution) <i>Issuance of common shares and/or securities immediately and/or eventually convertible into the Company's equity without preferential subscription rights of shareholders, and a public offering of financial securities (*)</i>	04/08/2020 (26 months)	€100,000 (€50,000,000 with respect to debt securities)	-	€71,965.30

³⁰ For information purposes, the share capital stated on the first page of the Registration Document is the same as the one in the most recent statement to the Registrar dated 5 October 2018

<p>AGM of 5 June 2018 (8th resolution)</p> <p><i>Issuance of common shares and/or securities immediately and/or eventually convertible into the Company's equity, without preferential subscription rights of shareholders, as part of an offering primarily for qualified investors or a limited group of investors as referred to in part II of Article L. 411-2 of the French Monetary and Financial Code (*)</i></p>	<p>04/08/2020 (26 months)</p>	<p>€100,000 (€50,000,000 with respect to debt securities)</p>	<p>€28,034.70 CEO decision on 21 September 2018</p>	<p>€71,965.30</p>
<p>AGM of 5 June 2018 (9th resolution)</p> <p><i>Issuance of common shares and/or securities immediately and/or eventually convertible into the Company's share capital or into its debt securities, with preferential subscription rights of shareholders to a category of persons (*)</i></p>	<p>04/12/2019 (18 months)</p>	<p>€100,000 (€50,000,000 with respect to debt securities)</p>	<p>-</p>	<p>€71,965.30</p>
<p>AGM of 5 June 2018 (11th and 12th resolutions)</p> <p><i>Issuance of common shares and/or securities immediately and/or eventually convertible into the Company's share capital, with preferential subscription rights of shareholders to a named person (*)</i></p>	<p>04/12/2019 (18 months)</p>	<p>€100,000 (€50,000,000 with respect to debt securities)</p>	<p>-</p>	<p>€71,965.30</p>

<p>AGM of 5 June 2018 (13th resolution)</p> <p><i>Capital increase via the incorporation of premiums, reserves, earnings or other items (*)</i></p>	<p>04/08/2020</p> <p>(26 months)</p>	<p>€100,000</p>		<p>€71,965.30</p>
<p>AGM of 5 June 2018 (14th resolution)</p> <p><i>Awards of free ordinary shares of the Company without preferential subscription rights for shareholders if new shares are granted (*)</i></p>	<p>04/08/2021</p> <p>(38 months)</p>	<p>€4,000</p>	<p>€565.70</p> <p><i>Board 6 November 2018</i></p>	<p>€3,434.30</p>
<p>AGM of 5 June 2018 (15th and 16th resolutions)</p> <p><i>Issuance of Company equity warrants (BSAs) without preferential subscription rights, for a category of persons (**)</i></p>	<p>04/12/2019</p> <p>(18 months)</p>	<p>€4,000</p>	<p>-</p>	<p>€3,434.30</p>
<p>AGM of 5 June 2018 (17th and 18th resolutions)</p> <p><i>Issuance and award of founders' warrants (BSPCEs), without preferential subscription rights, to a category of persons (**)</i></p>	<p>04/12/2019</p> <p>(18 months)</p>	<p>€4,000</p>	<p>-</p>	<p>€3,434.30</p>

<p>AGM of 5 June 2018 (19th resolution)</p> <p><i>Capital increases reserved for employee members of a company savings plan pursuant to Articles L. 3332(1) et seq. of the French Labour Code, without preferential subscription rights of shareholders, in accordance with Article L. 225-129-6 paragraph 1 of the French Commercial Code(**)</i></p>	<p>04/08/2020 (26 months)</p>	<p>€4,000</p>	<p>-</p>	<p>€3,434.30</p>
<p>AGM of 5 June 2018 (20th resolution)</p> <p><i>Increase in the number of shares to be issued in the event of a capital increase with or without preferential subscription rights of shareholders</i></p>	<p>04/08/2020 (26 months)</p>	<p>Ceiling of the resolution governing the initial issue</p>	<p>-</p>	<p>Ceiling of the resolution governing the initial issue</p>

(*) *The Ordinary and Extraordinary General Shareholders Meeting of 5 June 2018 voted that the issuances carried out pursuant to these resolutions would be subject to a shared ceiling of €100,000 with respect to equity securities and €50,000,000 with respect to debt securities, with the ceiling as to debt securities having no effect on the authorisation to increase capital through the incorporation of reserves, earnings or premiums.*

(**) *The Ordinary and Extraordinary General Shareholders Meeting of 5 June 2018 voted that the issuances carried out pursuant to these resolutions are subject to a shared ceiling of €4,000.*

21.1.2 Absence of non-equity shares

As of the date of the Registration Document, the Company has not issued any non-equity shares.

21.1.3 Treasury shares and acquisition of its own shares by the Company or its subsidiaries

As at 31 December 2018, the Company held 10,439 shares representing 0.1% of its capital, as part of a liquidity contract managed by Gilbert Dupont.

The General Meeting of 5 June 2018 authorised, for a period of eighteen months from the date of said meeting, the implementation by the Company of a share buyback programme, in accordance with Articles L.225-209 et seq. of the French Commercial Code, for one of the following purposes:

- the cancellation in whole or in part of the shares bought back for the purpose of reducing share capital, subject to adoption of the twenty-second resolution of the same General Meeting; or
- stimulation of the secondary market or the liquidity of the Company's share by a financial services intermediary pursuant to a liquidity agreement compliant with the Code of ethics approved by the *Autorité des Marchés Financiers*; or
- the allocation or transfer of shares to employees and/or corporate officers of the Company and/or companies related to it, in accordance with the laws and regulations in force or the implementation of any company savings plan or any employee share ownership plan under the terms and conditions set forth by law, in particular Articles L.3332-18 et seq. of the French Labour Code; or

- holding the shares and then subsequently delivering them as payment or in exchange as part of a merger, spin-off or asset contribution; or
- the implementation of any of the Company's stock option plans under Articles L. 225-177 et seq. of the French Commercial Code; or
- the implementation of any of the Company's restricted stock plans under Articles L. 225-197-1 et seq. of the French Commercial Code; or
- the delivery of shares upon the exercise of any rights attached to securities giving immediate or future access to the capital of the Company.

This programme is also intended to permit any market practice found admissible by the *Autorité des Marchés Financiers* and, more broadly, the execution of any other transaction in compliance with the legal provisions and regulations in force. In that case, the Company would so inform its shareholders through a release.

The maximum purchase price of the shares is two hundred euros (€200) per share, excluding costs. The total amount allocated to the share buyback programme may not be greater than €70,042,220.

Repurchase of the Company shares may involve a number of shares such that:

- the number of shares that the Company buys during the buyback programme shall not exceed ten percent (10%) of the shares making up the Company's share capital, at any point in time, with this percentage applying to a total equity adjusted to reflect transactions that affect it subsequently to the General Meeting; i.e., by way of illustration, as at 31 December 2018 the total number of shares was 5,079,455, with the provision (i) that the total number of shares acquired for holding and subsequent tendering in a merger, spin-off or asset contribution cannot exceed 5% of its share capital, and (ii) that if the shares are bought back to promote liquidity in the manner provided by the General Regulation of the *Autorité des Marchés Financiers*, the number of shares used for the 10% calculation given in the first paragraph shall equal the number of shares purchased, less the number resold during the authorisation period;
- the number of shares the Company may own at any time shall not exceed 10% of the shares making up the Company share capital at the date in question.

21.1.4 Convertible, exchangeable securities and securities with subscription warrants

On the date of the Registration Document, the instruments convertible into equity that were issued and not yet exercised are:

- 600 equity warrants (**BSAs 06-09**) entitling the purchase of 12,000 new shares in the Company;
- 2,477 equity warrants (**BSAs 12-2011**) entitling the purchase of 2,477 new shares in the Company;
- 9,900 equity warrants (**BSAs 10-2012**) entitling the purchase of 9,900 new shares in the Company;
- 8,000 equity warrants (**BSAs A01-2014**) entitling the purchase of 8,000 new shares in the Company;
- 3,000 equity warrants (**BSAs 07-2014**) entitling the purchase of 3,000 new shares in the Company;
- 6,200 founders' warrants (**BSPCEs A07-2014**) entitling the purchase of 6,200 new shares in the Company;
- 1,500 founders' warrants (**BSPCEs B07-2014**) entitling the purchase of 1,500 new shares in the Company;

- 6,000 equity warrants (**BSAs A01-2015**) entitling the purchase of 6,000 new shares in the Company;
- 750 equity warrants (**BSAs B01-2015**) entitling the purchase of 750 new shares in the Company;
- 6,991 founders' warrants (**BSPCEs A01-2015**) entitling the purchase of 6,991 new shares in the Company;
- 14,819 founders' warrants (**BSPCEs B01-2015**) entitling the purchase of 14,819 new shares in the Company;
- 7,500 founders' warrants (**BSPCEs A10-2015**) entitling the purchase of 7,500 new shares in the Company;
- 4,955 founders' warrants (**BSPCEs B10-2015**) entitling the purchase of 4,955 new shares in the Company;
- 400 equity warrants (**BSAs A10-2015**) entitling the purchase of 400 new shares in the Company;
- 1,000 equity warrants (**BSAs B10-2015**) entitling the purchase of 1,000 new shares in the Company;
- 30,000 founders' warrants (**BSPCEs A02-2016**) entitling the purchase of 30,000 new shares in the Company;
- 14,851 equity warrants (**BSAs BKN T1**) entitling the purchase of 14,851 new shares in the Company;
- 1,300 equity warrants (**BSAs A09-2016**) entitling the purchase of 1,300 new shares in the Company;
- 3,000 equity warrants (**BSAs B09-2016**) entitling the purchase of 3,000 new shares in the Company;
- 15,200 founders' warrants (**BSPCEs 09-2016**) entitling the purchase of 15,200 new shares in the Company;
- 15,126 equity warrants (**BSAs BKN T2**) entitling the purchase of 15,126 new shares in the Company;
- 14,506 equity warrants (**BSAs BKN T3**) entitling the purchase of 14,506 new shares in the Company;
- 34,258 equity warrants (**BSAs BKN T4&5**) entitling the purchase of 34,258 new shares in the Company;
- 14,975 equity warrants (**BSAs BKN T6**) entitling the purchase of 14,975 new shares in the Company;
- 15,592 equity warrants (**BSAs BKN T7**) entitling the purchase of 15,592 new shares in the Company;
- 2,250 equity warrants (**BSAs 02-2017**) entitling the purchase of 2,250 new shares in the Company;
- 16,728 equity warrants (**BSAs BKN T8**) entitling the purchase of 16,728 new shares in the Company;
- 16,666 equity warrants (**BSAs BKN T9**) entitling the purchase of 16,666 new shares in the Company;
- 18,450 equity warrants (**BSAs BKN T10**) entitling the purchase of 18,450 new shares in the Company;
- 18,518 equity warrants (**BSAs BKN T11**) entitling the purchase of 18,518 new shares in the Company;
- 14,476 equity warrants (**BSAs BKN2 T1**) entitling the purchase of 14,476 new shares in the Company;

- 18,182 equity warrants (**BSAsBKN2 T2**) entitling the purchase of 18,182 new shares in the Company;
- 8,000 founders' warrants (**BSPCEs A09-2017**) entitling the purchase of 8,000 new shares in the Company;
- 2,000 founders' warrants (**BSPCEs B09-2017**) entitling the purchase of 2,000 new shares in the Company;
- 2,000 equity warrants (**BSAs 09-2017**) entitling the purchase of 2,000 new shares in the Company;
- 11,314 free shares "**AGA NOV 2018**," whose vesting period ends on 5 November 2020.

A shareholder who at the date of the Registration Document held 1% of the Company's equity would see his or her interest in the Company's equity become 0,93% if all of these dilutive instruments ^{were} exercised.

The BSAs, BAAs and BSPCEs issued by the Company represent 7.34% of the share capital of the Company on a fully diluted basis, including 1.4% for Group employees and 3.9% for industrial or financial partners, 0.5% for Richard Bockrath and Charles Nakamura (Vice-Chairmen), 0.6% for John Pierce (Chairman of the Board of Directors), 0.2% for members of the Scientific Board.

21.1.4.1 Equity warrants (BSAs)

At the date of the Registration Document, 600 BSAs 06-09, 2,477 BSAs 12-2011, 9,900 BSAs 10-2012, 8,000 BSAs A01-2014, 3,000 BSAs 07-2014, 6,000 BSAs A01-2015, 750 BSAs B01-2015, 400 BSAs A10-2015, 1,000 BSAs B10-2015, 14,851 PACEO II BSAs, 14,851 BSAs BKN T1, 1,300 BSAs A09-2016, 3,000 BSAs B09-2016, 15,126 BKN T2 BSAs, 14,506 BKN T3 BSAs, 34,258 BKN T4&5 BSAs, 14,975 BKN T6 BSAs, 15,592 BKN T7 BSAs, 2,250 BSAs 02-2017, 16,728 BKN T8 BSAs, 16,666 BKN T9 BSAs, 18,450 BKN T10 BSAs, 18,518 BKN T11 BSAs, 14,476 BKN2 T1 BSAs, 18,182 BKN2 T2 BSAs and 2,000 BSAs 09-2017 have been granted and could be exercised by their beneficiaries, ie a total of 253,005 BSAs, entitling the purchase of 264,405 new shares subject to compliance with the specific conditions of each BSA.

The BSAs 06-09 were issued by the Company's Board of Directors on 1 December 2009 for the benefit of certain members of the Company's Scientific Board, based on a delegation of authority voted by the Company's General Meeting of 24 June 2009. Each **BSA 06-09** issued at €10 entitles the purchase of 20 common shares in the Company of €0.05 par value each at a subscription price of €6.25 per share - including a new issue premium of €6.20, or 12,000 common shares should all of the BSA 06-09 warrants be exercised. The BSAs 06-09 have all been exercisable since 2 December 2010; the deadline for their exercise is set at 1 ^{December} 2019, by midnight.

In addition, on 20 December 2011, the Board of Directors, acting on the delegation of authority of the General Meeting of Shareholders of 12 May 2011, issued **BSAs 12-2011** to one member of the Scientific Board at a price of €1.211 per share, with each one giving the right to subscribe for one ordinary share of the Company with a par value of €0.05 each at a subscription price of €16.15 per share (including an issue premium of €16.10). The BSAs 12-2011 have all been exercisable since 20 December 2012; the deadline for their exercise is set at 20 December 2021, by midnight.

³¹ Based on the capital of 5,079,455 shares as known at the date of the Registration Document

Moreover, on 30 October 2012, the Board of Directors, acting on the delegation of authority of the General Meeting of Shareholders of 12 May 2011, issued **BSAs 10-2012** to two members of the Scientific Board at a price of €1.63 per share, with each one giving the right to subscribe for one ordinary share of the Company with a par value of €0.05 each at a subscription price of €2.10 per share (including an issue premium of €2.05). The BSAs 10-2012 have all been exercisable since 30 October 2013; the deadline for their exercise is set at 29 October 2022, by midnight.

In addition, on 7 January 2014, the Board of Directors, acting on the delegation of authority of the General Meeting of Shareholders of 6 December 2012, issued **BSAs A01-2014** to two members of the Scientific Board at a price of €2.06 per share, with each one giving the right to subscribe for one ordinary share of the Company with a par value of €0.05 each at a subscription price of €8.18 per share (including an issue premium of €8.13). The BSAs A01-2014 are exercisable by tranche: the first third is exercisable starting 8 January 2015, the second third is exercisable starting 8 January 2016 and the third is exercisable starting 8 January 2017, the deadline for their exercise is set at 7 January 2024, by midnight.

On 3 July 2014, the Board of Directors, acting on the delegation of authority of the General Meeting of Shareholders of 19 June 2014, issued BSAs 07-2014 to an employee of the subsidiary Global Bioenergies GmbH at a price of €0.80 per share, with each one giving the right to subscribe for one ordinary share of the Company with a par value of €0.05 each at a subscription price of €0.61 per share (including an issue premium of €0.56). The BSAs 07-2014 are exercisable by tranche: the first third is exercisable starting 3 July 2015, the second third is exercisable starting 3 July 2016 and the third is exercisable starting 3 July 2017, the deadline for their exercise is set at 2 July 2024, by midnight.

In addition, on 13 January 2015, the Board of Directors, acting on the delegation of authority of the General Meeting of Shareholders of 19 June 2014, issued **BSAs A01-2015** to two members of the Scientific Board at a price of €2.20 per share, with each one giving the right to subscribe for one ordinary share of the Company with a par value of €0.05 each at a subscription price of €8.52 per share (including an issue premium of €8.47). The BSAs A01-2015 are exercisable by tranche: the first third is exercisable starting 13 January 2016, the second third is exercisable starting 13 January 2017 and the third is exercisable starting 13 January 2018, the deadline for their exercise is set at 12 January 2025, by midnight.

On 13 January 2015, the Board of Directors, acting on the delegation of authority of the General Meeting of Shareholders of 19 June 2014, issued **BSAs B01-2015** to an employee of the subsidiary Global Bioenergies GmbH at a price of €0.57 per share, with each one giving the right to subscribe for one ordinary share of the Company with a par value of €0.05 each at a subscription price of €8.52 per share (including an issue premium of €8.47). The BSAs B01-2015 are exercisable by tranche: the first third is exercisable starting 13 January 2016, the second third is exercisable starting 13 January 2017 and the third is exercisable starting 13 January 2018, the deadline for their exercise is set at 12 January 2025, by midnight.

On 14 October 2015, the Board of Directors, acting on the delegation of authority of the General Meeting of Shareholders of 3 June 2015, issued **BSAs A10-2015** to an employee of the subsidiary Global Bioenergies GmbH at a price of €0.37 per share, with each one giving the right to subscribe for one ordinary share of the Company with a par value of €0.05 each at a subscription price of €6.82 per share (including an issue premium of €6.77). The BSAs A10-2015 are exercisable by tranche: the first third is exercisable starting 14 October 2016, the second third is exercisable starting 14 October 2017 and the third is exercisable starting 14 October 2018, the deadline for their exercise is set at 13 October 2025, by midnight.

In addition, on 14 October 2015, the Board of Directors, acting on the delegation of authority of the General Meeting of Shareholders of 3 June 2015, issued **BSAs B10-2015** to an employee of the subsidiary Global Bioenergies GmbH at a price of €0.37 per share, with each one giving the right to subscribe for one ordinary share of the Company with a par value of €0.05 each at a subscription price of €36.82 per share (including an issue premium of €36.77). The BSAs B10-2015 will all be exercisable starting 14 October 2018; the deadline for their exercise is set at 13 October 2025, by midnight.

On 22 September 2016, the Board of Directors, acting on the delegation of authority of the General Meeting of Shareholders of 3 June 2015, issued a BEOCABSA (OCABSA warrant) to the Bracknor Investment fund in the context of an OCABSA programme (the "Contract"), which would be exercised simultaneously with the receipt by the Company of an initial transfer of €750,000 issued by Bracknor Investment corresponding to the first "tranche" of the Contract. Exercise of this warrant would permit subscription to both OCAs and BSAs. The exercise price of the BSAs would be equal to 120% of the Company's lowest volume-weighted average share price over the five trading days preceding (i) the date of the signing of the letter of engagement for the Contract or (ii) the date of signature of the Contract. The number of BSAs issued for the first tranche of the Contract will be based on their exercise price, calculated as follows: $(60\% \times €750,000) / \text{exercise price}$. As part of the issuance of the first tranche of the Contract, 14,851 **BKN T1 BSAs** were issued as a result of an exercise price calculated at €30.30 per warrant, which would give the right to subscribe in total to 14,851 ordinary shares of the Company with a par value of €0.05 each. The BSAs of the first tranche are exercisable as soon as the tranche is issued and will remain so until 21 September 2021, by midnight.

On 28 October 2016, the Board of Directors, acting on other delegations of authority than the one mentioned in the previous paragraph, i.e., acting on the authority of the General Meetings of 28 October 2016 and 26 June 2017, issued, in accordance with the terms of the Contract, 34 BEOCABSAs in addition to the initial BEOCABSA described above. At the date of the Registration Document, 12 BEOCABSAs were exercised in addition to the initial BEOCABSA. The exercise of these 12 BEOCABSAs enabled the issuance of a total of 127,851 BSAs:

- 15,126 **BSAs BKN T2**, exercise price per warrant of €29.75, exercisable from 31/10/16 to 30/10/21
- 14,506 **BSAs BKN T3**, exercise price per warrant of €31.02, exercisable from 8/11/16 to 7/11/21
- 34,258 **BSAs BKN T4&5**, exercise price per warrant of €26.27, exercisable from 5/12/16 to 4/12/21
- 14,975 **BSAs BKN T6**, exercise price per warrant of €30.05, exercisable from 17/01/17 to 16/01/22
- 15,592 **BSAs BKN T7**, exercise price per warrant of €28.86, exercisable from 13/02/17 to 12/02/22
- 16,728 **BSAs BKN T8**, exercise price per warrant of €26.90, exercisable from 13/03/17 to 12/03/22
- 16,666 **BSAs BKN T9**, exercise price per warrant of €27.00, exercisable from 11/04/17 to 10/04/22
- 18,450 **BSAs BKN T10**, exercise price per warrant of €24.39, exercisable from 15/05/17 to 14/05/22
- 18,518 **BSAs BKN T11**, exercise price per warrant of €24.30, exercisable from 19/06/17 to 18/06/22
- 14,476 **BSAs BKN2 T1**, exercise price per warrant of €24.87, exercisable from 27/06/17 to 26/06/22
- 18,182 **BSAs BKN2 T2**, exercise price per warrant of €19.80, exercisable from 27/07/17 to 26/07/22

Each BKN BSA gives the right to purchase one common share in the Company of €0.05 par value each.

Moreover, on 22 September 2016, the Board of Directors, acting on the delegation of authority of the General Meeting of Shareholders of 16 June 2016, issued 1,300 **BSAs A09-2016** to employees of Global Bioenergies GmbH at a price of €0.30 per share, with each one giving the right to subscribe for one ordinary share of the Company with a par value of €0.05 each at a subscription price of €29.62 per share (including an issue premium of €29.57). The BSAs A09-2016 will be exercisable starting 22 September 2019, and the deadline for their exercise is set at 21 September 2026 by midnight.

On 22 September 2016, the Board of Directors, acting once again on the delegation of authority of the General Meeting of Shareholders of 16 June 2016, also issued 3,000 **BSAs B 09-2016** to a Company consultant at a price of €2.20 per share, with each one giving the right to subscribe for one ordinary share of the Company with a par value of €0.05 each at a subscription price of €29.62 per share (including an issue premium of €29.57). The BSAs B09-2016 will be exercisable starting 22 September 2019, and the deadline for their exercise is set at 21 September 2026 by midnight.

On 22 February 2017, the Board of Directors, acting on the delegation of authority of the General Meeting of Shareholders of 16 June 2016, also issued 32,857 **BSAs 02-2017** to employees of Syngip BV, at a price of €0.25 per share, with each one giving the right to subscribe for one ordinary share of the Company with a par value of €0.05 each at a subscription price of €24.87 per share (including an issue premium of €24.82). The BSAs 02-2017 are exercisable by tranche: the first third is exercisable starting 22 February 2018, the second third is exercisable starting 22 February 2019 and the third is exercisable starting 22 February 2020, the deadline for their exercise is set at 21 February 2027, by midnight.

Finally, on 29 September 2017, the Board of Directors, acting on the delegation of authority of the General Meeting of Shareholders of 26 June 2017, issued 2,000 **BSAs 09-2017** to employees of Global Bioenergies GmbH at a price of €0.30 per share, with each one giving the right to subscribe for one ordinary share of the Company with a par value of €0.05 each at a subscription price of €25.00 per share (including an issue premium of €24.95). The BSAs B09-2017 will be exercisable starting 29 September 2020, and the deadline for their exercise is set at 28 September 2027 by midnight.

A shareholder who at the date of the Registration Document held 1% of the Company's equity would see his or her interest in the Company's equity become 0,95% if all of the remaining equity warrants (BSAs) were exercised.

21.1.4.2 Founders' warrants (BSPCEs)

As at the date of the Registration Document, 6,200 BSPCEs A07-2015, 1,500 BSPCEs B07-2014, 6,991 BSPCEs A01-2014,- 14,819 BSPCEs B01-2015, 7,500 BSPCEs A10-2016, 4,955 BSPCEs B10-2016, 30,000 BSPCEs A09-2015, 15,200 BSPCEs B02-2015, 8,000 BSPCEs A09-2017, 2,000 BSPCEs 09-2017, 2017 BSPCEs A09-2017 and 2,000 BSPCEs B09-201 were granted and were exercisable by their beneficiaries, for a total of 97,165 BSPCEs entitling the purchase the same number of new shares subject to compliance with the specific conditions of each BSPCE.

On 3 July 2014, the Board of Directors, acting on the delegation of authority of the General Meeting of Shareholders of 19 June 2014, issued **BSPCEs A07-2014** to 10 employees and **BSPCEs B07-2014** to one employee, with each one giving the right to subscribe for one ordinary share of the Company with a par value of €0.05 each at a subscription price of €40.61 per share (including an issue premium of €40.56).

- The BSPCEs A07-2014) are exercisable by tranche: the first third is exercisable starting 3 July 2015, the second third is exercisable starting 3 July 2016 and the third is exercisable starting 3 July 2017, the deadline for their exercise is set at 2 July 2024, by midnight.
- BSPCEs B07-2014 are all exercisable from 3 July 2017 until 2 July 2024, by midnight.

On 13 January 2015, the Board of Directors, acting on the delegation of authority of the General Meeting of Shareholders of 19 June 2014, issued **BSPCEs A01-2015** to 8 employees and **BSPCEs B01-2015** to 28 employees, with each one giving the right to subscribe for one ordinary share of the Company with a par value of €0.05 each at a subscription price of €28.52 per share (including an issue premium of €28.47).

- BSPCEs A01-2015 are exercisable by tranche: the first third is exercisable beginning in 13 January 2016; the second third is exercisable beginning on 13 January 2017; and the last third is exercisable beginning on 13 January 2018, the closing date of their exercise being set for 12 January 2025 by midnight;
- the BSPCEs B01-2015 are all exercisable from 13 January 2018 until 12 January 2025, by midnight.

On 14 October 2015, the Board of Directors, acting on the delegation of authority of the General Meeting of Shareholders of 3 June 2015, issued BSPCEs A10-2015 to 9 **employees and BSPCEs B10-2015 to 15 employees, with each** one giving the right to subscribe for one ordinary share of the Company with a par value of €0.05 each at a subscription price of €6.82 per share (including an issue premium of €6.77).

- BSPCEs A10-2015 are exercisable by tranche: the first third is exercisable beginning in 14 October 2016; the second third is exercisable beginning on 14 October 2017; and the last third is exercisable beginning on 14 October 2018, the closing date of their exercise being set for 13 October 2025 by midnight;
- the BSPCEs B10-2015 are all exercisable from 14 October 2018 until 13 October 2025, by midnight.

On February 16, 2016, the Board of Directors, acting on the delegation of authority of the General Meeting of Shareholders of 3 June 2015, issued BSPCEs A02-2016 to John Pierce, Chairman of the Board of Directors of **the Company, with each** one giving the right to subscribe for one ordinary share of the Company with a par value of €0.05 each at a subscription price of €23.70 per share (including an issue premium of €23.65). The BSPCEs A02-2016 are exercisable by tranche: the first third is exercisable starting 16 February 2017; the second third is exercisable starting 16 February 2018; and the third is exercisable starting 16 February 2019, the deadline for their exercise is set at 15 February 2026, by midnight.

On 22 September 2016, the Board of Directors, acting on the delegation of authority of the General Meeting of Shareholders of 16 June 2016, issued BSPCEs 09-2016 to 6 employees, with **each one giving** the right to subscribe for one ordinary share of the Company with a par value of €0.05 each at a subscription price of €29.62 per share (including an issue premium of €29.57).

Finally, on 29 September 2016, the Board of Directors, acting on the delegation of authority of the General Meeting of Shareholders of 26 June 2017, issued BSPCEs A09-2017 to one **employee and BSPCEs B09-2017 to one employee, with each one giving the right to** subscribe for one ordinary share of the Company with a par value of €0.05 each at a subscription price of €25.00 per share (including an issue premium of €24.95).

- the BSPCEs A09-2017 are exercisable by tranche: the first third is exercisable starting 29 September 2018; the second third is exercisable starting 29 September 2019; and the third is exercisable starting 29 September 2020, the deadline for their exercise is set at 28 September 2027, by midnight;
- the BSPCEs B09-2017 are all exercisable from 29 September 2020 until 28 September 2027, by midnight.

A shareholder who at the date of the Registration Document held 1% of the Company's equity would see his or her interest in the Company's equity become 0.98% if all of the remaining BSPCEs were exercised.

21.1.4.3 Equity warrants (BAAs)

On 2 February 2017, the Extraordinary General Meeting of Shareholders of the Company approved all of the resolutions submitted for its approval in connection with the acquisition of the Dutch company Syngip BV, among which the issue and award of 69,191 equity warrants (BAA) to Syngip BV's partners, entitling each to the award of one new share of the Company with par value of €0.05, as partial remuneration for the contribution of shares of Syngip BV, subject to the achievement of a technical milestone in the development of a process to convert gaseous carbon resources into isobutene. This milestone was not reached on 2 February 2019, thus BAAs became void.

21.1.4.4 Options for subscription or purchase of shares

As of the date of the Registration Document, the Company has not issued any options for the subscription or purchase of shares.

21.1.4.5 Awards of restricted stock

In the past, the Company awarded restricted stock to its employees, respectively during the course of share allocation plans in 2009, 2010, 2011 and 2018. At the time of this Registration Document, there were no further shares to be issued under these plans of 2009, 2010 and 2011. However, shares awarded as part of the share allocation plan of November 2018, for a total of 11,314 shares, have a vesting period whose maturity date was set at 5 November 2020. If the continued employment conditions of employees benefitting from this plan are met, 11,314 new shares could be created at the end of the vesting period.

21.1.5 Information concerning the terms governing any right of acquisition and/or any obligation attached to the capital subscribed, but not paid-in, or any undertaking to increase the capital

See Sections 21.1.1 and 21.1.4 of the Registration Document.

21.1.6 Information about any group member's share capital which is subject to options or to a conditional or unconditional agreement to create options, and the specifics of these options (including the identity of the individuals to whom they relate)

None.

21.1.7 History of the share capital for the period covered by the historical financial data

The following table shows the changes over time in the Company's share capital since it was founded.

Date	Transaction	Number of shares issued	Nominal unit value of shares (in euros)	Change in nominal value of the share capital (in euros)	Issue, contribution or merger premiums (in euros)	Aggregate share capital (in euros)	Cumulative number of shares
06/10/2008	Incorporation	37,000	1	37,000	0	37,000	37,000
13/02/2009	ABSAs issued	4,800	1	4,800	595,200	41,800	41,800
16/09/2009	ABSAs issued due to exercise of BSAs	4,800	1	4,800	595,200	46,600	46,600
09/07/2010	ABSAs issued due to exercise of BSAs	4,800	1	4,800	595,200	51,400	51,400
04/08/2010	ABSAs issued due to exercise of BSAs	2,000	1	2,000	998,000	53,400	53,400
15/11/2010	ABSAs issued due to exercise of BSAs	2,879	1	2,879	356,996	56,279	56,279
15/11/2010	ABSAs issued due to exercise of BSAs	6,046	1	6,046	0	62,325	62,325
12/05/2011	Split in the par value per share	1,246,500	0.05	0	0	62,325	1,246,500
14/06/2011	Shares issued	333,675	0.05	16,683.75	6,606,765	79,008.75	1,580,175
22/07/2011	Capital increase by incorporation of reserves for the issuance of free shares	16,800	0.05	840	0	79,848.75	1,596,975
06/09/2011	Shares issued	59,625	0.05	2,981.25	1,397,013.75	82,830	1,656,600
04/07/2012	Shares issued	153,459	0.05	7,672.95	3,030,815.25	90,502.95	1,810,059
24/10/2012	Capital increase by incorporation of reserves for the issuance of free shares	7,800	0.05	390	0	90,892.95	1,817,859
21/01/2013	Capital increase by incorporation of reserves for the issuance of free shares	2,400	0.05	120	0	91,012.95	1,820,259
16/07/2013	Capital increase by issuance of shares	927,419	0.05	46,370.95	22,953,620.25	137,383.90	2,747,678

25/10/2013	Capital increase by incorporation of reserves for the issuance of free shares	7,578	0.05	378.90	0	137,762.80	2,755,256
11/06/2014	Capital increase by issuance of shares	1,500	0.05	75	59,090.70	137,837.80	2,756,756
19/06/2014	Capital increase by issuance of shares	400	0.05	20	11,936.00	137,857.80	2,757,156
25/07/2014	Capital increase by incorporation of reserves for the issuance of free shares	1,600	0.05	80	0	137,937.80	2,758,756
27/08/2014	Capital increase by incorporation of reserves for the issuance of free shares	1,562	0.05	78.10	0	138,015.90	2,760,318
17/10/2014	Capital increase by issuance of shares	5,400	0.05	270	205,975.60	138,285.90	2,765,718
31/10/2014	Capital increase by issuance of shares	2,750	0.05	137.50	99,966.35	138,423.40	2,768,468
05/12/2014	Capital increase by issuance of shares	7,000	0.05	350	250,761.00	138,773.40	2,775,468
09/06/2015	Capital increase by issuance of shares	3,877	0.05	193.85	113,994.71	138,967.25	2,779,345
31/07/2015	Capital increase by issuance of shares	8,270	0.05	413.50	320,344.92	139,380.75	2,787,615
06/10/2015	Capital increase by issuance of shares	12,452	0.05	622.60	466,352.33	140,003.35	2,800,067
14/10/2015	Capital increase by issuance of shares	130	0.05	6.50	3,879.20	140,009.85	2,800,197
25/11/2015	Capital increase by issuance of shares	30,000	0.05	1,500.00	960,700.00	141,509.85	2,830,197
05/01/2016	Capital increase by issuance of shares	40,000	0.05	2,000.00	969,600.00	143,509.85	2,870,197
21/01/2016	Capital increase by issuance of shares	274,931	0.05	13,746.55	6,502,118.20	157,256.40	3,145,128
30/06/2016	Capital increase by issuance of shares	30,000	0.05	1,500.00	686,050.00	158,756.40	3,175,128
23/09/2016	Capital increase by issuance of shares	25,000	0.05	1,250.00	649,700.00	160,006.40	3,200,128
08/12/2016	Capital increase by issuance of shares	101,763	0.05	5,088.15	2,244,911.85	165,094.55	3,301,891
01/02/2017	Capital increase by issuance of shares	90,787	0.05	4,539.35	1,924,031.65	169,633.90	3,392,678

02/02/2017	Capital increase by issuance of shares	37,240	0.05	1,862.00	873,114.14 ³²	171,495.90	3,429,918
19/05/2017	Capital increase by issuance of shares	185,271	0.05	9,263.55	3,402,967.64	180,759.45	3,615,189
05/07/2017	Capital increase by issuance of shares	695,878	0.05	34,793.90	10,777,769.92	215,553.35	4,311,067
24/01/2018	Capital increase by issuance of shares	197,694	0.05	9,884.70	3,850,401.20	225,438.05	4,508,761
29/06/2018	Capital increase by issuance of shares	10,000	0.05	500.00	190,000.00	225,938.05	4,518,761
26/09/2018	Capital increase by issuance of shares	560,694	0.05	28,034.70	6,240,524.22	253,972.75	5,079,455

To the Company's knowledge, none of its share capital has been pledged

³² Contribution premium related to the acquisition of Syngip BV

21.2 BYLAWS

Summarised in this paragraph are the main provisions of the Company's bylaws.

21.2.1 Corporate purpose (Article 2 of the bylaws)

The Company is formed for the following purposes, both in France and abroad:

- (i) research, development, production, operation and commercialisation in any form of all goods and services in biotechnology used for producing and saving energy (hereinafter the "Field");
- (ii) consulting, help, assistance, engineering in the design and development of any sort of project or service in the Field;
- (iii) consulting, studies, design, promotion and realisation of any and all projects and plans involving the organisation, operation, development, financing and restructuring of businesses in areas related to the Field;
- (iv) any form of studies for, research in, filing, selling and exploiting patents, licenses, models, drawings and trademarks in areas related to the Field;

and more generally, all business operations of that type, especially including by asset contributions, the creation of new companies, the subscription or purchase of equity or rights in companies, merger, alliance or association as well as any other industrial, commercial or financial activities in real or business property that might serve the corporate purpose and aid in its development and expansion.

21.2.2 Members of governing, management or supervisory bodies

The main provisions of the bylaws dealing with the Board of Directors and general management are described in Chapter 16 ("Board and Management Practices") of the Registration Document.

21.2.3 Rights, privileges and restrictions attaching to shares

Rights and obligations attaching to the shares (Article 11 of the bylaws)

Each share gives the owner a claim to the profits, corporate assets or liquidation proceeds proportionately to the fraction of share capital that it represents.

The shareholders are liable up to the amount of the par value of the shares they hold; any further call up of funds is prohibited.

The rights and obligations attaching to a share follow the ownership of the share.

Ownership of one share automatically requires adherence to the Company's bylaws and the decisions of the General Meetings.

Whenever it is necessary to hold several shares in order to exercise a right, in the event of an exchange, recombination or grant of shares, or in consequence of an increase or reduction of capital, merger or other company transaction, the holders of single shares or of any number of shares less than the number required may not exercise these rights unless the holders have the responsibility of assembling or possibly buying or selling the number of shares required.

Voting rights attaching to the shares (Article 11 of the bylaws)

Each share gives a right to vote and be represented in the General Meetings, as prescribed by law and the bylaws.

Voting rights of the owner if shares are stripped of voting rights (Article 12.2 of the bylaws)

Unless there is an agreement otherwise and the Company is notified of such agreement by registered letter with return receipt requested (since the Company is under no obligation to comply with such an irregular agreement unless it concerns a General Meeting held later than one month following the despatch of the registered letter, as shown on the postmark), the voting right belongs to the usufruct owner in Ordinary General Meetings and to the bare owner in Extraordinary General Meetings.

Indivisibility of shares (Article 12.1 of the bylaws)

Shares are indivisible from the Company's viewpoint. Those with undivided ownership of shares must be represented before the Company by only one owner, who is taken to be sole owner, or by a single proxy agent. In the event of disagreement, a single agent may be named by the court upon the request of whichever co-owner acts first.

Moreover, in accordance with Articles L. 225-115 to L. 225-117 of the French Commercial Code as they applied at the date of the Registration Document:

- every shareholder is entitled to receive, in the manner and timeframes called for by regulations:
 - o the financial statements for the fiscal year and the list of the directors of the Board and, when appropriate, the consolidated financial statements,
 - o the reports of the Board of Directors and the Statutory Auditors that will be submitted to the General Meeting,
 - o if appropriate, the texts of, and reasons offered for, the proposed resolutions, along with information concerning the candidates to the Board of Directors,
 - o the total amount, certified as accurate by the Statutory Auditors, of compensation paid to the five or ten highest paid individuals, depending whether or not the total workforce is greater than 200 employees,
 - o the total amount, certified by the Statutory Auditors, of payments made pursuant to 1 and 4 of Article 23-b of the French General Tax Code, as well as the list of philanthropic and charitable contributions;
- every shareholder is entitled, before any General Meeting is held, to obtain in the manner and time frames prescribed by regulations, the list of shareholders; and
- every shareholder is entitled at all times to receive the documents referred to in Article L. 225-115 with regard to the past three reporting years as well as the minutes and attendance sheets of the General Meetings held during those past three years.

21.2.4 Amending Shareholder Rights

Shareholders' rights may be modified as allowed by the laws and regulations pertaining to French corporations.

21.2.5 General Meetings (Article 20 of the bylaws)

Notices and sessions of General Meetings (Article 20.1 of the bylaws)

General Meetings are convened and adopt decisions in the manner prescribed by law.

They are held at the Company's registered office or at any other place that may be specified in the notice of meeting.

Agenda (Article 20.2 of the bylaws)

The agenda of a General Meeting is drawn up by the person calling the meeting.

However, one or more shareholders or the works council shall have the option, in manner prescribed by law and regulations, of requiring that proposed resolutions be placed on the agenda.

The General Meeting may not vote on a question that has not been placed on the agenda. It may, however, in all circumstances remove one or more Directors and undertake to replace them.

Admission to General Meetings - Proxies (Article 20.3 of the bylaws)

The General Meeting consists of all shareholders regardless of the number of shares they hold so long as these are fully paid-in. Any shareholder has the right to attend the General Meetings and to take part in the deliberations, in person or by proxy, regardless of the number of shares owned, merely by showing proof of their status.

If not personally present at the General Meeting, the shareholder can take one of the following three courses of action:

- have himself or herself represented by another shareholder or by his or her spouse, his or her partner in a civil union or by any individual or legal entity of his or her choice, as prescribed by law;
- vote as an absentee by using a paper or electronic form that may be obtained according to the conditions indicated by the meeting notice; paper absentee ballots will be counted only if they reach the Company at its registered office or place set in the notice of meeting no later than three (3) days before the date of the General Meeting; electronic absentee ballots or proxies may be received by the Company up to 3:00pm (Paris time) of the day before the General Meeting;
- give a proxy to the Company without specifying a representative; the Chairperson of the General Meeting, who will vote in favour the proposed resolutions presented by or approved the Board of Directors and vote not in favour of any other proposed resolutions; to cast any other vote, the shareholder must choose a representative who agrees to vote as instructed.

Shareholders have the right to participate in General Meetings if their shares have been recorded in the shareholder's name or that of a designated intermediary as provided by law by midnight (Paris time) of the third business day preceding the meeting, in either the Company's record of name shares or the authorised intermediary's record of bearer shares.

No transfer or any other transaction performed after the third business day prior to the general meeting, midnight, Paris time, regardless of the method employed, shall be notified by the intermediary mentioned in Article L.211-3 of the French Monetary and Financial Code or taken into consideration by the Company. It should be noted that at the date of the Registration Document, a site exclusively for voting in General Meetings via electronic telecommunications as provided in Article R. 225-61 of the French Commercial Code has not been set up.

Absentee voting or giving a proxy cannot be done unless a paper form is sent in.

Attendance sheet - Meeting officers - Minutes (Article 20.4 of the bylaws)

Every meeting shall maintain an attendance list in the legally prescribed form.

This attendance sheet must be signed by the shareholders present and the proxies. The attendance sheet must be certified true and complete by the Meeting officers. The proxy forms must be appended to the attendance sheet.

The attendance sheet and appended proxy forms must be kept at the registered office and sent to anyone requesting them in the manner prescribed by law and regulations.

The General Meetings are chaired by the Chairman of the Board of Directors or, in his absence, by the Vice-Chairman, if there is one, or by the most senior member of the Board in attendance at the General Meeting. In the event the General Meeting was convened by the Statutory Auditors or by an appointee of the court, the General Meeting is chaired by one of those who called the meeting. Failing which, the General Meeting itself elects a chairman.

The vote tellers' functions are performed by two shareholders who are present and who agree to perform these duties, who have by themselves or as proxies the largest number of votes.

The Meeting officers so installed shall name a secretary, who does not have to be a shareholder.

The mission of the Meeting officers is to verify, certify and sign the attendance sheet, ensure the proper conduct of debates, settle any incidents occurring during the meeting, check the votes cast and ensure their legality and ensure that minutes of the meeting are drawn up.

The minutes shall be prepared and copies or excerpts of the deliberations shall be issued and certified in accordance with law and regulation.

General Meeting quorum and voting (Article 20.5 of the bylaws)

At General or Special Meetings decisions are passed in compliance with the quorum and majority requirements set in law.

Except in cases where the law provides otherwise, each shareholder is entitled to as many votes as he or she owns fully paid-up shares.

If the Board of Directors permits, shareholders participating at a General or Special Meeting in person or by proxy, by video conference or the use of telecommunications that allow them to be identified, such as the internet, and in the manner previously defined by the Board as provided by law and regulations, shall be deemed present for the purposes of calculation of a quorum and a majority. In that case, the notice of meeting published in the *Bulletin des Annonces Légales Obligatoires* shall mention this option and the address of the site set up for this purpose.

21.2.6 Provisions of the bylaws that might have an impact on the occurrence of a change in control

The bylaws contain no provisions that might defer or prevent a change in control

21.2.7 Identification of Shareholders (Article 13.1 of the bylaws)

In order to identify bearer shareholders, the Company may at any time and at its own expense make inquiry of the central custodian as to the name of an individual or a company, the nationality, the year of birth or of founding, the address, and the electronic address if any, of the holders of securities that provide present or future voting rights in its own shareholder meetings, as well as the number of shares owned by each and any restrictions there may be upon those securities.

This information is collected by the central custodian and then forwarded to the Company, in the manner prescribed by law and regulations in force.

Upon inspection of the list forwarded by the central custodian, the Company has the option of requesting, either by the interpolation of the central custodian or directly from the persons appearing on this list who in the opinion of the Company might be intermediaries acting on behalf of third parties, the information required in the first paragraph of Article 13.1 of the bylaws concerning the owners of such shares.

The Company may also at any time ask an intermediary that on behalf of a third party holds registered (name) securities immediately or eventually convertible into equity to disclose to the Company the identity of the owners of such securities, as well as the quantity of such securities each such owner holds.

As long as the Company believes that certain identified shareholders are acting on behalf of third party owners of the shares, the Company will be entitled to request that such shareholders disclose the identity of the owners of the shares, and the number of shares owned by each of them.

The Company may ask any legal entity that owns its shares in an amount greater than one fortieth of the equity or voting rights in the Company to let it know the identity of the persons who directly or indirectly hold over one-third of the share capital in this legal entity or of the voting rights exercised at that entity's General Meetings.

In accordance with Article L. 228-3-3 of the French Commercial Code, if the party queried in the manner provided by this article does not meet the deadlines imposed by law and regulations or has furnished incomplete or erroneous information as to his status, as to the owners of the securities or as to the quantity of securities held by each of them, the shares or the securities immediately or eventually convertible to equity for which this person appears on the share register shall forfeit voting rights at all shareholder meetings held until the identification has been corrected, and payment of dividends shall be suspended until such time. Moreover, should the person registered knowingly overlook these provisions, the court in whose jurisdiction the Company's registered office is located may, upon the application by the Company or shareholders holding at least 5% of the share capital, order complete or partial forfeiture of the votes attaching to the shares in respect of which the query was made for a term not exceeding five years, and possibly for the same period, order the suspension of dividend payments on the shares in question.

21.2.8 Identification of Shareholders (Article 13.2 of the bylaws)

Without prejudice to the duties to declare ownership interest provided by law, any individual or legal entity, acting alone or in concert, who should possess directly or indirectly a number of shares representing a fraction equal to or greater than zero point five percent (0.5%) of the share capital or voting rights of the Company must, when they cross this threshold or whenever they cross a new threshold of zero point five percent (0.5%) of the share capital or voting rights of the Company, so inform the Company by fax and by registered letter with return receipt requested addressed to the registered office within four trading days of crossing this threshold.

These thresholds are determined by using the number of shares held directly or indirectly and shares in the category of shares owned pursuant to Article L. 233-9 of the French Commercial Code.

The declaration referred to in the first paragraph to be acceptable shall contain:

- the acquisition date(s) of the securities or voting rights that cause one or more thresholds to be crossed;
- total number of shares or votes directly or indirectly held by this person and shares in the category of shares owned pursuant to Article L. 233-9 of the French Commercial Code;
- if applicable, the disclosures mentioned in (a), (b) and (c) of paragraph 3 of Article L. 233-7 I of the French Commercial Code.

In the event that the provisions of Article 13.2 of the bylaws is not complied with, upon request recorded in the minutes of the General Meeting by one or more shareholders jointly holding at least five percent of the Company's share capital or voting rights, any shareholder who has not made the aforementioned declaration in the prescribed time will be, as provided in Article L. 233-14 of the French Commercial Code, deprived of a vote in any shareholder meeting taking place during a two- year period following the date of a corrected declaration.

The duty to declare provided above applies in the same way to any crossing below a threshold of zero point five percent (0.5%) of the share capital or total voting rights of the Company.

21.2.9 Specific provisions governing changes in the share capital

The Company's share capital may be increased, amortised or reduced in the manner and by any means provided by law and regulations.

22 MAJOR AGREEMENTS

Consortium agreement with Arkema, the CNRS, the Université des Sciences et Technologies de Lille and the Université Claude Bernard Lyon 1

As part of the financing agreement with the French Environment and Energy Management Agency (ADEME), in January 2014, the Company entered into a consortium agreement (the Project) with Arkema France, the French National Centre for Scientific Research (CNRS), the Université des Sciences et Technologies de Lille and the Université Claude Bernard Lyon 1, with an effective date of 15 November 2012 and a Project start date of 17 July 2013. The purpose of the Project is to lay down the terms and conditions concerning the parties' collaboration for setting up a process to transform plant feedstock into methacrylic acid, in particular through the use of the fermentation process developed by the Company to produce isobutene. This agreement stipulates that all results depending on a party's proprietary knowledge are the property of said party.

Cooperation agreement with Audi

The Company concluded several cooperation agreements with Audi AG – the last one in July 2018 – having as its purpose development of know-how and the realisation of work by the Company, concerning the production and study of the commercialisation of renewable gasoline, through the conversion of isobutene produced by the Company from renewable resources into isooctane. Under the terms of the agreement, Audi agreed to make payments to the Company based on the realisation of certain key steps in the project.

Cooperation agreement with IBN-One, a subsidiary of Global Bioenergies SA, Global Bioenergies SA and Cristal Union

Within the scope of Cristal Union's acquisition of a stake in IBN One via its subsidiary Cristal - Financière, a cooperation agreement was signed on May 2015 between the Company, IBN- One and Cristal Union, in the aim of laying down the terms and conditions of their collaboration, initially focusing on defining the key stages of the process targeting the construction of the IBN-One plant. The second stage will focus on the conduct of additional studies to be identified during the first stage.

Partnership agreement with Aspen

The Company entered into a partnership agreement with IBN-One and Aspen in July 2016 to grant Aspen rights of access to the production of isooctane from the Leuna demo plant and the future IBN-One plant in exchange for Aspen's financial contribution to the Group's industrial development efforts.

Partnership agreement with Preem, Sekab and Sveaskog

In April 2016, Preem, Sekab and Sveaskog had announced their collaboration to develop a gasoline fuel based entirely on forest resources with support from the Swedish Energy Agency. In September 2016, the consortium selected the Company's Isobutene process to study the various plant location scenarios for cost-effective conversion of forest products and residues to bio-isooctane.

Partnership agreement with Butagaz

In January 2017, the Company announced the signing of a partnership agreement with IBN-One and Butagaz under which Butagaz contributes financially to the industrial development efforts of the Group, which will provide it with batches of isobutene, and rights of access to the production of isooctane from the future IBN-One plant are reserved for Butagaz.

**23 INFORMATION FROM THIRD PARTIES, EXPERT DECLARATIONS AND
DECLARATIONS OF INTEREST**

None.

24 PUBLICLY ACCESSIBLE DOCUMENTS

Copies of the Registration Document are available free of charge from the Company and on the Company's website (www.global-bioenergies.com), as well as on the website of the *Autorité des Marchés Financiers* (www.amf-france.org).

All of the Company's legal and financial documents which need to be made available to shareholders pursuant to applicable regulations can be examined at the Company's registered office.

Other accessible documents:

- the Company's memorandum of incorporation and bylaws;
- all reports, letters and other documents, historical financial information, valuations and statements prepared by an expert at the Company's request, any part of which is included or referred to in the Registration Document;
- the historical financial information of the Company for each of the three financial years preceding the publication of the Registration Document.

25 INFORMATION ON EQUITY HOLDINGS

Information relating to the companies in which Global Bioenergies holds a proportion of the capital likely to have a material impact on the assessment of its own assets, financial position or results is set out in Section 7 "Organisational structure" of the Registration Document.

GLOSSARY

Agrolefins: plant-derived olefins.

Terephthalic acid: one of the three positional isomers of phthalic acids, along with isophthalic acid and phthalic acid. It is mainly used as a feedstock in the polyester industry, in particular PET.

Olefins: Hydrocarbons with one or two double bonds.

Starch: Organic substance in the form of white grains, constituting the food store of numerous plants, in particular cereals. Starch is one of the two principal polymers which exclusively contain glucose, the other being cellulose. Starch is commonly converted into glucose syrup through enzymes (amylases).

Bioethanol: the main biofuel currently used in petrol engines.

Molecular biology: technique used for the analysis and modification of nucleic acids.

Synthetic biology: scientific field combining biology and engineering principles in the aim of designing and building (i.e. synthesising) new biological systems and functions.

Biomass: defines the whole of plant-based materials (including algae), animal and fungal materials that can become an energy source.

Bioprocess: process using microorganisms to convert plant-based resources into compounds of industrial value.

Butadiene: compound with four carbon atoms comprising two double bonds. It is mainly used in the production of synthetic rubber, varnish, nylon and latex paints.

Butyl rubber: special type of synthetic rubber, with the distinctive property of being gas-tight. It is used in the manufacturing of all inner tubes, balls and certain car parts. Butyl rubber consists of 98% isobutene.

Cellulose: a glucose polymer (between 200 and 14,000 monomers) and one of the main components of plants. Cellulose is a very hard polymer ("crystalline cellulose"), which can be broken down by enzymes. Several companies have industrialised pathways for the transformation of plant cellulose into glucose syrup.

Commodity product: commonly used chemical product such as plastics, elastomers, paint solvents, sold in large bulk quantities at low prices.

Dimerising: operation consisting in condensing two identical chemical molecules to obtain a single molecule, double the size.

Enzyme: protein-based catalyst produced by living organisms, able to catalyse a chemical reaction, i.e. transform a product into another.

Ethanol: alcohol naturally produced by yeasts and whose molecular formula is $\text{CH}_3\text{-CH}_2\text{OH}$.

Ethylene: unsaturated hydrocarbon whose molecular formula is C_2H_4 . The smallest molecule in the olefin family.

Fermentation: Biological process performed by microorganisms, which may or may not use oxygen, resulting in the transformation of a source of carbon (such as glucose) into other compounds, such as ethanol (alcoholic fermentation) or lactic acid (lactic fermentation), etc.

Glucose: The most widespread naturally occurring sugar (dextrose) or a compound industrially produced through the enzymatic hydrolysis of starch.

Hydrocarbon: organic compound exclusively consisting of carbon (C) and hydrogen atoms (H). Olefins are hydrocarbons, as well as the alkanes used as fuel.

Metabolic engineering: modification, through genetic engineering, of the natural metabolism of living organisms, with the general aim of making them produce specific chemical compounds with a yield allowing industrial exploitation.

Isobutanol: alcohol whose molecular formula is $\text{CH}_3\text{-CH}_2(\text{CH}_2)\text{-CH}_2\text{OH}$, used today as a solvent, and usable as a fuel or additive for petrol engines. Isobutanol can be converted into isobutene through thermo-chemical dehydration.

Isobutene: four-carbon branched alkene occurring in the form of a colourless inflammable gas under normal temperature and pressure conditions. It is used in the manufacture of tyres, organic glass and certain plastics. It can also be dimerised into isooctene, then hydrogenated to form isooctane.

Isooctane: hydrocarbon in the alkane family with 8 carbons, used as a petrol additive due to its anti-explosive properties. Isooctane is used as a reference standard in the octane index (its octane index is 100).

Isoprene: one of the gaseous olefins used in the tyre and glue industries.

Monomer: organic molecule able to react with itself and thus form a polymer. Where two monomers constitute a polymer, the term co-monomers is used.

N-butene: one of the gaseous olefins, used in particular in the plastics industry.

Gaseous olefins: family of molecules including ethylene, propylene, n-butene, isobutene and butadiene.

Oligomer: polymer solely consisting of a few (2 to 50) monomers.

PMMA: acronym of Poly (methyl methacrylate). Plastic polymer with unique solidity and transparency properties, often referred to as "organic glass". Marketed under names such as Plexiglass® and Altuglas®. Approximately 30% of the world's PMMA is made with isobutene.

Polyester: polymer in which the monomers are linked through ester-type bonds.

Polyethylene: plastic polymer obtained through the polymerisation of ethylene, used in packaging in particular.

Polysisobutene: plastic polymers with distinctive deformability properties, sometimes called "viscous plastics", manufactured through the polymerisation of isobutene.

Polymer: substance composed of chains of repeated subunits of the same nature. In certain cases, the polymer is composed of a single subunit, i.e. it stems from a single monomer. In other cases, the polymer is composed of a sequence of two alternating monomers.

Polypropylene: plastic polymer obtained through the polymerisation of propylene, particularly used in the car industry.

Photosynthesis: natural process which enables plants and certain bacteria to synthesise organic matter through sunlight and atmospheric CO₂.

Process Book: Collection of all the data required for a process, including manufacturing instructions, and the economic validation of said process. The Process Book provides the required details for the manufacturing of a given product, from raw materials to finished product specifications.

Productivity: a measurement unit which measures production in relation to time and volume. It is expressed as $\text{g.L}^{(1)}.\text{h}^{(1)}$.

Propylene: unsaturated hydrocarbon whose molecular formula is C₃H₆. The second smallest molecule in the olefin family, after ethylene.

Yield: In fermentation, this is the ratio between the amount of end product and the amount of feedstock used for its production.

Substrate: substance that will be transformed into a product by a microorganism or enzyme.

Thermochemistry: field of chemical reactions taking place at high temperatures, most often through the use of specific catalysts.

Trans esterification: standard technique for the production of biodiesel. It consists of a process whereby vegetable oils, animal fats or microalgae-based oils are cold-mixed with an alcohol (ethanol or methanol) in the presence of a catalyst (sodium hydroxide or potassium hydroxide).

Titre: production measurement unit, generally expressed in gram per litre ($\text{g.L}^{(1)}$)

Trimerisation: operation resulting in the transformation of three monomers into a trimer.

Metabolic pathway: series of enzymatic reactions in living cells resulting in the synthesis of a product from a substrate, in several stages.