

# SUSTAINABILITY REPORT

# 2016



## VISION

To be a leading oil refiner and oil products marketing enterprise in Greece and the wider region.

## CORPORATE MISSION

**To conduct** our business operations so as to increase the company's corporate value for the benefit of all stakeholders -shareholders, personnel, customers, suppliers, associates and partners, as well as the local and greater community- applying technological and commercial innovations.

**To meet** our customers' needs responsibly and effectively, while expanding our share in the domestic market.

**To function** reliably, swiftly and flexibly in our relationship with employees, customers, suppliers, and the general public, by making use of practices that demonstrate responsibility and integrity, as well as respect for people and the environment.

## STRATEGIC GOALS

**Maximising the profitability** of all the companies of the Group and overall financial performance.

**Maximisation and optimisation of sales**, by effectively marketing our products and exploiting opportunities in our three markets (domestic, aviation-marine bunkering, and export), for achieving the best possible profitability.

**Striving for the highest standards** of Health and Safety, Environmental protection and Quality, through the application of technical, operational and organisational innovations and improvements.

## OUR VALUES

### 1 Integrity

- Respect for laws and regulations.
- Applying business ethics and the principles of corporate governance.
- Honest and open communication.
- Credibility and respectability in all kinds of business relations.

### 2 Efficiency

- Achieving set targets.
- Creating value for shareholders and society.
- Servicing customers' needs.
- Providing a safe, stimulating and reciprocal workplace.
- Continuous improvement and promotion of learning and innovation.

### 3 Social responsibility

- Respect for all stakeholders.
- Respect for the environment and commitment for sustainable growth.
- Priority for Health and Safety.
- Ensuring that the companies of the Group are active and responsible corporate citizens, respecting the local community and society as a whole.

## OUR PRINCIPLES

### Respect for our people

We recognise the value of our people and we promote their personal development, while offering competitive terms of employment, within a working environment of respect and mutual trust. We respect human and labour rights and give first priority to workplace Health and Safety assurance.

### Respect for the environment

We recognise the value of our natural environment and the necessity for sustainable development and commit ourselves to the implementation of effective operational procedures and technology for its protection.

### Transparency

We operate professionally and responsibly, strictly implementing the principles of business ethics and corporate governance.

---

# Sustainability Report 2016

---

The growth of  
MOTOR OIL:  
Important  
milestones

# 45 YEARS

## MOTOR OIL

### 1972

Commissioning of the refinery. It comprises a Crude Oil Distillation Unit, a base oils production unit and port facilities.

### 1978

Commissioning of the Catalytic Reformer Unit for gasoline production.

### 1984

Construction of a Power Plant, burning fuel gas.

### 1996

Purchase of 50% of the company's shares by Saudi Arabian Oil Company (Saudi Aramco).

Relocation of the Head Office to a modern Offices Complex in Maroussi.

### 2001

Increase of the company's equity capital through public offer of shares and listing on the Athens Stock Exchange.

Upgrading of the Lubes Vacuum Distillation Unit.

### 1975

Construction completion of the 100,000 barrels/day Crude Distillation Complex.

Construction completion of the 1.5 million cubic metres tank farm.

### 1980

Commissioning of the Catalytic Cracking Unit (for converting fuel oil to higher added value products).

### 1993

ISO 9002 quality certification for the entire range of the company's commercial and manufacturing activities.

### 2000

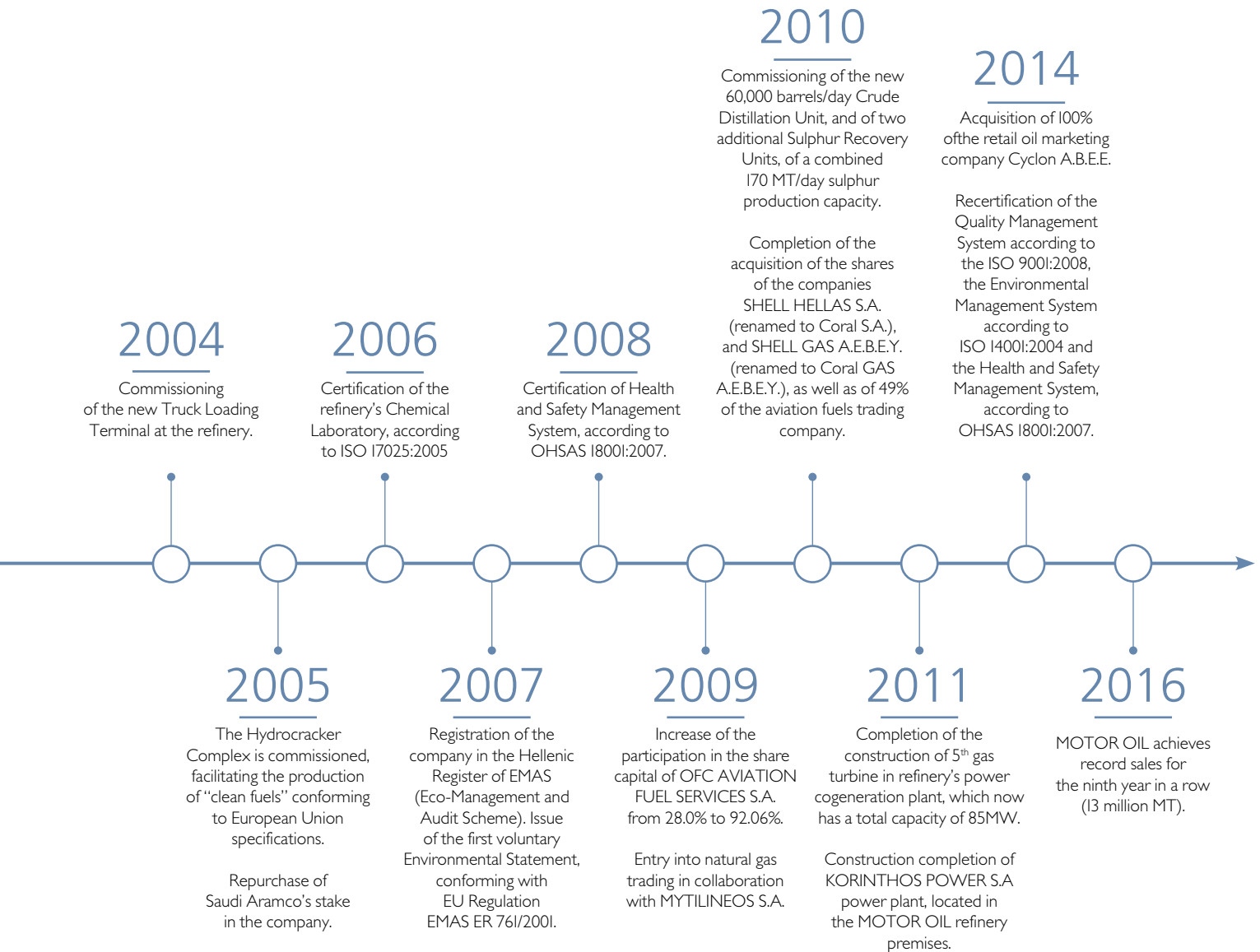
Construction of new units and upgrading of the Naphtha Reformer into a continuous 103-octane number catalyst regeneration unit for the production of fuels conforming to EU specifications.

New Central Control Room and installation of a Distributed Control System.

Certification of the Environmental Management System, according to ISO 14001:1996.

### 2002

Acquisition of 100% of the retail oil marketing company AVIN OIL.











---

# Management Message

For the Motor Oil Group, 2016 was a very good year in terms of financial results. The refining market conditions were such that created the base for high refinery margins, which in combination with a steadily strong US dollar, allowed for a -record breaking- high profitability.

In 2016 we achieved, for the ninth year in a row, record sales, 77.9% of which headed for exports. On a Group consolidated level, our operating profitability reached 604 million euros and our net Group profits reached 298 million euros. The total evaluation of our social product reached 662.4 million euros.

Despite the challenges of the economic environment in our country, sustainable development and value creation continued to form our fundamental course of action. For us, it is a basic priority to be able to support our customers, our employees but also the greater society.

With more than 1,900 employees in our Group, we constantly strive to offer a fair and safe working environment that supports personal and professional growth and development. In this context we managed to run training programs that amounted to 21,000 man-hours.

We continued to place utmost importance in the implementation of an integrated management system for Health, Safety, Quality and the Environment. In this context we spent 32.9 million euros for Safety and 24 million euros for the Environment in investments, improvements and operating expenses.

Regarding the society, we remained focused in our efforts to help support and facilitate the negative consequences of the economic crisis in Greece. We continued our initiatives regarding the planning and roll out of targeted solutions, especially for sensitive groups that are affected particularly harshly by the crisis and also the local communities residing near our installations.

All the above were achieved due to the valuable contribution of our Groups' employees. Every day they reconfirm their dedication to our goals and to our vision for a balanced and long-term growth.

This current version of the "Sustainability Report 2016" is the fifteenth such report, which describes in detail our Group's activities. The structure of the Report is based on the materiality analysis of all the topics raised by our stakeholders, following the guidelines of the Global Reporting Initiative under the G4 scheme. In this context, this Report serves as our "Communication on Progress" on the basis of our commitment to disclose information according to the principles of the UN Global Compact, which we endorse and support.

As a leading company in the Greek energy sector, we remain ready to respond to the ever-increasing needs of our challenging economy. At the same time, we continue to gaze into the future with optimism and we create constant and long-term value for all the stakeholders groups involved.

Motor Oil Group Management

## Contents

---

- i Vision, Mission, Strategic Targets, Values and Principles
- ii Key Group data for 2016
- 2 The growth of MOTOR OIL: Important milestones
- 5 Management Message
- 6 Contents
- 9 On the Sustainability Report 2016

## 10 Identity and Corporate Responsibility

---

- 12 Profile of the Motor Oil Group
- 13 The Refinery
- 14 Results 2016
- 15 Corporate Governance
- 17 Participation in International - National Agencies and Networks
- 17 Awards & Recognition
- 18 Managing Corporate Responsibility
- 19 Responsible Growth and Investments
- 21 Responsibility for the Environment, Health and Safety
- 21 Responsible Quality Management
- 22 Communication with Stakeholders

## 48 Responsibility for the Environment

---

- 50 Environmental Management
- 52 Environmental Impact Management
- 53 Environmental Investments and Expenses
- 54 Best Available Techniques
- 56 Energy Efficiency
- 58 Air Quality Management
- 62 Liquid Waste Management
- 63 Solid Waste Management - Recycling
- 64 Water Management
- 65 Noise Management
- 65 Protection of the Marine Environment



## 24 Responsibility towards our Employees

- 26** Human Resources Management System
- 26** Equal Opportunities and Human Rights
- 27** Labour Relations - Relations with Trade Unions
- 27** Basic Employment Data
- 30** Remuneration System and Additional Benefits
- 31** Education and Training

## 66 Social Responsibility

- 68** Economic Benefits to Society - Social Product
- 69** Customer Service - Respect for the Customer
- 70** Social Solidarity and Sponsorships

## 34 Health and Safety

- 36** Health and Safety Management Framework
- 38** Safety Indices
- 39** Health and Safety Investments
- 40** Inspections
- 41** Procedures
- 42** Planned Shutdowns - New Projects
- 43** REACH and CLP Regulations
- 43** Emergency Response Plans
- 44** Safety of Port Installations
- 45** Safeguarding Workforce Health
- 45** Training on Safety Issues

## 76 Global Compact: Communication on Progress 2016

## 77 GRI Compliance Level





---

# On the Sustainability Report 2016

This Sustainability Report of 2016 is the fifteenth such record of the annual activities of the MOTOR OIL Group (1 January 2016 - 31 December 2016). The primary concern of the Report is to provide comprehensive information for all stakeholders in the Group: workforce, customers, suppliers, shareholders, investors, creditors and local communities.

The Report underlines the Group's sincere commitment to a responsible and sustainable growth. As an active member of the community, MOTOR OIL Group strives to achieve sustainable development by responding to the environmental challenges deriving from its operations, while at the same time tries to meet the needs of the local and wider society.

The structure of the Sustainability Report 2016 complies with the totality of aspects of corporate responsibility. It focuses, therefore, on actions that demonstrate respect for human values and the environment, the implementation of an effective health and safety policy and support for efforts to achieve sustainable social development. The various sections of the Report describe in detail the Group's activities, with presentations of the latest quantitative figures and data.

The terms 'Group' and 'MOTOR OIL Group' refer to the MOTOR OIL Group and its constituent subsidiary Groups and companies, AVIN OIL, Coral, Coral Gas, LPC and OFC. The term 'company' refers to the parent company 'MOTOR OIL'; the terms 'other companies' and 'remaining companies' refer to the aforesaid set of companies, while the term 'commercial companies' refers, once again, to the aforesaid set of companies, not - however - including OFC.

## **Global Reporting Initiative - UN Global Compact**

The selection of topics for the Sustainability Report 2016 was based on the G4 guidelines of the Global Reporting Initiative (GRI), on the oil & gas sector supplement and on the ten principles of the United Nations Global Compact.

At the end of the Report there is a summary table matching the contents of the current Report to the GRI indicators and Global Compact principles. In this sense the Sustainability Report 2016 also serves as a "Communication on Progress" for the Global Compact, setting out the way in which its ten principles have been implemented.

Supplementary data for the Group's activities can be found in the Annual Financial Report 2016 and the Environmental Statement 2016, as well as at the company website, [www.moh.gr](http://www.moh.gr)

## **Communication**

The MOTOR OIL Sustainability Report 2016 has been edited and compiled by the Group's Communications, Corporate Affairs and Corporate Social Responsibility Department. We wish to extend our heartfelt thanks to all other Divisions and Departments whose contributions of data have allowed us to produce a comprehensive Report.

We welcome all views and observations on the structure and content of the report - your input will help us to keep improving its quality. Please contact us on +30 210 8094004, or send your comments to [csr@moh.gr](mailto:csr@moh.gr).



# I. Identity and Corporate Responsibility

We are an energy group that creates value  
with consistency and responsibility.

In all the years during which the MOTOR OIL Group has been operating as an oil refiner and oil products marketing company, it has always functioned with a strong sense of corporate responsibility, aiming at sustainable profitability and development in a socially responsible manner. It implements investment programs aiming at the continuous development and optimisation of its productive activity, always bearing in mind the Vision and the corporate values that form the framework of its operation and business activity.

2016 was a very positive year for MOTOR OIL with exceptional financial results. Conditions in the sector and international prices of crude oil and petroleum products internationally led to an increased demand for petroleum products, leading to high refinery margins. Consolidated financial results were even higher than the corresponding ones of the parent company, and the Group was reinforced by the positive results of its commercial companies, which attained a good performance in the domestic market in the liquid fuel retail trade sector.

For 2016 as well, company strategy has focused primarily

on attaining a high degree of refinery employment, on optimal distribution of products, on the 3 main markets in which it does business (domestic market, exports and shipping/aviation), and on creating positive cash flows. As a result of all the above, MOTOR OIL managed to achieve record sales (13 million MT) for the ninth year running, significantly exceeding the refinery's annual production capacity. Achieving significantly high financial results is of considerable importance, as in 2016, a periodic maintenance took place at the refinery, which lasted almost one month. This periodic maintenance resulted in a small fall of the production figures, from 11.8MT in 2015 to 11.5 MT in 2016.

At the same time, overseas sales in 2016 (including shipping and aviation) accounted for 77.8% of the company's total volume of sales, compared with 76.1% in 2015, owing to the fact that the company exploited to the full its export capacity.

Finally, regarding our financial overview, the creation of positive cash flows allowed on one hand an uninterrupted funding of our turnover and operating activities, while on the other hand achieving the lowest net debt in its history.





13 million tons

Motor Oil  
sales hit  
historic new  
record

77.8%

of sales  
are exports.  
Further  
reinforcement  
of export  
orientation

Full advantage of favourable international circumstances

Record low net bank debt

Improved results from the operation  
of the commercial companies

## I. Motor Oil Group Profile

The MOTOR OIL Group has an average number of staff of 1,925, a consolidated turnover in 2016 corresponding to nearly 3.6% of the Greek GDP, and total assets on a consolidated basis of 2.86 billion euros. It plays a leading role in the sectors of crude oil refining and marketing of petroleum products in Greece, as well as the greater eastern Mediterranean region, supplying its customers with a wide range of high quality products.

The MOTOR OIL parent company was founded in 1970 and the refinery commenced operations in 1972. The company has been quoted on the Athens Stock Exchange since 2001. It is listed on the index of 25 companies with the highest capitalization (FTSE/ATHEX Large Cap), the General Index (ATHEX COMPOSITE INDEX) and on individual sector indices.

- The refining of crude oil and marketing of oil products are the main activities of the MOTOR OIL Group, whose refinery is one of the most technologically sophisticated, complex and flexible (in terms of production processes) refineries to be found anywhere in Europe or elsewhere.
- In the area of trade, the Group has achieved significant development of its activities and an expansion of its domestic market share. The basis for this development are the liquid fuel retail networks of its subsidiaries AVIN OIL and Coral (formerly SHELL HELLAS S.A.). Moreover, since 2015, the liquid fuel trade activities of CYCLON were transferred to AVIN OIL, continuing under the same trade mark. Together, the 3 networks consist of a total of approximately 1,410 service stations selling liquid fuels, accounting for about 35% of the domestic market.
- LPC S.A. operates in the lubricants sector (after the split of the operations of CYCLON HELLAS S.A.). The entire lubricants part of AVIN OIL was transferred to this company, with LPC now producing and marketing a range of lubricants, and constituting the core of this activity in the Group.
- The Group enjoys a presence in the liquefied gas sector through Coral Gas SA. The company stores, packages and markets bottled and bulk liquefied gas and liquefied gas for vehicles, and has a market share of around 30%.
- The Group has laid the foundations for its presence in the electricity generation sector, through a 35% stake acquired by the MOTOR OIL S.A. in KORINTHOS POWER S.A.

(the other 65% stake is held by MYTILINAIOS S.A. Group of Businesses). The company has a combined- cycle, natural gas fuelled, power station, with a capacity of 436.6 MW, located next to the MOTOR OIL facilities at Ag. Theodoroi, Corinth.

- The Group has already established a presence in the natural gas market through M & M NATURAL GAS S.A., in which MOTOR OIL holds an equal stake with MYTILINAIOS S.A. Group of Businesses. In 2011, M & M received a license to supply natural gas from the Ministry of the Environment, Energy and Climate Change, under which it has the right to sell natural gas for the next twenty years.
- The Group is active in the aviation fuel services sector through OFC AVIATION FUEL SERVICES S.A. in which MOTOR OIL and subsidiary AVIN OIL hold an equal stake of 46.03% each. OFC is the company which constructed and operates the existing, automated system for supplying aviation fuel to the Eleftherios Venizelos Airport, Athens, as well as the fuel storage facilities at the same airport.
- MOTOR OIL acquired a presence in the sector of prospecting, exploration and exploitation of oil (upstream) acquiring a 65% stake in the newly established MOTOR OIL VEGAS UPSTREAM Ltd.
- Finally, the Group has a stake in companies providing support for its operations, such as MOTOR OIL Finance plc, supplying financial services, MOTOR OIL Cyprus Limited, a holding company, and the company Building Facility Services, which supplies facility management and operation services.

The table below sets out major subsidiary and affiliated companies comprising the MOTOR OIL Group, as well as the stakes held in them (directly or indirectly) by the parent company. More detailed information on the companies can be found in the Annual Financial Report 2016.

NAME	ACTIVITY	PERCENTAGE SHARE	
		DIRECT	INDIRECT
AVIN OIL S.A.	Marketing of petroleum products	100%	
CORAL S.A.	Marketing of petroleum products	100%	
CORAL GAS S.A.	Marketing of liquefied petroleum gas	100%	
LPC S.A. LUBRICANTS & PETROLEUM PRODUCTS	Processing and marketing of lubricants and petroleum products	100%	
OFC AVIATION FUEL SERVICES S.A.	Aviation Fuel Supply Systems	46.03%	46.03%
M AND M NATURAL GAS S.A.	Marketing of natural gas	50%	

NAME	ACTIVITY	PERCENTAGE SHARE	
		DIRECT	INDIRECT
SHELL & MOH S.A. AVIATION FUELS	Marketing of aviation fuels		49%
KORINTHOS POWER S.A.	Production and marketing of electrical energy	35%	
ATHENS AIRPORT FUEL PIPELINE COMPANY S.A.	Supply of aviation fuel via pipeline to E. Venizelos Airport	16%	
MOTOR OIL VEGAS UPSTREAM LIMITED	Prospection, exploration and exploitation of oil	65%	
MOTOR OIL (CYPRUS) LIMITED	Holding Company	100%	
MOTOR OIL FINANCE plc	Financial services	100%	
MOTOR OIL MIDDLE EAST DMCC	Marketing of crude oil and oil products		100%
BUILDING FACILITY SERVICES	Provision of facility management and operation services	100%	

This Report includes results only for parent company MOTOR OIL and for subsidiaries AVIN OIL, Coral, Coral Gas, LPC and OFC.

## 2. The Refinery

The Refinery is located in Agioi Theodoroi, Corinth, about 70 km from the center of Athens. The Refinery with its ancillary plants and fuel distribution facilities forms the largest privately owned industrial complex in Greece, and is considered one of the most modern refineries in Europe. The complexity of Motor Oil's refinery stands at 11.54 according to Nelson's Complexity Index.

It has the capacity to process various types of crude oil and manufactures a wide range of oil products. It supplies commercial oil companies in Greece, but the bulk of its production is sold abroad. Moreover, it is the only refinery that produces base oils in Greece. Refinery products meet the European Union specifications, as well as the most stringent

international standards. The technical sophistication of the refinery allows MOTOR OIL to manufacture products with high added value, adjusting the final product mix to market needs, ensuring better distribution prices and achieving better refining margins than other composite refineries in the Mediterranean.

### Characteristics of the Refinery

- Processing capacity: 185,000 barrels of crude oil per stream day (BSD).
- The refinery produces all types of fuel and is one of the most advanced and complex in Europe, with Hydrocracker and Catalytic Cracking units and an 11.54 rating on the Nelson Complexity Index.
- It produces refined fuels (gasoline and automotive diesel) in accordance with the EU specifications.
- It has ISO 9001:2008 certification for Quality, ISO 14001:2004 and EMAS III ER 1221/2009 certification for the Environment, OHSAS 18001:2007 certification for Health and Safety, ISO 17025:2005 certification for its Chemical Labs and CE Marking certification for its asphalt products, in accordance with EU Regulation 305/2011 and the requirements of European standard EN 12591:2009. This is a combination of standards found in very few European refineries. Since 2016, MOTOR OIL has been applying the EI/JIGI530 standard in the management and transportation of Jet Fuel. In the context of reducing greenhouse gas emissions and the sustainability criteria laid down by the EU, our company applies a control system for biofuels and the blending of fossil fuels with biofuels, having been certified with the 2BSvs Certificate since October 2016. This certification meets the requirements of the biofuel mass balance and expires in 2021.
- It is the only refinery in Greece with a unit producing base oils and finished lubricants, approved by such international agencies as the American Petroleum Institute (API), the European Automobile Manufacturers Association (ACEA) and the United States Army and Navy.
- It possesses a power and steam cogeneration unit, which now has a capacity of 85MW following the recent addition of a fifth gas turbine.
- It uses natural gas as a fuel and as a raw material for the production of hydrogen.
- It has a storage capacity of 2,500,000 m<sup>3</sup> (Crude Oil: 1,000,000 m<sup>3</sup>, Intermediate & Finished Products: 1,500,000 m<sup>3</sup>).
- It has modern port facilities for tanker docking, suitable for tankers of up to 450,000 tons DWT, which can serve more than 3,000 vessels annually.
- It has a modern truck loading terminal, which can serve 220 road tankers per day.

## I. Identity and Corporate Responsibility

The refinery's requirements in terms of electricity are met by the five gas turbines of the Power Cogeneration Plant, which make it energy self-sufficient. Steam is provided by the four steam-producing boilers, as well as the steam generated by certain units within the refinery. The sea water desalination units provide sufficient water of suitable quality to feed the boilers and fully meet the needs of the refinery.

The refinery is connected to the national natural gas network, allowing it to use natural gas as a raw material for the production

of hydrogen and as a fuel for its thermal and energy needs. This grants it valuable flexibility in selecting the optimal mix of raw materials and fuels, while further improving the refinery's environmental performance.

Liquid waste is collected and treated in the Industrial Waste Water Treatment Plant and the Urban Liquid Waste Treatment Plant. The refinery has a modern Truck Loading Terminal, which significantly strengthens the competitive position of MOTOR OIL in the southern Greek market.

## 3. Results 2016

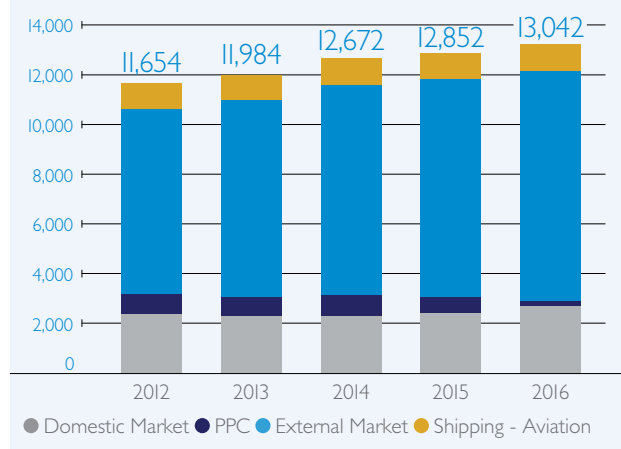
2016 was another great year for the refinery sector worldwide, and especially for the Mediterranean region. The great sophistication of our refinery did, however, allow the Group to make continual adjustments to the crude supply mix in order to take advantage as effectively as possible of the circumstances.

During 2016, enabling conditions were created for the refining sector in the Mediterranean basin as well as in the broader area, while at the same time, our refinery managed to procure crude oil at competitive prices with especially favorable financial terms. This resulted in achieving high refinery margins throughout the year, which reached the upper end of the sector and were significantly higher than the sectoral benchmark margins. The financial results were also positively influenced by the measurement of inventories. In this context, MOTOR OIL managed to set a new sales record, to further increase exports and cut its net bank debt to the lowest levels in its history.

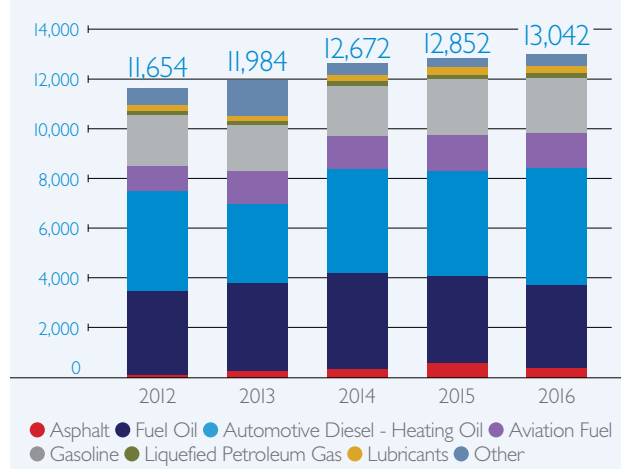
- It is highly important that MOTOR OIL product sales have been rising steadily in recent years, reaching 13.18 million tons\* in 2016 – a new historic record, despite the periodic maintenance of refinery units that lasted nearly a month. Its products are delivered to the three markets in which it operates (domestic market, exports and the shipping/aviation sector) through a powerful sales network and with the help of long-standing relationships with customers. The quantities supplied to each of these markets are determined by the relevant demand, but also by the company's aim of supplying its products to the markets that offer the highest margins. The sales figures show the company's steady export orientation, based on which foreign sales, including shipping/aviation sales, to more than 45 countries (the main destinations being Egypt, Saudi Arabia, USA, Lebanon, Italy and Turkey) accounted for 77.8% of all sales, compared to 76.1% in 2015. Exports are beneficial to the company also on an operational level, allowing it to finance the purchase of crude oil at the current price levels, ensuring a continuous supply of raw material to the refinery.

*\*13,042 thousand MT sales and 138 thousand MT from the sale of crude oil to a third party.*

**MOTOR OIL Sales per Market (thous. MT)**

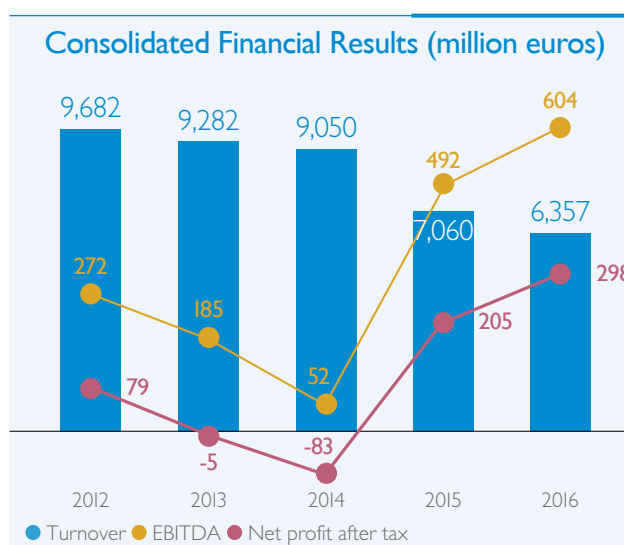


**MOTOR OIL Sales per Product (thous. MT)**





- The Group's turnover dropped by 10% in 2016 compared to 2015 and stood at 6.35 billion euros. The fall in the average prices for petroleum products by 18% contributed to this decrease; to some extent this was countered by a 3.86% increase in the volume of sales and the marginal appreciation of the US dollar against the euro by 0.23%.
- The Group's EBITDA was also substantial, amounting to 603.5 million euro in 2016 compared to 492 million euro in 2015, recording an increase of 22.7%. Similarly, the Group's net results after tax for 2016 reached 298 million euro compared to 205 million in 2015, recording a 45.4% increase. These results were the product of high refining margins during the course of the year, in combination with the appreciation in the value of the US dollar against the Euro. These good results were further reinforced by the positive contribution of the retail subsidiaries which benefited from a strong tourism period.
- MOTOR OIL had significantly increased its domestic market share, thanks to the performance of the retail trade networks of AVIN OIL and Coral, whereas in the past 2 years it dropped, reaching 31.4% in 2016. This drop is due to the decreased sales of fuel oil to PPC, whereas specifically



the decrease of 2016 is due to the absence of any sales of aviation fuels, which the company makes from time to time in the domestic market.

#### MOTOR OIL'S DOMESTIC MARKET SHARE

	2012	2013	2014	2015	2016
Fuels	35.0%	37.5%	38.0%	35.2%	33.5%
Shipping/Aviation	25.2%	26.7%	28.7%	26.2%	25.8%
Lubricants	46.9%	36.8%	40.4%	40.4%	52.0%
<b>TOTAL DOMESTIC MARKET</b>	<b>32.1%</b>	<b>33.9%</b>	<b>35.3%</b>	<b>32.7%</b>	<b>31.4%</b>

## 4. Corporate Governance

The management and control of MOTOR OIL are based on contemporary principles of good corporate governance, as prescribed by legislation and the relevant regulations, and by other international codes of best practice and auditing standards. The concept of corporate governance runs through its strategy, and as a practice it sets the tone for its daily operation, on subjects such as:

- the appropriate structure of its Board of Directors,
- respect for, equal treatment and protection of the interests and the rights of all shareholders,
- compliance with legal and regulatory provisions,
- transparency in decision-making procedures,
- the reliability and adequacy of all disseminated information, regarding the Group's strategy and financial results, or its financial transactions,
- the management of personnel and remuneration matters, and
- the identification, assessment and control of all inherent risks.

The company has its own Code of Corporate Governance

(CCG), prepared and approved by the Board of Directors. It sets out the framework for the basic operating areas of the company, as well as the best practices in corporate governance which it has adopted. The Code is revised as appropriate (amendment of articles of association, change in organizational chart, etc.) and is always available in its current form on the company website. The company's most senior decision-taking body is the Board of Directors, which is elected by the Annual General Meeting of Shareholders and which represents a broad range of knowledge, experience and qualifications, tailored to match the objectives of the company while ensuring, as far as possible, a numerical balance between executive and non-executive directors.

## I. Identity and Corporate Responsibility

COMPOSITION OF BOARD OF DIRECTORS		
NAME	BOARD POSITION	MEMBER IDENTITY*
Vardis J.Vardinoyannis	Chairman and Managing Director	Executive
Ioannis V.Vardinoyannis	Vice Chairman	Executive
Ioannis Kosmadakis	Deputy Managing Director	Executive
Petros Tzannetakis	Deputy Managing Director	Executive
Nikos Th.Vardinoyannis	Member	Non-executive
George Alexandridis	Member	Non-executive
Theofanis Voutsaras	Member	Executive
Michael Steiakakis	Member	Executive
Niki Stoufi	Member	Non-executive
Anastasios Triantafyllidis	Member	Non-executive/ Independent
Antonios Theoharis	Member	Non-executive/ Independent

\*In accordance with Law 3016/2002

Two committees, established in 1996 and each made up of three members, operate within the framework of the Board of Directors: the Compensation Committee and the Audit Committee. Both are chaired by the non-executive director Mr. G. Alexandridis, and on each committee the other two members are the non-executive and independent directors of Mr. A. Triantafyllidis and Mr. A. Theoharis.

The Compensation Committee advises the Board of Directors within the competences assigned to it by the latter. It deals with staffing issues and recommends policies on salaries, benefits and incentives for management and staff, also overseeing implementation of the said policies.

The members of the Audit Committee are recommended by the BoD and elected by the Annual General Meeting of Shareholders, in accordance with the provisions of Law 3693/2008, and all have substantial knowledge and experience in matters relating to finance, accounting and auditing.

The Audit Committee is of considerable assistance to the Board of Directors in performing its duties, acting as recipient of all reports on audits carried out by the company's Internal Audit Department. The legal auditor or auditor's office reports to the Committee on all matters relating to the progress and results of the regular mandatory audit, submitting a special report on any weaknesses in the internal audit system, particularly any shortcomings found in procedures relating to the provision of financial information and the compilation of financial statements.

Since 1990 the company has had its own Internal Audit Department, which reports directly to the Board of Directors and is overseen by the Audit Committee. The company's independent internal audit system aims at ensuring compliance with the company's procedures for managing financial and operational matters, as well as ensuring that issues related to the

efficient management of business risks are given proper attention. Lastly, the company's financial statements are also audited by independent chartered auditors, in compliance with its statutory obligations.

### Control and Risk Management Systems

In respect of the operation of the company's Internal Control and Risk Management - ICRM - Systems, in relation to the procedure for compiling financial statements, we should state that the MOTOR OIL financial reports system uses a sophisticated software package to produce reports to the administration and to external users.

Financial statements and other analyses are submitted to the administration on a monthly basis, and compiled in simple and consolidated form, in accordance with the International Financial Reporting Standards, for submission to the administration and for general publication, on a quarterly basis. Both reports submitted to the administration and financial information released to the public, contain all the necessary information expected from an updated internal audit system, featuring analyses of sales, costs and spending, operating profits and other details.

All reports to the administration contain details for the current period, for purposes of comparison with the corresponding figures in the budget, as approved by the Board of Directors, and with the figures for the same period in the previous year. All published interim and annual financial statements are compiled in accordance with the International Financial Reporting Standards, contain all necessary information and opinions on the financial statements, are reviewed by the Audit Committee and approved in their entirety by the Board of Directors.

## 5. Participation in International - National Agencies and Networks

MOTOR OIL and the Group's other companies support and maintain lasting relationships with international and national bodies, and are members of:

- The Global Compact Network Hellas.
- The Hellenic Network for Corporate Social Responsibility.
- The Hellenic Federation of Enterprises.
- The Athens Chamber of Commerce and Industry, the Hellenic-American and Arab-Hellenic Chambers, as well as other regional Chambers.
- The Hellenic Association of Independent Power Producers.
- The Union of Listed Companies, etc.

MOTOR OIL also participates in the following organisations:

- CONCAWE (CONservation of Clean Air and Water in Europe), which provides technical support to European refineries on Health, Safety and Environmental Protection issues.
- Oil Companies International Marine Forum (OCIMF), which is an association of petroleum companies with an interest in promoting the safe and environmentally friendly marine transportation of crude oil and petroleum products.
- Mediterranean Oil Industry Group (MOIG), which is an oil industry forum on issues relating to prevention and timely response to marine pollution, intended to coordinate the industry in the event of major oil spill incidents in the Mediterranean Sea.

Moreover, we support the academic community in research exploring refining industry issues relating to health, safety and environmental protection.

In this context, MOTOR OIL:

- Continues to cooperate with the Applied Geochemistry Laboratory of the Geology Department, Patras University, for the determination of chemical conditions prevailing in the refinery's coastal zone.
- Cooperates with the Universities of Nottingham and Ulster, the Research Institutes of CERTH in Thessaloniki, UniCRE in the Czech Republic, CIEMAT in Spain, LNEG in Portugal, companies IBERCAT in Spain, VUHU in the Czech Republic and ESTRA in the UK for the realisation of the DIRPIMCOAL project. The DIRPIMCOAL research project aims at the environmental optimisation of the liquefaction of coal from industrial and urban waste for the production of biofuels.

## 6. Awards and Recognition

The Group's companies have received significant recognition for their work and activities from the international and national business communities. The distinctions underline the superb quality of their products and services, and highlight the importance attached by the Group to effective meeting of social needs.

Business CHRIMA Awards	1 <sup>st</sup> prize in the "High Investments" category for MOTOR OIL.
ICAP True Leaders	MOTOR OIL ranked 3 <sup>rd</sup> in the ICAP list with the most profitable and robust businesses.
Joint Inspection Group	OFC was awarded for the ninth consecutive year with the JIG "Certificate of Excellence". This is a global first, which none of the 180 companies inspected by JIG has achieved ever before.
Safety Awards	<p>Coral won the WINNER award in the Petroleum product category for the evaluation method of the Sustainable Development model it implements.</p> <p>AVIN received Silver award for the Safety at the Workplace Campaigns category, for the "Safety Day" program it implements each year.</p> <p>Coral Gas was awarded for reaching 1,500,000 hours with no accident throughout the entire chain of its operations.</p> <p>Coral Gas won the Gold award in the Identification &amp; Solutions of Work Risks category, for its new ARI-ADNE tool, that records and monitors all safety incidents and near-misses, in an easy and effective manner.</p>

## I. Identity and Corporate Responsibility

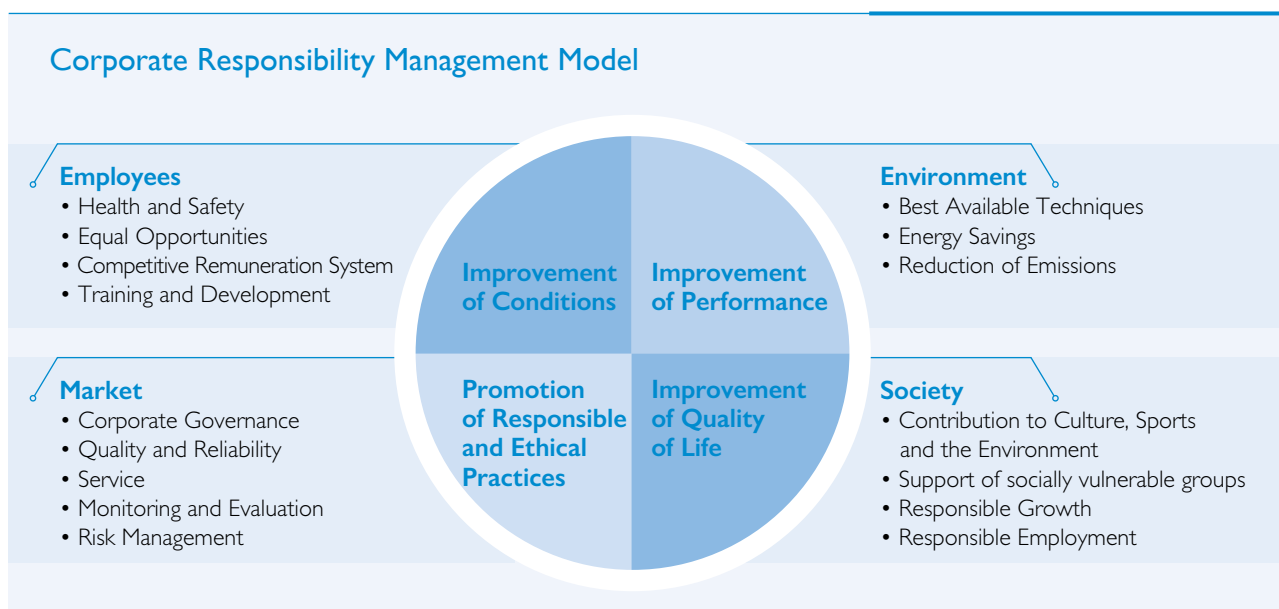
### 7. Managing Corporate Responsibility

The MOTOR OIL Group is engaged in the energy sector, mainly in the oil sector, which is an area requiring special respect for and compliance with the principles of Corporate Social Responsibility and sustainable growth. This is because crude oil, from extraction and transportation to refining and use of refined products, has environmental effects that must be effectively managed, utilising available technology.

In implementing the principles of corporate responsibility, we seek:

- to achieve a balanced approach to the economic, social and environmental impact of the Group's operations,
- to create value for our shareholders, while also serving the interests of other stakeholders,
- to show concern for our employees and for society at large.

We fully acknowledge the importance of these issues and demonstrate our corporate responsibility by our commitment to pursuing our business activities with due respect for people, the environment and society. MOTOR OIL has adopted a Corporate Responsibility Management Model that incorporates the four sectors of action inspired by the UN Global Compact and the internationally accepted Global Reporting Initiative (GRI).



#### **MOTOR OIL:**

##### ***With Responsibility towards its Employees,***

adopts the four principles: attract, identify, develop, retain, in order to develop its human resources, by investing in their training, and providing a workplace environment that is characterized by good team-work, mutual respect and is conducive to individual initiative. In such a workplace, Health and Safety constitute a major priority which is assured through state-of-the-art infrastructure and contemporary management practices.

##### ***With Responsibility towards the Environment,***

strives to ensure that its activities have the minimum possible impact on the environment, by having in place an effective Environmental Management System and implementing Best Available Techniques, as well as the most advanced systems for environmental protection, energy management and energy saving.

##### ***With Responsibility towards Society,***

pursues constructive social dialogue with the local communities in which it operates, in a climate of trust and respect. It supports these communities by participating in programmes that enhance their economic, social and cultural life, and becomes involved in similar activities that benefit society as a whole.

##### ***With Responsibility towards the Market,***

respects market rules and produces top quality products; it focuses on relations of trust with its customers, suppliers and partners, and strives to ensure the best possible return for its shareholders without compromising its principles of corporate responsibility and sustainable development.



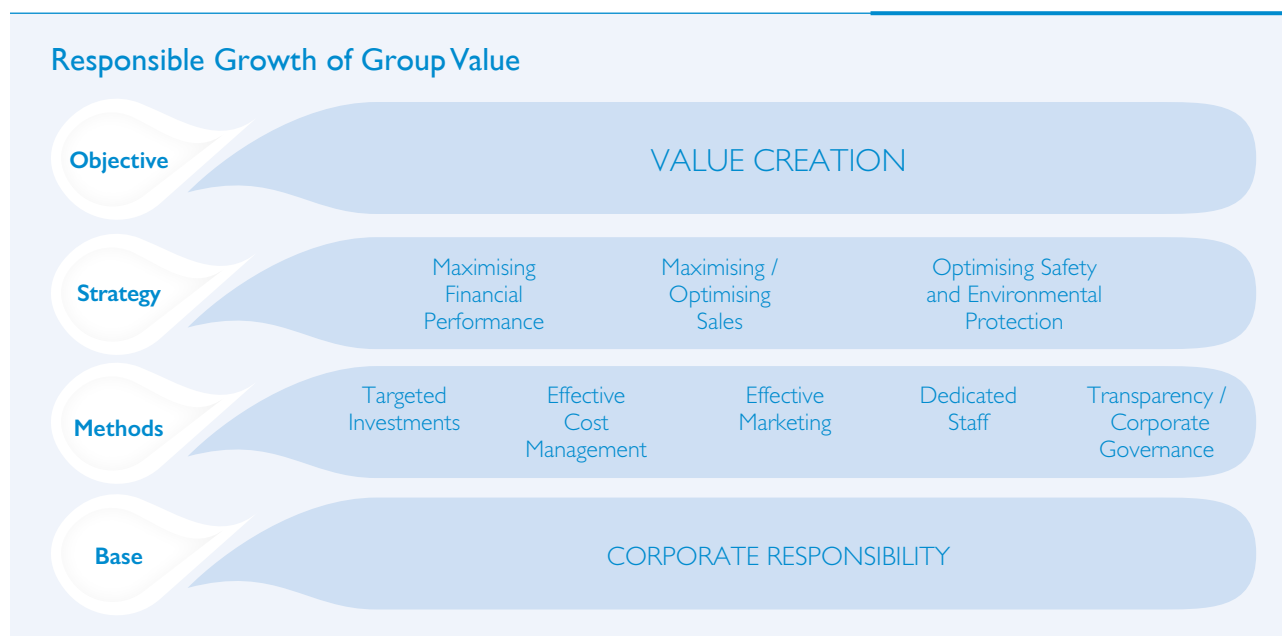
## Responsible Management of the Supply Chain

A key element in our corporate responsibility is the proper management of our supply chain, aware as we are that a sustainable supply chain not only reduces social and environmental risks but can also enhance values and success on the business and social levels. We thus carry out detailed evaluation of our potential suppliers, on the basis not only of their economic viability but also of qualitative and environmental criteria. Would-be suppliers are asked to complete questionnaires detailing their ability to safeguard the quality of the products and services they aim to provide, as well the environmental impact of their activities and the health and safety systems they employ.

In respect of the contractors we employ at the refinery and our other installations, we follow a comprehensive programme of safety training, the objective always being to achieve GOAL ZERO, i.e. zero accidents. As an example, in 2016 we carried out a comprehensive programme, for all refinery contractors (2,872 people), who attended a training programme with a total duration of 22,976 hours, sat for examinations and were awarded a certificate. Detailed evaluation and training programs are also implemented in the tanker companies which meet our land transport needs. We are aware that every day dozens of tankers are travelling the roads on our behalf, and are committed to minimizing the risks inherent in road transport. For this reason, we have developed very detailed programmes in which transportation companies are assessed and given rigorous improvement targets; if they fail to meet them, their contracts are not renewed. As a result of this ground-breaking programme, by the end of 2016 the road tankers we use had travelled a total of 20,000,000 km without a single accident.

## 8. Responsible Growth and Investments

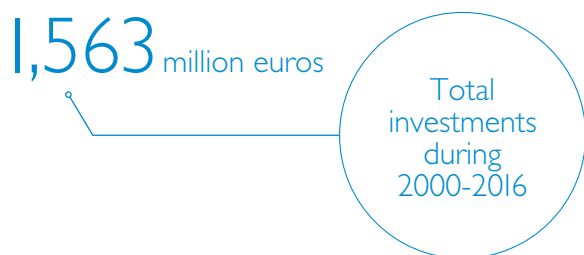
Responsible growth and creation of value for the benefit of all stakeholders, is at the core of MOTOR OIL Group's business model. We therefore adopt an investment program allowing the attainment of a good operating performance in all sectors, with substantial financial results as the final outcome.



## I. Identity and Corporate Responsibility

Our vision is the consolidation of MOTOR OIL's position as a leading refining and oil products marketing company in the broader region in which we operate. In order to succeed in this objective, we focus on the following three key targets:

- Maximization of financial returns and profit margins of refinery.
- Maximisation and optimisation of sales, by effectively marketing the refinery products and exploiting opportunities in our three available markets (domestic, aviation/shipping, and exports), for achieving the best possible profitability.
- Striving for the highest standards of Health and Safety, Environmental Protection and Quality, through the application of technical and operational adaptations.



Total investment expenditures by the Group in the period 2000-2016 have amounted to 1,563 million euros, not including capital used for acquisitions.

Total investment expenditures for 2016 amounted to 86.4 million euros, and regarding the refinery, it included periodic maintenance of the refinery units, during which numerous and substantial operational upgrades were carried out. A project was also realised with the purpose of upgrading the kerosene production procedure and new tanks were constructed, in the area created after the underground placement of the PPC electricity cables, aiming at increasing the refinery's storage capacity.

Over the last fifteen years we have completed a series of substantial investments for MOTOR OIL concerning both

organic growth and acquisitions. The company has now entered a period of maturing investments and optimization of their exploitation. At the same time, 6 years after the purchase of Shell operations in Greece, a significant increase in its domestic market share is clear to see, demonstrating the increased efficiency of the Coral and AVIN OIL networks, as well as that of Cyclon which was fully bought out by MOTOR OIL in late 2014.

The most recent major investment, the construction of the new Crude Distillation Unit - completed in 2010 which cost, together with the peripheral units, a total of 200 million euros - has strengthened its competitive position and improved its profitability, having now been on-line for more than six full years. Moreover, a large investment in the last decade has been the installation of the hydrocracker complex, which made possible the generation of clean fuels to meet European Union specifications.

The rest of our investment programme has been designed to upgrade the technological capacity and efficiency of the refinery, and to introduce vertical integration, automation, energy autonomy and environmental protection. The result has been that the refinery is now regarded as one of the most efficient and sophisticated installations of its kind anywhere in the world.

## 9. Responsibility for the Environment, Health and Safety

Ensuring health and safety and environmental protection constitutes a fundamental strategic aim. Thus, we strive to conduct our operations without compromising the health and safety of our employees and associates, while maintaining the highest standards of environmental protection and respecting the quality of life of those living in the vicinity of our industrial facilities.

The importance we attach to the management of health, safety and environmental protection, and our commitment to continuous improvement in these areas, is set out in the relevant policy that governs the operation of the Environmental Management System (ISO 14001:2004 compliant, the first such

certification dating back to 2000, and EMAS III ER I221/2009 compliant, first certified in 2007) and the Health and Safety Management System (OHSAS 18001:2007 compliant, first certified in 2008), which interpret this Policy into detailed programmes and measurable targets.

## Health, Safety and Environmental Protection Policy

MOTOR OIL operates with due respect for Health, Safety and the Environment. To achieve this, the company is committed to:

- Setting aims compatible with the continuous improvement of its Health, Safety and Environmental management systems.
- Complying with, or exceeding, the requirements of relevant legislation or other obligations.
- Producing guaranteed quality products in accordance with, or exceeding, Health and Environmental Protection specifications applicable to each, efficiently making use of raw materials, energy and technology.
- Reporting its performance, good or bad, as a responsible corporate citizen.
- Maintaining emergency action plans and systems which are regularly rehearsed with the appropriate drills.
- Applying a coherent Integrated Management System that takes Health, Safety and Environmental Protection factors into consideration when business decisions and plan are being prepared, and in the operation of its facilities.
- Offering information and training to its own employees and to subcontractors and others working on its behalf, so as to ensure their commitment to and raised awareness of safe working practices.
- Actively and uncompromisingly complying with environmental operating standards that set limits on waste and polluting emissions.
- Cooperating with all stakeholders in developing and applying balanced Health, Safety and Environmental Protection programmes that take into account the needs of all parties involved.

## 10. Responsible Quality Management

Our commitment to quality is a fundamental element of our strategy. MOTOR OIL's quality policy is summed up in two key principles, to which both management and employees are fully committed:

- MOTOR OIL will produce and sell products that satisfy its customers, always taking into consideration all stakeholders' interests.
- MOTOR OIL focuses on its customers, examines and evaluates their requirements and applies all necessary technologies and actions, aiming at avoiding compromises in quality matters and constantly improving the effectiveness of its Quality Management System.

The Integrated Management System, used to implement our quality policy, is oriented to the customer and his needs, covering systematically all operational and organizational processes relating to quality. The System was re-certified in 2014 by Bureau Veritas, in accordance with standard ISO 9001:2008, valid until 2017, while the first relevant certification dates back to 1993.

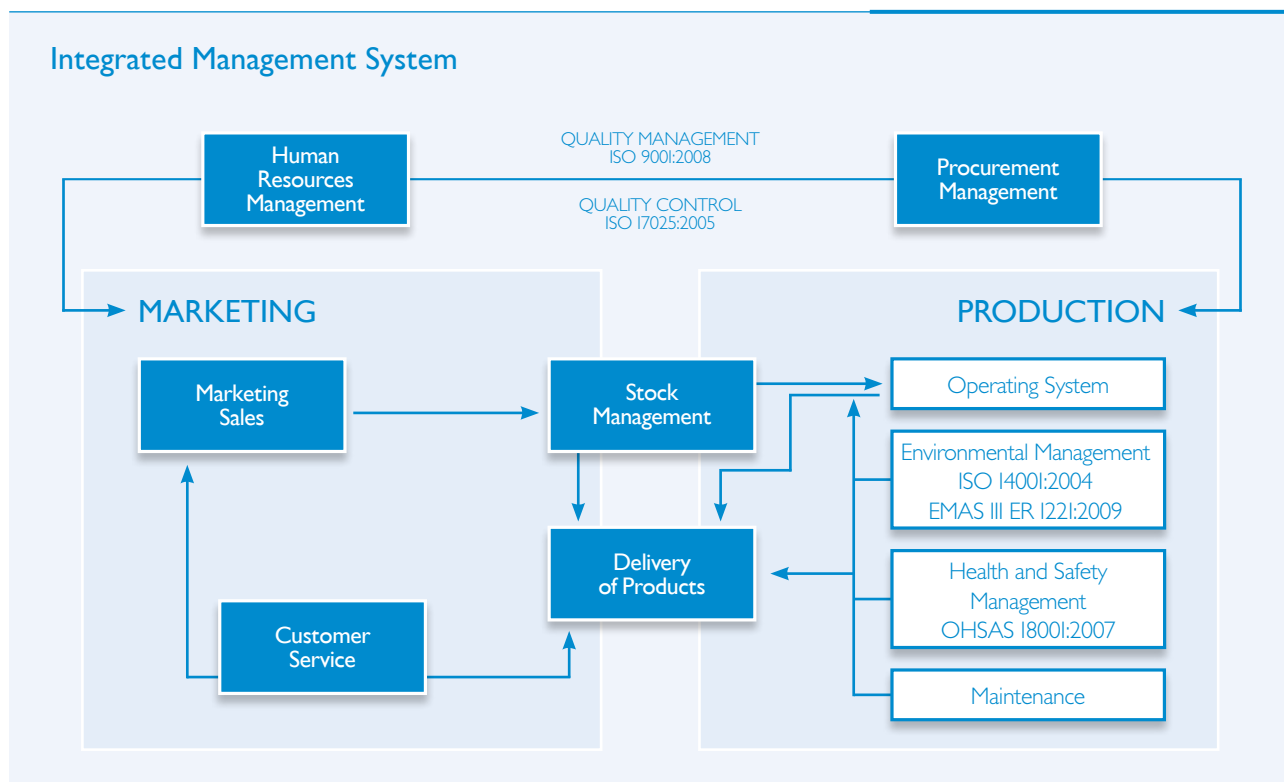
The consolidation of the ISO 14001:2004 Environmental Management System and the OHSAS 18001:2007 Health and Safety Management System into the Integrated Management System confers the necessary internal coherence and links these management systems with other related processes which affect them, thus maximising their effectiveness. Since October of 2016, our company has also been certified with the 2BSvs Certificate, related to the control of the biofuels and the blending of fossil fuels with biofuels.

The Quality Control process meets the requirements of the

ISO 17025:2005 standard, and the Hellenic Accreditation System (HAC) has certified the refinery's Chemical Laboratory as capable of conducting tests in accordance with requirements of the standard, and issuing Quality Certificates endorsed by HAC for virtually all the company's products. This certification offers us an additional competitive advantage, ensuring that of our products is guaranteed. The refinery has also been awarded CE Marking in accordance with standard EN 12591 for asphalt products, the certification remaining valid until 2017. All Management Systems are subject to bi-annual or annual audits, by the certification bodies, in order to confirm their consistent implementation, in line with the requirements of each one, and they are re-certified every three, four or five years, depending on the System.

The appropriate development of these management systems is realised by achieving certification for their updated versions. In addition, customers and insurance organisations carry out audits.

## I. Identity and Corporate Responsibility



### Certified Management Systems of the Group's Subsidiary Companies

- AVIN OIL operates a Quality Management System certified according to ISO 9001:2008 covering fuels and lubricants storage, marketing and distribution, and retail network management.
- Coral has been certified across all its activities since 2012. Specifically, ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007 certifications were secured for Coral's procedures for taking delivery, storage, mixing, loading, transportation, service station management and delivery to customers of various fuels products, lubricants and chemicals.
- Coral Gas operates an Environmental Management System, with ISO 14001:2004 certification, and a Health and Safety Management System with OHSAS 18001:2007 certification, for all its facilities and ISO 9001:2008 certification for its Quality Management System.
- OFC has a Quality Management System, certified to standard

ISO 9001:2008, an Environmental Management System certified under ISO 14001:2004 and a Health and Safety Management System certified under OHSAS 18001:2007/ ELOT 1801:2008. These certifications relate to the main activity of the company which is the delivery, storage and distribution of aviation fuel, as well as the provision of technical consultancy services and training in aspects of the refuelling of aircraft. In 2013, a Fire Safety recertification was granted for the next five years.

- LPC has a Quality Management System in place, certified to standard ISO 9001:2008 for the design, production, sale and distribution of base lubricants, antifreeze, greases and chemical products and to EMAS (EL 00051) and ISO 14001:2004 for the waste lubricant oil regeneration procedure.

## II. Communication with Stakeholders

We recognize that our business operations and decisions affect - and are affected by - various groups of stakeholders. The long-standing communication and cooperation we have developed with stakeholders indicates the importance we attach to this issue, and our desire to openly discuss that any arising issues can be handled in mutually acceptable ways. Direct stakeholders and, in summary, their interaction with the Group companies, as well as the communication approach applied to each of them, are shown in the following table:



STAKEHOLDERS	IDENTITY	KEY ISSUES OF INTERACTION	COMMUNICATION APPROACH
Employees	1,925 direct employees, with about 52% of them working in the refinery (see Chapter 2).	Employees offer their labour, knowledge and experience in return for a safe working environment, competitive and fair salaries and additional benefits as well as opportunities for professional advancement and personal development.	Ongoing, two-way communication between employees and management through corporate announcements, briefings, intranet, working groups and various events. The refinery employees are represented by their Trade Union and the Health and Safety Committee. Official dialogue is regularly conducted; employees are also encouraged to submit their individual proposals for improvements in working conditions.
Customers	The refinery, due to the nature of its activity, has relatively few customers. The Group's commercial companies have an extensive network of customers, from industrial facilities and commercial companies to final consumers.	The refinery is in continuous communication with its customers in order to satisfy their requirements and provide high quality products, and is duly rewarded with the income it receives. The Group's commercial companies place customer service at the very heart of their strategy, offering them products and services of the highest quality.	Long-standing and close relationships with our customers, based on the quality of our products, the service we offer, our experience, and our reliability. We maintain ongoing communication with refinery customers, and once a year conduct a satisfaction survey. In the commercial companies, the customer service departments and staff of our service stations are the public face of the company. We organize mystery shopping programmes for all our service stations and market surveys.
Local communities	Our industrial activities impact local communities in the vicinity of the refinery (Ag. Theodoroi, Corinth) and the facilities of the commercial companies (Perama, Kalohori Thessaloniki, Kavala, Hania).	We closely collaborate with the local and regional communities, whose key concern is the creation of jobs and the return of the so-called social product through the company's social contribution.	Continuous communication and interaction with local communities through local councils and other agencies such as private associations and organizations (see Chapter 5). Our sustained commitment and ongoing communication allow us to listen to the local community's needs and respond promptly and meaningfully.
Partners and suppliers	Suppliers of products and providers of contract services at the refinery, at the other facilities and at our service stations.	We are closely collaborating with our partners and suppliers for the provision of products and services based on rigid quality and safety criteria. Consequently, they are fairly rewarded, without problems, for the provision of products and services, ultimately resulting in contribution to economic development.	We have long-standing and close relationships with our partners and suppliers. There is a structured communication and training programme at the refinery, as well as all of our facilities, offering them appropriate information on health, safety and environmental protection issues, for which compliance requirements are exceptionally strict and closely monitored (see Chapters 1 and 3).
Shareholders, Investors and Analysts	The company's equity is held by private and institutional investors, both Greek and foreign. At the end of 2016 the main shareholder was Petroventure Holdings Ltd, with a stake of 40%. The free float percentage was approximately 53%. The business activities of MOTOR OIL are monitored by both Greek and foreign financial analysts.	Shareholders invest capital in MOTOR OIL, as in any other company, in the expectation that there will be long-term financial returns, including dividends and an increase in value of their shares.	The company operates a Shareholder Services Department. Regular communication with shareholders is conducted in various ways: roadshows 7-8 times a year; an Annual Analysts' Briefing once a year; 4 quarterly teleconferences with financial analysts; on the company website; press releases and announcements; the Annual Financial Report and Sustainability Report, and regular attendance at investment conferences.
State	Public authorities on a local and national level.	We are in close interaction with the State and create revenues through the payment of taxes and duties. Public authorities protect the public interest with laws and regulations, ensuring their enforcement, issuing operating licences and providing support in emergency situations.	We always operate within the confines of the law. There is an open and honest, two-way communication and cooperation with competent Public Authorities, ensuring the supply of information required by each body, as well as documented discussion on any issues arising.

# 2. Responsibility towards our Employees

An aerial photograph of an offshore oil platform and two large oil tankers. The platform is a complex of steel structures with various pipes and equipment. Two large tankers are positioned alongside it, one on the left and one on the right. The water is a deep blue, and the sky is a lighter blue. The overall scene is industrial and maritime.

At the MOTOR OIL Group we believe that our value is generated by our employees.

We recognise that they are our most valuable resource, essential to the achievement of our strategic goals, to the successful implementation of our growth business plans and in ensuring our long-term competitiveness.

That is why we have established an organised and modern Human Resources Division for the entire MOTOR OIL Group aimed at identifying, attracting, developing and retaining qualified employees and executives who can be utilised by all the companies.

We aim to provide a safe and fair workplace, which promotes trust, team spirit and respect for people, along with effectiveness.

We are committed to providing the best possible working conditions, securing respect for human rights and for the freedom of association, upholding non-discrimination and providing equal opportunities for learning and personal development.

During 2016, the MOTOR OIL Group had an average workforce of 1,925 employees.

In the midst of the profound economic and social crisis afflicting our country, we continued to renew our workforce through 300 recruitments over the last five years, offering an extended training programme and continuing the provision to our employees of a structured discretionary benefits package.



1,925

Employees  
at Group  
level

300

Recruitments  
during  
the years  
2012-2016

Training  
hours  
in 2016

21,000



## 2. Responsibility towards our Employees

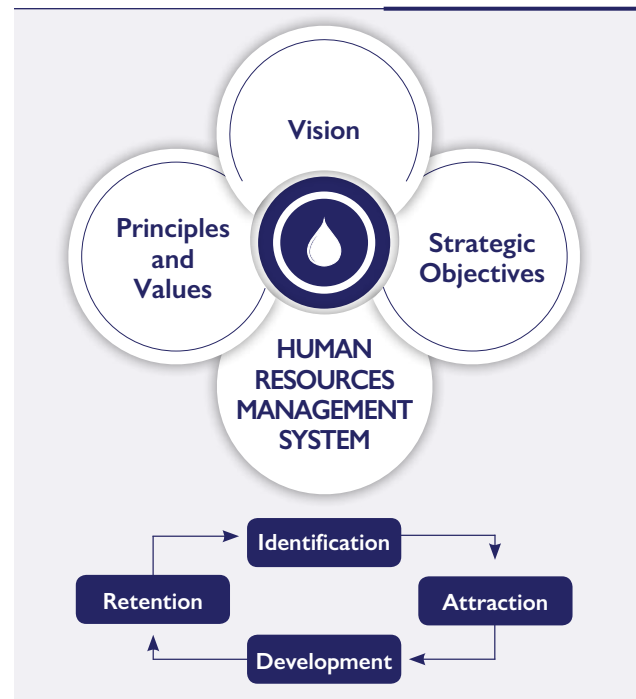
### I. Human Resources Management System

The MOTOR OIL Group has grown significantly over the last few years and has adopted a contemporary, fully integrated Human Resources Management System. The System is designed to allow proper management of the Group's human resources, with ongoing development and advancement of individual employees. This system is founded on the principles and values of the Group and defined by its vision and strategic objectives.

The purpose of the Human Resources Management System is to identify and attract the most talented executives on the market, develop them and retain them within the Group.

All of the above are implemented by the Group's HR Division within the following framework:

- Compliance with applicable legislation, and universally established principles of human and labour rights.
- Fairness and meritocracy in employee relations.
- Attracting competent young people having a professional approach to work, who share our values: reliability, dedication, integrity and personal responsibility.
- Providing equal opportunities and possibilities for the professional and personal development of employees.
- A competitive and fair remuneration system linked to employee performance and consistent with prevailing market conditions.
- Offering pay and benefits exceeding those provided for by law and by collective labour agreements.
- A programme of targeted education and training, covering subjects relevant to the Group's strategic development goals, and aiming at the effective and safe discharge of duties.
- Fostering corporate culture and corporate values.



### 2. Equal opportunities and human rights

All aspects of human resources management are pursued with transparency and are based on meritocracy. We offer a workplace of no exclusions, in which all are treated fairly and are offered equality of opportunity, and where diversity is valued. Recruitment, transfers, promotions, benefits, education and training, etc., are governed by the principles of our equal opportunities policy, the avoidance of any form of discrimination, and respect for employees' dignity.

In applying the equal opportunities policy, we have ensured:

- That the composition of management reflects the composition of the workforce.
- That education and training programmes are available to all personnel, in accordance with business needs.
- Equal pay for men and women.

We support attempts to build a society free of exclusion, in which persons with disabilities can be productively integrated into the community. We ourselves employ 18 people with disabilities, who enjoy equal opportunities in employment and education.

MOTOR OIL fully respects international principles of human rights, in particular those set out in the United Nations

Declaration of Human Rights, and in the UN Global Compact's ten principles, to which we are signatories. The Group is opposed to any practice which might encourage the imposition of any form of forced or child labour. It complies fully with national legislation on child labour; there are no instances of forced or child labour anywhere in the Group's activities, nor would they be acceptable. It should be noted that all MOTOR OIL's activities take place exclusively on Greek territory, where the legislative framework is consistent with the requirements of the 1998 Declaration of the International Labour Organisation (ILO) on Fundamental Principles and Rights at Work, to which reference is made in the Constitution and in labour law. The Greek legal provisions include conventions concerning the protection of freedom of association and the right to collective bargaining.

### 3. Labour Relations - Relations with Trade Unions

At MOTOR OIL, the terms and conditions of employment are regulated by a Collective Labour Agreement, which was drawn up in September 1974, and is approved by the Ministry of Labour.

As is made clear by the recent materiality analysis described at the end of the Report, it is extremely important to our Group – and particularly to the refinery due to the complex nature of the work it entails – that employees can join unions and professional associations freely and without restraint. Refinery employees are represented through their trade union and the Health and Safety Committee. The union has had a Collective Labour Agreement with the Hellenic Federation of Enterprises since 1986. This agreement lays down the terms of employment and pay levels at the refinery.

Since 2006, there has been a Company Collective Labour Agreement

between the company and the union, which is renewed every year and is then submitted to the Corinth Labor Inspection.

We believe that smooth cooperation between the Company and the employees' union is extremely important - particularly so in difficult times like the present, when we are experiencing the effects of the severe economic crisis. We, therefore, hold regular meetings with union representatives, the common aim being to ensure harmonious bilateral relations, avoid disputes and preserve labour peace, while continuing to achieve improvements in working conditions.

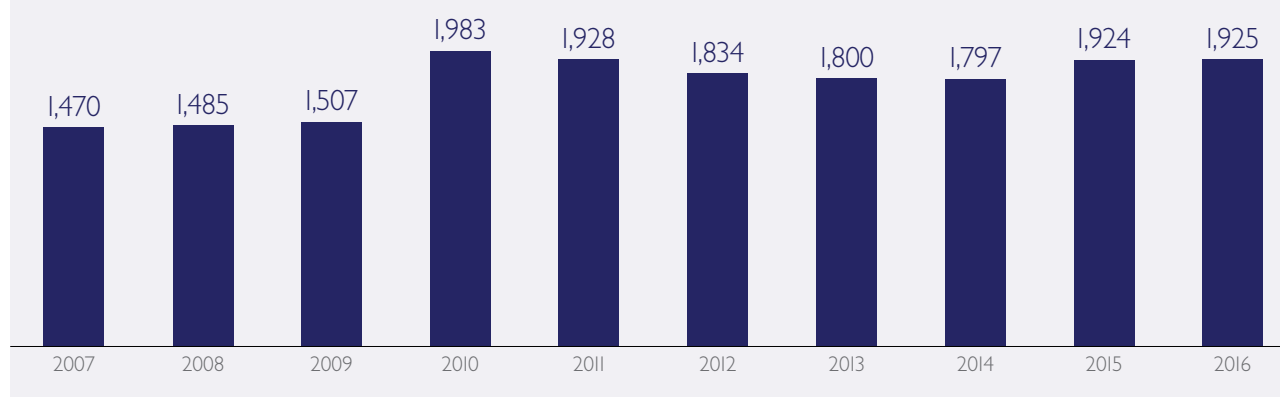
### 4. Basic employment data

In 2016, the size of the combined human resources of the Group (MOTOR OIL, AVIN OIL, Coral, Coral Gas, OFC and LPC) - averaged over the year - was 1,925 employees. In addition to personnel directly employed by the companies of the Group, a significant number are indirectly employed through sub-contractors.

96.6%

of group employees at the end of 2016 were on open-ended contracts

Workforce (yearly average)



WORKFORCE 2016 (PER COMPANY)

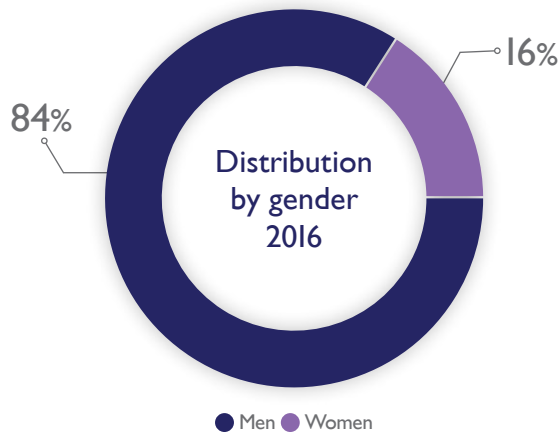
MOTOR OIL	1,193
AVIN	178
CORAL	288
CORAL GAS	104
LPC	139
OFC	23



## 2. Responsibility towards our Employees

MOTOR OIL's main area of activity is the refinery at Agioi Theodoroi, Corinth, where in 2016 an average of 991 persons were employed.

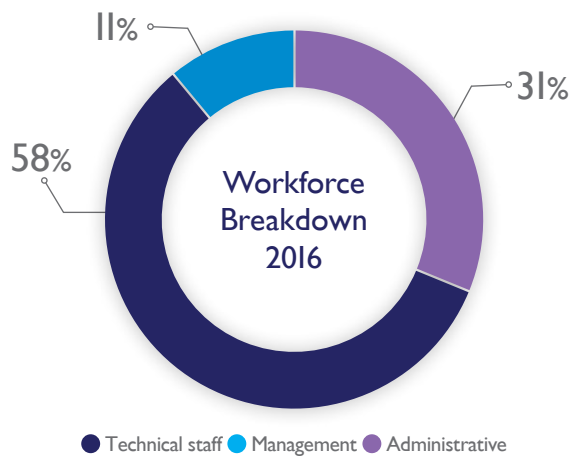
Approximately 55% of the refinery personnel live in the greater region of Corinth, where MOTOR OIL is the biggest employer.



### Gender Profile

We support equal treatment for men and women, with equal opportunities for all, without discrimination. However, owing to the nature of the work and the skills required at our refinery, the percentage of women employees is relatively low. Thus, in 2016, on average, 16% of all employees were female, while at the Group Head Offices, the number of women rises to 37.5%.

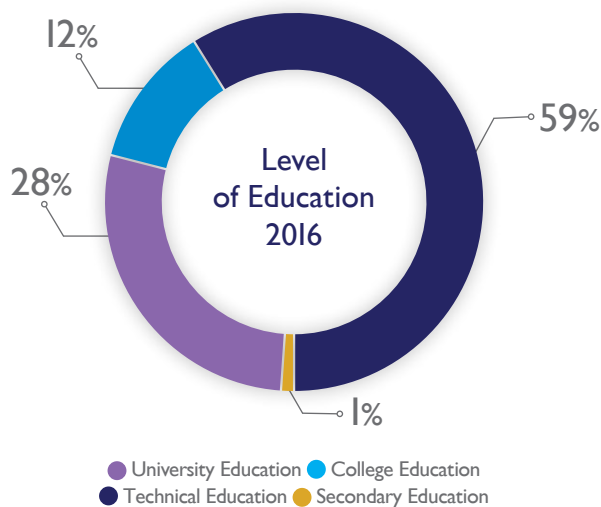
Among management, women made up 14% of the total, a satisfactory reflection of the overall participation of women in the total workforce, while in other office and technical jobs the percentage was 16%.



### Workforce Breakdown and Professional Advancement

In 2016, management comprised 11% of the total personnel of the Group, while technicians-operators and administrative personnel accounted for 89% of the total number of employees.

Each employee has the opportunity for promotion within the management hierarchy, according to his qualifications, performance and skills, as the main objective is to fill vacant managerial positions from within the Group wherever and whenever possible. In fact, each vacancy is first advertised internally; the position is opened to external applicants only if no suitable internal candidate can be found.



### Level of Education

We attach great importance to the educational level of our personnel, and our aim is to attract, develop and retain suitable and competent employees. All of the employees hired for executive positions in 2016 were university graduates.

In order to further develop the skills of our personnel and to maintain a high-output culture in the workplace, various further education and vocational training programmes are organised in new technologies and systems, while employees are encouraged to participate in long-term external courses leading to recognized degrees.

### Average Age - Age Range

The average age of the Group workforce is around 43.4. It should be noted that in 2016 56% of the workforce were under 45.

### Length of Employment and Turnover of Employees

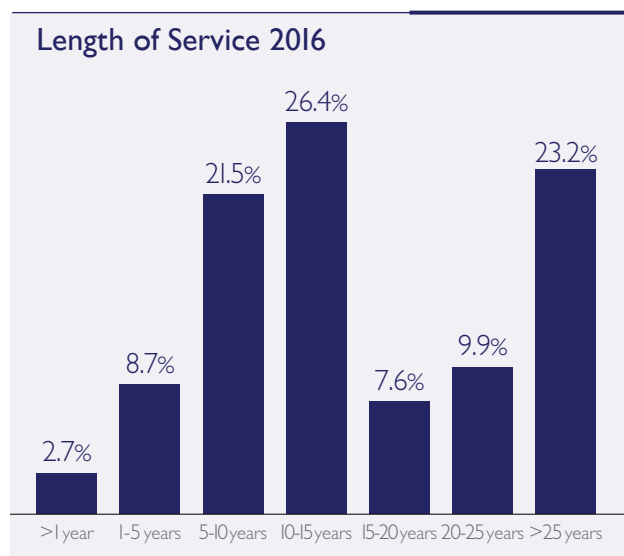
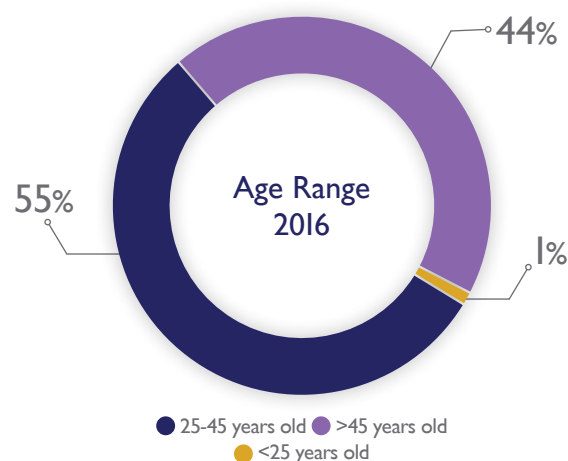
Length of employment with the Group was, on average, 16 years. 67.1% of employees have been with the Group over ten years, while only 11.4% have less than five years of service.

In 2016 staff mobility was 3.9% and is a reflection of the reciprocal confidence, loyalty and satisfaction of our employees.

Long-term employment at MOTOR OIL is rewarded by additional salary increments. In addition - at the refinery, at Coral and at Coral Gas - commemorative gifts of value are made to employees completing periods of long service; these gifts vary from company to company and are commensurate with the years of service.

In 2016, the permanent staff increased by 73 new employees while 75 persons left for various reasons.

We ascribe great importance to attracting and hiring new management executives. In the last years, we have embarked upon new collaborations with top universities around the world through which we seek to attract new candidates. These candidates are assessed through a thorough and detailed process that includes behaviour and skills measuring tools, in-depth interviews and a final selection panel.



STAFF MOBILITY					
	2012	2013	2014	2015	2016
RECRUITMENTS	70	53	26	76	73
STAFF DEPARTURES (CLASSIFIED BY REASON)					
RETIREMENT	75	28	29	20	20
RESIGNATION	17	11	15	9	20
VARIOUS	15	11	12	17	35
<b>TOTAL</b>	<b>107</b>	<b>50</b>	<b>56</b>	<b>46</b>	<b>75</b>
STAFF MOBILITY*	5.8%	2.8%	3.1%	2.4%	3.9%

\*STAFF MOBILITY =  $\frac{\text{DEPARTURES}}{\text{AVERAGE NUMBER OF EMPLOYEES}} \times 100$

## 2. Responsibility towards our Employees

### 5. Remuneration system and additional benefits

One of the Group's main objectives is to offer its employees competitive remuneration, both to reward their contribution and to maintain a high level of employee satisfaction.

The system we implement in order to set, manage and review salary levels is in line with current company and sector-specific agreements, and is consistent and transparent.



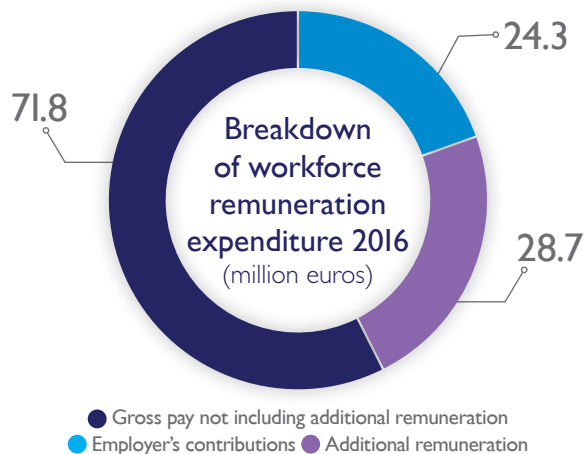
Negotiations covering collective agreements on salary adjustments are in line with sector practices that are applied at national level. Moreover, the structure of the remuneration system ensures equal pay for men and women doing the same work, and rules out any other form of discrimination. The factors determining wage/salary levels are mainly the employee's grade and performance, the responsibilities and accountabilities of the position held, the educational level and the seniority/ length of service.

to the Group's performance.

#### Additional discretionary benefits

The Group introduced many years ago a wide range of supplementary, discretionary allowances and insurance benefits for employees and their family members. These discretionary employee allowances cover five main areas:

- Personal development and welfare.
- Covering medical treatment cost in case of health issues.
- Family assistance.
- Provision of various other facilities.
- Strengthening corporate culture, and cultivating cooperation and team spirit.



The Group's total expenditure on wages/salaries in 2016 amounted to 124.8 million euros. This includes pay for regular and overtime work, mandatory employer contributions to social security funds and other additional allowances over and above those laid down in either labour legislation or collective agreements. These additional, non-statutory allowances are discretionary payments to employees intended to reward productivity and acknowledge the contribution of individuals

Such employee benefits are: insurance policies providing both pension and medical treatment coverage for employees, schemes helping employees with the costs of their children's education, Christmas parties for employees' children, long-service awards, support for employees participating in sporting activities, etc.

#### Voluntary blood donation

Blood donations by employees of MOTOR OIL have become a tradition, now with a 30-year history. The programmes are run in association with the Corinth General Hospital (for employees at the refinery) and the Metaxa Specialist Cancer Hospital (for employees at the MOTOR OIL head offices). Overall, the resulting blood reserves are used to cover the needs of the blood donors themselves, their families or close relatives, and other people, in the event of an emergency. We managed to collect 123 blood units in 2016 and the total amount donated through the years exceeds 3,600 units.

## Sports Activities for Staff

To promote and improve team spirit and employee involvement, we encourage their participation in various sporting activities.

### Athens Classic Marathon

For the second consecutive year, MOTOR OIL supported employees from the entire Group taking part in the biggest sports event in Greece - the 34<sup>th</sup> Athens Classic Marathon, which took place on November 13<sup>th</sup>. To help the entrants better prepare, training sessions were held a few months before at OAKA Olympic Stadium, at Andreas Sygros Park and the municipal track of Corinth with the help of an experienced trainer. On the day of the race, 68 people took part in the 5km, 70 people in the 10km, and 12 people ran the 42km Classic Marathon, all finishing in the packed Panathenaic Stadium. It is noteworthy that MOTOR OIL secured 100 of the 150 entries through the Desmos non-profit organisation, thus supporting its worthwhile work.

### Football and basketball teams

In 2016, the MOTOR OIL employees' football team performed exceptionally well, winning 3<sup>rd</sup> place in the 24-team Amateur Athens Corporate Games League. The team has won a total of 18 titles, including 9 doubles, and has also performed very impressively in foreign fixtures.

Meanwhile, the basketball team competed in a corporate league that featured 50 company teams and took 25<sup>th</sup> place in the event.

## 6. Education and Training

Investment in ongoing training for our employees is a strategic choice and a key element in the process of aligning our workforce's skills with the full range of objectives and ambitions of the Group.

Therefore, given the critical importance of the issue, the MOTOR OIL Group designs and implements each year, a comprehensive programme of education and in-house training for employees. The basic objective served by our programme, is to continually enrich the vocational knowledge of our employees, expanding their range of skills, while also upgrading their level of technical training, allowing them to carry out their everyday and more long-term tasks.

5.9 million euros

for education  
and training  
programmes  
over the period  
2012-2016

### Education and Training Programmes

The parameters determining the planning and implementation of the education and training programmes are the educational needs of the workforce as identified in the working environment each year. The planning of such programmes is based on:

- The Group business objectives.
- The training programmes organized in previous years.
- The training required in areas of technical specialization.
- Training needs in the areas of health and safety, with emphasis

on the technical side, and the propagation of a safety culture in all levels of the workforce.

- Training needs in the areas of quality and environmental protection.
- More general needs to improve workforce skills.

### The education and training programmes cover the following areas:

- Training in business and administrative skills, computer skills, as well as personal development issues.
- Introductory training for new operators and maintenance technicians, and for new engineers.
- Skills training for technical staff in their particular areas of employment, as well as in use of personal safety equipment and working machinery/equipment.
- Training regarding Health, Safety, Environmental Protection and Quality, with an emphasis on the special features of each workplace.
- Training of non-technical staff in basic Health and Safety regulations, use of fire-fighting equipment and first aid provision.
- Instruction in safe driving techniques and in the procedures for the safe loading, unloading and transport of fuels.
- Emergency preparedness exercises, including scheduled or unscheduled drills.

The education and training programmes are implemented either through in-house seminars or by attending international seminars run by internationally recognized educational centres. Also,

## 2. Responsibility towards our Employees

Group managers attend conferences both in Greece and abroad, participate in undergraduate and postgraduate courses and are kept up to date through the purchase of books and subscriptions to specialist technical journals and professional associations.

### Training in 2016

In 2016, a total 21,000 man-hours were devoted to education and vocational training -at an overall cost of 1.1 million euros-involving the participation of 1,376 employees (74.1% of the total workforce), of which 118 were managers and 1,258 other personnel. The figure of training man-hours includes training related to fire safety, use of Personal Protective Equipment and other related subjects throughout the refinery and the other Group facilities. However, it does not include training hours associated with emergency preparedness exercises.

Occupational health and safety, environmental protection and quality were the principal subjects covered by training activities in 2016. In these areas training was provided to cover the relevant management systems, the REACH Regulation, preventing sea and air pollution and avoidance of related incidents, process safety, occupational health, fire safety, the use of Personal Protective Equipment, rescue methods in cooperation with the Disaster Response Team (EMAK), safe driving and fuel transport, the provision of first aid and other more specialized topics.

The other education programmes were designed to provide the existing technical staff with further training, in order to develop and further improve their skills in various specialized technical areas, and to instruct staff of the commercial companies in issues of insurance law, taxation, etc.

Training was also organized in management and leadership, internal audit, workforce management and assessment, negotiating techniques, presentation skills, IT, creating a safety culture, accounting, procurements, finance, customs policy, customer service, communication and law.

The contribution and significant involvement of Group executives in the in-house training and education programme was also very important. In 2016 this involvement accounted for about 2,000 hours.

Moreover, during 2016, in line with the policy on reimbursement of tuition fees, 6 employees were assisted in their efforts to specialise in particular subjects, or achieve first degree or postgraduate qualifications in areas relevant to the Group's current operations.

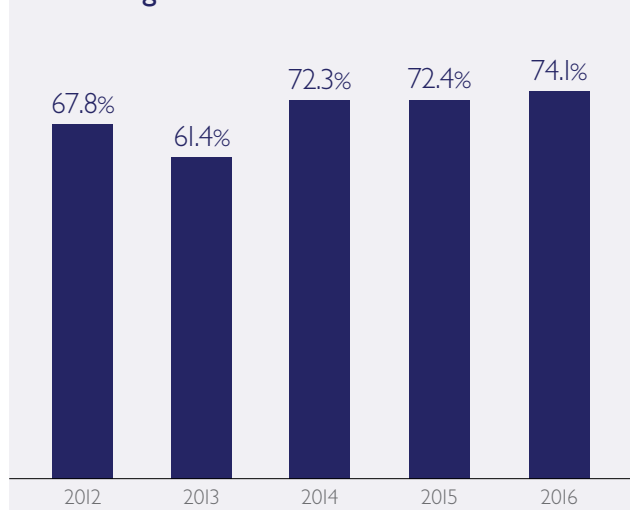
### Management and employee training in 2016

We strive to continually develop our management staff by offering innovative skills development programmes in cooperation with top educational institutions and bodies. In this context, the main training areas were as follows: The following programmes were held, with certification by Harvard University, to teach leadership skills:

**Leadership Academy Step 1:** The objective of this training was to develop the skills necessary for all new managers to enable them to lead their teams and cultivate relationships with their colleagues and supervisors.

**Leadership Academy Step 2:** The purpose was to further develop the skills required of every manager in order to handle a variety of business challenges that have a direct impact on the success of their work.

Percentage of trainees over the total workforce



Average number of training hours per trainee





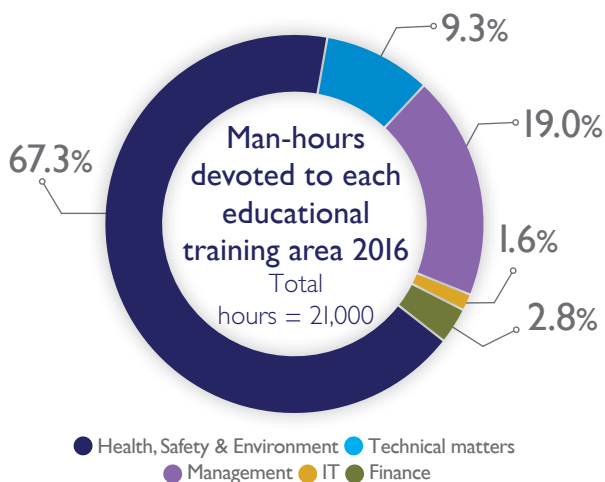
The following were also held to teach additional skills:

**Presentation Skills:** This sessions aims at an understanding of key presentation tools so that participants can present with brevity, clarity, coherence and vision while maintaining the interest of the audience.

**Negotiation Skills:** The goal here was to understand the key structural elements of negotiation and to upgrade the negotiating performance of participants.

**Customer Service:** The purpose of the training was to give trainees a new philosophy of service that will lead to satisfied customers, increase sales and improve quality.

**Conflict Management:** The seminar was designed to offer the skills, techniques and practical exercises necessary that will enable employees to effectively handle any conflict that arises and reach the desired outcome.



### Training subjects at the Refinery in 2016

Internal training at the refinery is provided by instructors who may be refinery managers or highly specialized external instructors from Greece or abroad.

The main training areas were as follows:

- Training of shift workers in the use of fire-fighting equipment and personal protection equipment, with weekly drills.
- Training of rescue teams by the Elefsina Disaster Response Team in the rescue of persons at risk in inaccessible parts of the refinery, at a great height from the ground.
- Training of staff of Equipment Inspection Service for certification and re-certification.
- Extensive training of the safety staff in first aid - with relevant certification-, in rescue methods in cooperation with the Disaster Response Team (EMAK) and in safe and fast driving techniques for cars, motorcycles, ambulances and fire engines.

- Participation of refinery engineers in international conferences and seminars and other refineries.

### Training tools at the Refinery

The training simulators are extremely valuable training tools, and are used to train operators of all grades, helping them develop their skills, expand their knowledge and improve performance through constant repetition. There are simulators in the Catalytic Cracking Unit, the Hydrogen Cracking Unit and the new Atmospheric Distillation Unit.

An important tool is also the Digital Educational Material File, on the company intranet, continuously posting and updating material like e-books, conference presentations, training videos and so on. The File is freely available to all, so that both management and workforce can stay abreast and study various areas of interest.

Technical Training Manuals - prepared entirely by our own refinery engineers - are also available, and are written to reflect the current structure of the refinery and meet its current production needs. The manuals fully cover the training needs of the refinery workforce, and can also be used in other activities where information on the structure and operation of the refinery is required.

# 3. Health and Safety

The ongoing improvement of our health and safety performance will always be one of our main priorities.

The nature of the Group's business operations - refining, storage, transportation and marketing of fuels - combined with our corporate principles and values, make occupational Health and Safety a matter of exceptional importance, and a priority to which our commitment is absolute and permanent. In order to ensure a safe working environment, and achieve ongoing improvement in workplace health and safety conditions, we implement a rigorously structured Management System, fully aligned with European Union Directives and other, additional measures.

In pursuit of our established objective of Zero Accidents, we reinforce and safeguard our management system with:

- Ongoing training and presentations on safety issues, involving the entire workforce.
- Regular maintenance of equipment to ensure it functions properly and safely.
- Investment in new technology equipment and control measures.
- Risk assessment of critical tasks, in order to ensure

that the proper precautions are taken before tasks are carried out.

- Introducing an annual safety day across the whole Group, with presentations of relevant material to the entire workforce.

Throughout 2016, the actions and implementation of systems aiming at reducing risk and eliminating the consequences of any undesirable incidents continued, with the ultimate goal of constantly improving our performance in Health and Safety.

The effort to upgrade the safety culture and raise the awareness on safety-related issues is also ongoing. Lessons learnt from international incidents in the refinery sector were presented, focusing in particular on the training of personnel and external associates/contractors, who were all trained and certified.

Moreover, a range of investments were made on projects that reduce the possibility of an accident and upgrade the fire safety equipment.

A photograph of an industrial refinery at night, featuring tall distillation columns and complex piping structures illuminated by artificial lights against a dark sky. The image serves as the background for the infographic.

The Group's  
injuries  
frequency  
index

1.2

32.9 million euros

Spent  
on Safety  
(investments  
and operating  
expenses)



### 3. Health and Safety

## I. Health and Safety Management Framework

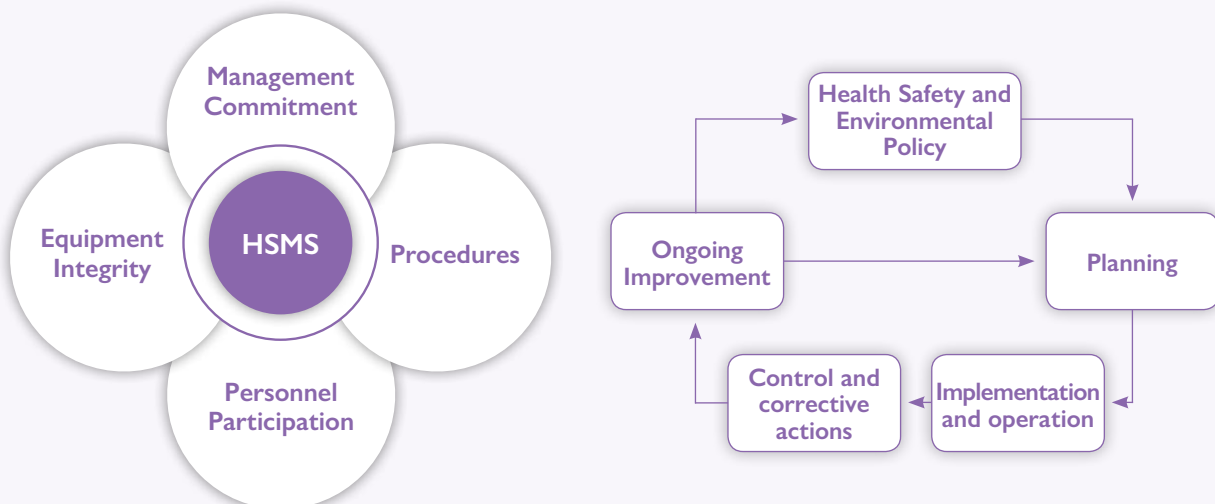
Health and Safety at work and the prevention of occupational hazard is a moral obligation and a business necessity, which goes beyond the narrow limits of a simple legal obligation. Our primary concern is to take measures, and implement projects and programmes, to ensure we attain our permanent objectives for workplace health and safety, which can be formulated as follows:

- To reduce the risk of major technological accidents to the lowest possible level.
- To eliminate occupational accidents - "Goal Zero".
- Constant monitoring and upgrading of the quality of equipment so as to ensure that conditions conducive to safe work operations are continuously improved.
- Effective protection of people (our personnel, contractors' personnel, our neighbours, associates and site visitors), as well as the environment and our own installations, from the hazards that may arise from the company's activities.
- Ongoing training of personnel and briefing on health and safety issues in order to prevent accidents and occupational health problems.
- Full compliance with regulatory requirements.
- Active involvement of all employees in finding acceptable and effective solutions for protection and safety, as well as in establishing regulations, identifying hazards and assessing risk.
- Frank and open communication between workers and management in health and safety matters.

At the refinery, delivering on this commitment relies on the effective operation of the integrated Health and Safety Management System, which is certified compliant -since 2008- with the internationally recognised Health and Safety standard OHSAS 18001:2007.

The same certification has been secured by OFC (in 2006), Coral and Coral Gas (in 2013).

### Health and Safety Management System (HSMS) OHSAS 18001:2007



#### COMPONENT PARTS OF THE HEALTH AND SAFETY MANAGEMENT SYSTEM

Policy	<ul style="list-style-type: none"> <li>• Description of MOTOR OIL's commitment to Health and Safety and arrangements for implementing the policy.</li> </ul>
Planning	<ul style="list-style-type: none"> <li>• Strict compliance with relevant legislation, international standards and codes of practice and established operational rules.</li> <li>• Specification of annual goals, programmes and investment projects for equipment upgrades, to ensure optimum performance with respect to both productivity and safety.</li> <li>• Designation of responsibilities and accountabilities.</li> <li>• Systematic identification and recognition of occupational hazards and assessment of risk across all activities at the refinery and other facilities.</li> </ul>

Implementation	<ul style="list-style-type: none"> <li>• Visible and systematic management by competent executives at all management levels.</li> <li>• Provision of appropriate and full training to all employees.</li> <li>• Understanding and analysis of operational risks in course of work and appropriate precautions, by all employees and at all levels of management.</li> <li>• Strict application and documentation of procedures for operational safety and efficiency.</li> <li>• Ensuring that all operations are carried out in full compliance with safety rules and regulations.</li> <li>• Systematic reporting of incidents.</li> <li>• Excellent cooperation and communication with public authorities and other stakeholders, including providing them with all relevant information.</li> <li>• Systematic measurement of results and target setting, using established industry indicators, so as to ensure constant improvement in performance and identification of malfunctions and vulnerabilities.</li> <li>• Carrying out of exercises for the updating of the company's Emergency Response Plan.</li> </ul>
Compliance monitoring and corrective actions	<ul style="list-style-type: none"> <li>• Ongoing inspections of machinery and other equipment to ensure its proper function.</li> <li>• Regular auditing of safety procedures.</li> <li>• Systematic investigation and analysis of all incidents.</li> <li>• Measurement, assessment and communication of results.</li> <li>• Rewarding of positive results.</li> </ul>
Ongoing improvement	<ul style="list-style-type: none"> <li>• Ongoing review of management system.</li> <li>• Recommendations for improvement and revision of current arrangements.</li> <li>• Commitment to implementation of recommendations.</li> <li>• Ongoing personnel training.</li> </ul>

The operation of the Health and Safety Management System is assigned to the refinery's Health, Safety and Environment Section. Moreover, the health and safety organisation includes in-house safety engineers, occupational physicians and nursing staff - both at the refinery and at MOTOR OIL's head office - at a level that goes beyond the requirements of the relevant Greek legislation.

There are also two statutory committees:

- The Safety and Environment Committee, made up of the refinery section heads and representing the entire workforce.
- The five-member Employee Health and Safety Committee, whose elected members are appointed every two years by the refinery employees.

The above Committees are intended to oversee control of health and safety conditions, making recommendations for changes and improvements as necessary.

Similar arrangements operate in the other companies of the Group, taking appropriate account of the particular conditions of each workplace.

During 2016, our efforts to achieve our Health and Safety goals were focused on the following:

### **1. Improvement of safety culture and increasing the awareness of the personnel**

- Cooperation with an internationally recognised foreign firm, with proven experience in the industry, with the goal of studying and adopting international practices.
- Safety inspections, observations of unsafe behaviours, interviews, investigations of main and secondary causes of an accident, risk evaluation in each task, monitoring of safety indices, etc.

- Frequent awareness actions on safety issues and meetings with the participation of all members (section heads, engineers, supervisors, foremen) aiming at the prevention of accidents and managing risk at work.
- Implementation of "Lessons learnt from accidents" training program including presentations of large accidents in facilities, with analysis and exchange of opinions of the participants.
- Enhancement of electronic library with incidents/accidents related to operations of the refinery or other facilities.
- Organisation of Safety Day campaign.
- Posting of safety signs throughout the refinery premises.
- Briefing of competent personnel regarding the new Corporate Contingency Plan.
- Training and presentations to personnel with regard to risks of works close to areas with inert atmosphere, risks from hydrogen sulphide, as well as training of new operators.
- Assignment of the training and certification work for the entire contractor's personnel employed in the refinery, to a company recognised in the industry with regard to training and certification issues.

### **2. Strengthening and improvement of the safety system**

- Adoption of inspections with prioritisation of risks and goal for reducing possibility of failure, determination of frequency of equipment inspections and intensification of specific inspections, as well as the recording and inspection of equipment due to corrosion under insulation (CUI), the recording and inspection of dead legs and the risk analysis for change of operating parameters.
- Installation of a Plant Information System, that ensures the central management and monitoring of information and data related to the refinery equipment, improving management of change.
- Strengthening safety measures in the storing and handling of



### 3. Health and Safety

chemicals, on the basis of the evaluation of risks posed by their particular properties, and in general the labelling of all containers in compliance with the CLP regulation.

- Strengthening of hydrogen sulphide detection systems with installation of fixed laser-technology detection systems in high-risk critical areas of the refinery.
- Mapping of the points where vehicle traffic must be restricted, and placement of special traffic cones for improving safety on

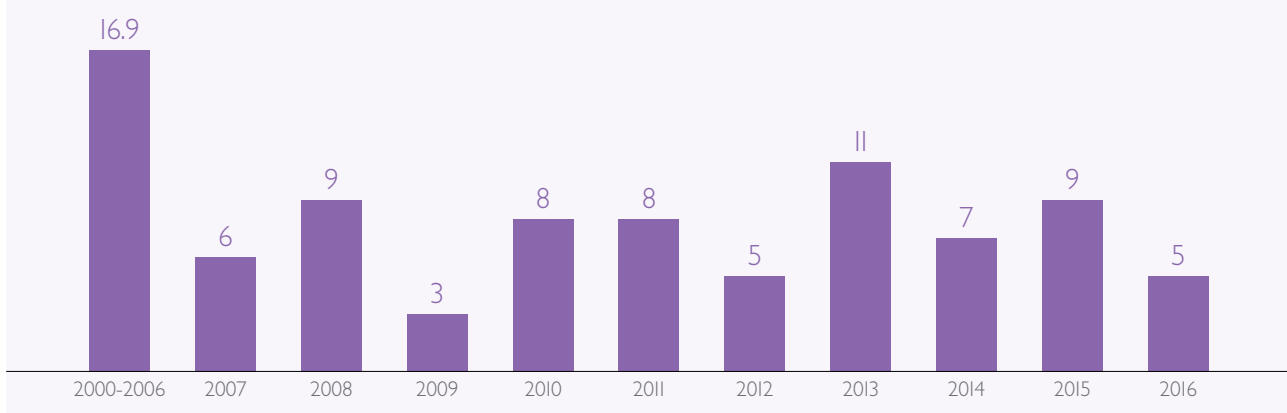
the refinery roads.

- Update of the refinery's safety study in line with the Seveso III Directive.
- Participation in Concawe in safety issues, in order to optimize response to safety issues through collaboration with representatives of European refineries.
- Continuation of revision of Safety Data Sheets in implementation of the CLP regulation.

## 2. Safety Indices

The extent, to which the Health and Safety Management System operates successfully, is reflected in trends in the most important safety indices, i.e. the number, frequency and severity of lost-time injuries.

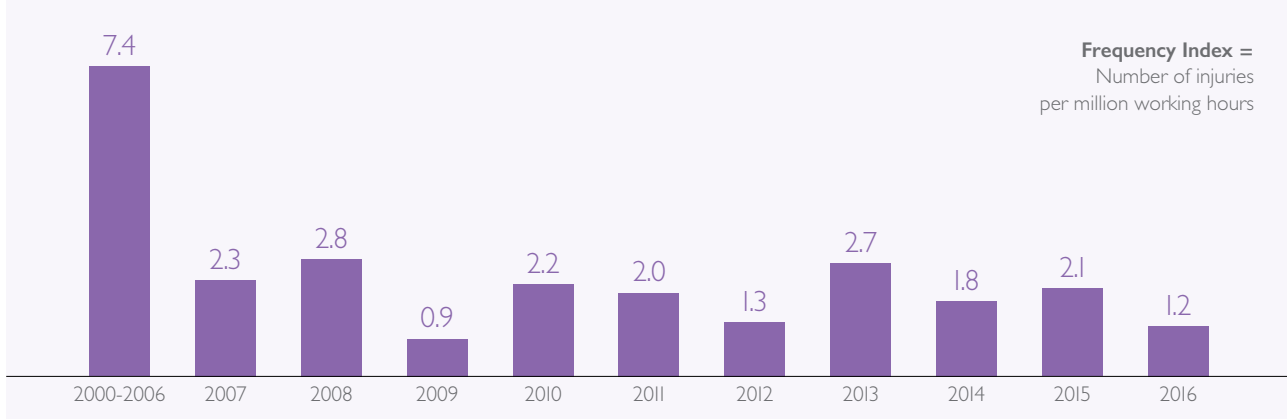
Lost Time Injuries (LTI) for Motor Oil Group<sup>1</sup>



Five (5) lost time injuries were recorded at the facilities of the MOTOR OIL Group in 2016. Three of them occurred in the MOTOR OIL refinery and 2 in LPC. There was no accident in the other companies of the Group.

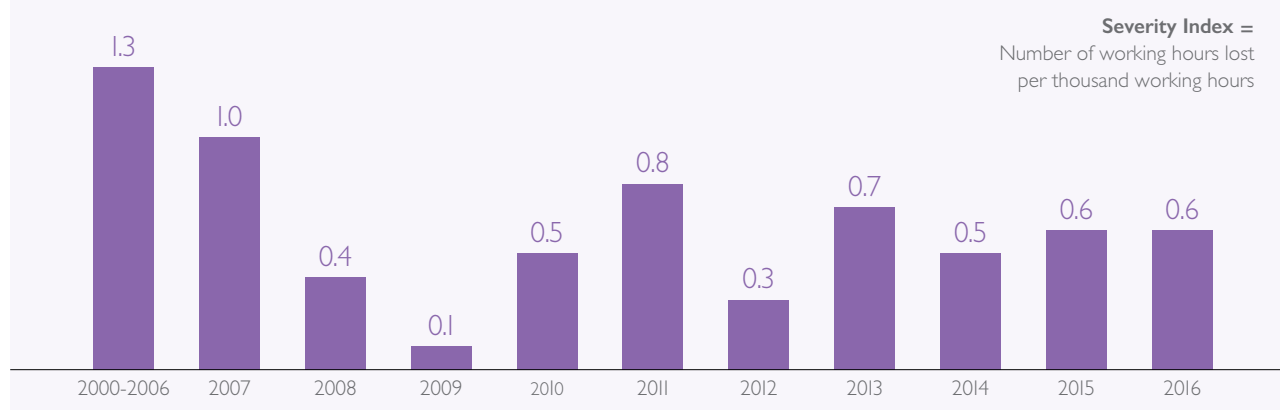
There were no serious safety incidents during the course of our activities.

Lost Time Injuries Frequency Index (LTIF) for Motor Oil Group<sup>1</sup>



The Lost Time Injuries Frequency Index recorded a particularly low value of 1.2 in 2016. Correspondingly at MOTOR OIL, LTIF was 1.1, which historically is the lowest value for the company, only achieved one other year within the past 25 years.

### Lost Time Injuries Severity Index (LTIS) for Motor Oil Group<sup>1</sup>



The Lost Time Injuries Severity Index recorded a value of 0.6 across the whole Group in 2016, with a value of 0.7 for MOTOR OIL.

These values, in combination with the constantly increasing refinery production and the higher volumes handled by our commercial companies, continue the steady downward trend of the last twenty years, demonstrating the ongoing effort to reach our Zero Accident target. In this context, the Group's management is offering its steady support to programmes aimed at training and informing the workforce and strengthening technical and organizational measures, remaining committed to our 'Zero accidents' objective.

The LTIs have been analyzed in depth to identify their causes

and establish the most appropriate corrective measures, which were then communicated to the personnel through training sessions and briefings. Recommendations for equipment improvements, arising from investigation of LTIs, were implemented immediately.

These statistics relate to accidents involving the company's own employees and do not include Lost-time accidents involving subcontractors' employees, the level of which remains very low. Accidents involving subcontractors' employees numbered 4 in 2012, 5 in 2013, 2 in 2014, 3 in 2015 and 1 in 2016.

Finally, we should note that, as in previous years, no case of occupational illness was recorded.

<sup>1</sup> Note: Includes the companies MOTOR OIL, Avin Oil (since 2006), Coral and Coral Gas (since 2010), OFC (since 2012) and LPC (since 2015).

## 3. Health and Safety Investments

Improvements in working conditions and in the safety of the work environment are achieved by making the necessary investments in equipment, through the upgrading of procedures, and by means of Health and Safety inspections.

The refinery's design, construction and operation is in accordance with Greek and international regulations and standards. Nevertheless, a comprehensive investment programme in the proper maintenance of electrical, mechanical and electronic equipment and in technical upgrading and renewal of that equipment is continually implemented, taking account of developing technology, so as to maintain the highest possible standards of safety and accident prevention.

In 2016, the total cost of the investment programme of all Group companies on projects to improve health and safety

and to procure safety equipment amounted to 27.4 million euros, while the cost of operating expenditure of all kinds in this area was 5.5 million euros.

The greatest emphasis was laid on projects to reduce the risk of accidents and to improve working conditions, as well as projects aimed at upgrading fire safety measures at our facilities. More specifically, periodic maintenance was carried out at the refinery units in 2016, which included various works, such as replacement of the catalyst in the Hydrocracker unit, and maintenance of the new crude oil unit after 6 years of

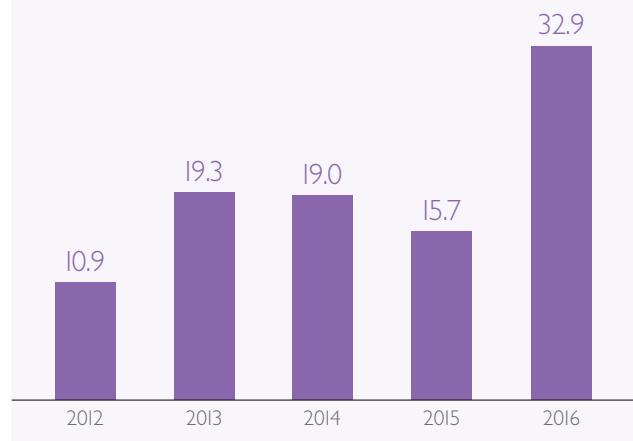
### 3. Health and Safety

continuous operation. Furthermore, the sprinkler system of the alkylation unit was upgraded, and the safety valves in the production units and in segments of the network towards the flares were replaced. The installation of the Advanced Process Control system in all production processes continued, which ensures a more effective and safer operation.

The upgrade of the personal protection gear also continued, the filter fire extinguishing system was installed, new fire extinguishing equipment was purchased, and the safety gear for tanks was upgraded.

Additionally, all our commercial companies proceeded to investments for improvements of the safety systems in service stations and their facilities. These included maintenance and upgrade of critical equipment and tankers, installation of camera devices in services stations, maintenance of fire extinguishing means, etc.

**Investments and Operating Expenses for Health and Safety** (million euros)



### 4. Inspections

It is our standing practice to carry out regular health and safety inspections, which involve scrutiny of production and distribution equipment, working areas and fire safety systems. The inspections allow us to identify hazards and recognize risk.

At the refinery, planned Health and Safety inspections are carried out by both internal inspection teams and external safety auditors, including specialist Greek and foreign consultants.

Hot-works and work in confined spaces are subject to a strict programme of intensive auditing and inspection. The Health, Safety and Environment Section carries out on average 6 inspections a day, with the total number of inspections approaching 1,600 in 2016, not including checks carried out during maintenance periods.

Projects under construction are subject to daily inspections, while planned horizontal inspections - carried out by teams of different composition and mandate, comprising refinery executives and other competent personnel - are performed according to an annual schedule, as follows:

- **Safety and Environment Inspections:** carried out by a four-member team headed by a Head of Section and comprising engineers and supervisors. There are 24 of these teams, each undertaking every year to inspect six of the 24 sections into which the facilities have been sub-divided for the purposes of more effective and comprehensive control.
- **Executive Safety and Environment Inspections:** carried out by teams headed by the refinery Deputy General Manager and including departmental managers and the Head of the Health, Safety and Environment Section.

Recommendations for improvements in working conditions and safety also arise following meetings of the Safety and Environment Committee and the Employee Health and Safety Committee. The findings of the above-mentioned horizontal inspection procedures, and recommendations arising from meetings of the two committees, after evaluation, lead to appropriate technical or organizational measures being taken.

At the same time, vertical inspections are conducted on a quarterly basis by the section head, the engineers and supervisors of the various sections.

It is self-evident that technical inspections and monitoring of equipment carried out by the Technical Department will lead to findings and the taking of measures which reduce hazard and risk and contribute to the improvement of occupational health and safety conditions. The programming and management of these results of inspections are based on the use of computer systems like the PCMS (Plant Condition Management Software), designed to generate optimal safety results and saving of resources.

Finally, the company takes special care to ensure the operational readiness of the equipment of the fire safety system. The routine and periodically scheduled checking of this equipment is carried out according to a very carefully planned annual programme under the supervision of the Fire Safety Service.

## 5. Procedures

Technical integrity of equipment, compliance with international standards/regulations and safe working conditions are amongst the primary factors ensuring safety in the workplace. Even more important is how individuals behave (the “human factor”). Refinery employees are able to perform their work safely not only as a result of the strict work procedures they are required to follow and of having been provided with appropriate skills and competencies, but also because they have been trained in safety awareness.

### Complying with Legislation

The company is fully aware of, and strictly complies with, all relevant Greek and European Health and Safety legislation, while it also applies any relevant international standards, codes of practice and other operational norms, where these are judged likely to help achieve even higher standards of protection than would be achieved by legal compliance alone.

An independent third party certifies full and comprehensive implementation of legislation in our internal procedures and operations.

We have also developed an intranet database containing all health and safety provisions of Greek law relevant to the refinery's operations. It is constantly updated and made available to all employees on the company intranet. This database is exceptionally important, not only for the legality of our operations, but also for the wealth of information it contains on a wide range of issues, including hazard identification and control, the drafting of emergency preparedness plans, maximum acceptable levels of exposure to hazardous substances, the use of chemical substances and the relevant precautions, etc.

Besides data on legislation, the database contains other significant resources relating to refinery safety, including: all training material; the complete internal safety regulations for the refinery; hazard and risk assessment reports covering all individual workplaces; specifications for all safety equipment (e.g. personal protective equipment -PPE- and fire-fighting equipment), and material safety data sheets (MSDS), accidents/event/near-misses investigations, etc.

### Hazard identification, risk assessment and control

We are continuously engaged in establishing best practices for identification of health and safety hazards in all areas and in implementing procedures for immediate response. Across the whole range of refinery activities, studies have been conducted to assess risk for each work station and task; the necessary measures have been taken to eliminate or minimize all risks identified.

Whenever changes are made to workplaces or to working practices, these risk assessments are reviewed so as to ensure they are always relevant and up to date. Moreover, in the

context of the requirements of OHSAS certification, the whole monitoring process of our procedures has become more systematic. Within each refinery section, risks identified are classified into three categories according to the hazard level: low, medium or high. For each category of risk we prepare a timetable for taking action to eliminate or reduce the risk, and appoint a manager to be responsible for the necessary action.

We provide appropriate and adequate training to all our workers covering: information and instruction relevant to the hazards arising from their work, measures for the elimination of hazards or control of risk, correct use of personal protective equipment, safe working practices, appropriate emergency response procedures and first aid provision.

We ensure that all operations are carried out in full compliance with safety rules and regulations by taking all necessary precautionary measures and by establishing and adhering to specific procedures. Of particular importance during maintenance and repair work is the procedure for issuing of Work Permits, within a stringent statutory framework of rules and procedures. For this reason, the issuing of these Permits is the subject of continuous training activity, covering both those who issue them and those who receive them, both company employees and any sub-contractor personnel who may be involved in work activities on the refinery site.

In respect of the need to assess and minimize operational risks, the HAZOP - Hazard and Operability - Study is used to analyze risk and operability in all new units or whenever changes are made to an existing unit, and a five-year revision programme is implemented. A HAZOP study was conducted in 2016 at the naphtha hydrodesulphurization unit.

Likewise, the studies required by the regulations on fire safety are conducted; other safety studies are prepared and communicated for approval and registration as appropriate with the competent authorities.

Special focus is placed on the analysis of near misses, which are classified depending on the severity of the consequences and the probability of their occurrence ( $RISK = PROBABILITY \times SEVERITY$ ). Near misses are discussed with the entire workforce in order to cultivate a culture of safety and to generate proposals for improvement through the exchange of information.



### 3. Health and Safety

In respect of health and safety equipment (personal protective equipment, fire-fighting equipment, etc.) we implement rigorous specifications based on recognized European standards in order to optimize workforce health and safety precautions. A particular effort has been made to standardise specifications for personal protective equipment at all companies and facilities within the Group.

In addition, safety equipment specifications are monitored continuously so that they can be updated in line with the new technological developments.

In this context, the following took place in 2016:

- Supply of full-face mask with incorporated intracom system for use in the alkylation unit.
- Mandatory use of personal hydrogen sulphide equipment by all workers and contractors in the field.
- Order for clothing appropriate for protection against exposure to thermal radiation (Nomex) for all workers and contractors.
- Mandatory use of filter escape devices for workers and contractors.
- Supply of safety barriers for protection from fall in small openings such as wells, or for excavations and unsafe points with a large area. Their installation in selected points is still in process.

---

#### Indicative Activities in 2016 in the area of procedures

- We continued implementation of the programme to monitor and assess contractors in respect of their compliance with health and safety rules when working in the refinery facilities.
  - We reviewed procedures in the Health and Safety Management System.
  - A procedure was issued for the performance of radiographic examinations.
  - A procedure was issued for addressing an incident of total loss of electricity.
  - We continued to update the Safety Data Sheets for refinery products, adding new information, as part of our implementation of the provisions of the European REACH and CLP Regulations.
  - Participation continued in international organizations dedicated to exploring and achieving continual improvement in rules and practices.
- 

#### Reports, Measurements, Indicators

We regularly report, record, investigate and analyze incidents (fires, accidents, near-misses) using internationally recognized indices in order to take the appropriate corrective and preventive measures, while enhancing our experience by monitoring investigations of serious accidents at comparable facilities abroad and incorporating their findings in our own practice. We systematically record all elements in our health and safety performance, for monitoring purposes, and at the same time we use internationally recognized indices suitably targeted to provide a basis for checking ongoing improvement and identifying any shortcomings or irregularities.

#### Protection (Security)

We take all necessary preventive measures to protect our installations against possible - malicious or not - security threats. The security system is fully automated and includes an automatic

identification system of incoming employees and vehicles with the issue of RFID cards during entry, security cameras in the perimeters of the refinery and the port, a motion detection system at the enclosure and an automatic monitoring and notification system (video analytics) in case of breach of the refinery's perimeter.

Those of our personnel responsible for this protection are suitably trained, both in security and safety matters, so as to be able to effectively and swiftly fulfil their responsibilities, being fully aware of the duties assigned to them, while at the same time fully respecting individual freedoms and fundamental human rights. In this context security guards are certified by the National Organisation for the Certification of Qualifications and Vocational Guidance (EOPPEP) in the specialisation "Private Security Personnel".

## 6. Planned shutdowns - New projects

Every year, planned shutdowns of refinery units take place, which are necessary to allow for periodic maintenance to be carried out and thus ensure their reliable operation, both in respect of efficiency and in respect of safe operation, while construction work on new projects is constantly being carried out. To avoid accidents during planned and unplanned shutdowns, a methodical approach is required, with continuous monitoring while work is being carried out.

Such extended shutdowns of refinery units require vigilance and special precautionary safety measures, because of the greatly increased risk of accidents, which include: provision of information to all personnel involved in order to ensure they are aware of the necessary safety measures and to increase their safety awareness; daily co-operation with project managers to identify unsafe conditions and for the concomitant implementation of corrective measures; and daily site safety inspections.

The Health, Safety and Environment Section plays an active part in the shutdowns of units for maintenance work, depending on the type of work being done, carrying out continual monitoring and evaluation of the work in accordance with safety rules and good industrial practice.

In 2016, planned and unplanned maintenance works took place in various units of the refinery that lasted in total 18 days. Before the start of the maintenance works the schedule was examined in detail, in order to identify any critical works and potential risks and take measures. Awareness raising actions and briefings were also organized, with the participation of all

members and contractors to ensure smooth cooperation and avoidance of unsafe actions.

The following were held:

- Meetings of the refinery General Manager with engineers, section heads and operating personnel, aiming at vigilance in respect of safety issues before the shutdown.
- Safety meetings with the purpose of informing the entire workforce on safety issues.
- Meetings with the contractors of all companies participating in the works, aiming to achieve strict compliance with the procedures and resolve any safety issues before the start of the works.
- Daily meetings during the project with the Contractors' safety engineers, for reporting any comments and corrective actions. Safety Engineers and Engineers of the Production and Maintenance sections took part in the meeting from the refinery's side.
- Daily checks during the works by Managers, Safety Engineers and the contractors' Safety Engineers.
- Stocktaking of actions after end of works and organisation of day event to analyse issues and extract conclusions.

## 7. REACH and CLP Regulations

The REACH Regulation (Registration, Evaluation and Authorization of Chemicals) is intended to rationalize European legislation on human health safety and environmental protection from the potential effects of various chemical substances. The legal framework introduced by the Regulation directly affects producers, importers and final users of chemical substances and preparations in the European Union.

The objective is to prohibit the import into, or the production within, the EU of any substance at any quantity above one ton a year, unless the substance has been entered on the European Register of Chemical Products.

After successful completion of the first phase of substance registration in 2010, MOTOR OIL, through its participation in various recognized organizations and consortia (CONCAWE, FERC, MERC), remains ready to respond to any requirements that may arise, is monitoring developments and preparing for the second phase of substance registration (2018).

The CLP (Classification, Labelling and Packaging) Regulation of the European Union came into effect in 2009, ensuring that risks associated with chemical products are clearly communicated to employees and consumers through proper classification and labelling of chemical products. The risks which may be posed to human health and the environment are labelled using a standard system of declarations and pictograms on packaging and on safety data sheets, so that workers and consumers are aware of the possible consequences of handling these products. MOTOR OIL has completed the above process of labelling its products on all safety data sheets.

## 8. Emergency response plans

Our emergency response arrangements are based on the Emergency Response Plan, which is regularly reviewed and updated to take account of expansions and other changes to the refinery's configuration, changing legal requirements, and changes to "best practices" resulting from technical developments or experience gained by others in dealing with major or non-major accidents. We have also prepared and submitted studies to the competent authorities, in line with the requirements of the SEVESO III EU Directive, which describe significant potential accident scenarios and related prevention and response measures.

### 3. Health and Safety

The Emergency Response Plan describes, with particular reference to a major accident situation, the public health protection measures -including warnings for neighbouring communities, and related advice- that would be put into effect in the event that the Major Technological Accidents Response Plans were activated; these plans are drafted by the competent authorities and determine how the state might intervene in emergency situations.

The purpose of the Emergency Response Plan is to offer the involved personnel an overall emergency response plan, which may arise from the operation of the Refinery. The plan provides the necessary guidelines for taking and executing the correct decisions and actions, providing information for:

- the operational organisation for addressing the event / emergency.
- the Action Plans.
- the communication with the company's staff and the Public Authorities and/or other competent services that must be notified in each case.
- the communication actions with the other stakeholders.

Features of the plan include:

- The Mutual Aid Agreement whereby all Greek refineries co-operate in the event of an emergency, which dates from 1988. The effectiveness of this collaboration plan is ensured through joint exercises involving MOTOR OIL, the local fire brigade and the other refineries. As was the case in the previous years, within 2016, MOTOR OIL participated in a fire safety exercise in the refineries of ELPE Aspropyrgos in the context of this program. Additionally, MOTOR OIL is in constant communication with the Corinth Fire Brigade regarding training matters on how to address an incident inside the refinery's facilities.
- Development of the Corporate Contingency Plan for reciprocal assistance between companies in the Group in the event of an emergency. This has also been integrated into the Emergency Response Plan of each individual company. In this context, MOTOR OIL participated in fire safety drills at the facilities of OFC.
- Drills carried out every week and major industrial accident response drills carried out regularly during the year, during which the Major Incident Response Procedure is activated.

Safety drills and major exercises contribute greatly to the training and preparedness of employees, and to the evaluation and modification of the plan itself. They also help us to evaluate, upgrade and add to the fire safety equipment, because the exercises prompt suggestions for new means of improving fire safety, the progress of which is monitored by the management on a monthly basis.

- The fixed and portable equipment for leak detection and fire-fighting, which are upgraded according to a regular annual investment plan. The design and installation of autonomous, permanent fire-extinguishing systems at key points around the refinery offer the ability to respond to incidents immediately and ensure the greatest possible protection for personnel and operating equipment. In 2016, a new autonomous and permanent fire-extinguishing system was installed at a critical point of the Lubricant production section, in order to improve the refinery's fire protection system. The breathing apparatus of the fire safety crew was also upgraded in 2016, equipping them with new technology air bottles, that are 30% lighter and with double capacity, ensuring comfort during execution of the works and longer autonomy.
- The availability on the refinery site of six fire engines and one 12,000-litre bulk foam tender, that are available on 24-hour standby, and are operated by trained firefighter crews.
- The existence of alternative locations for the Incident Control Room at four different strategic points on the refinery site, and the availability of a state-of-the-art emergency telephone system that provides for refinery staff to be contacted at times of emergency outside of normal working hours.
- The introduction of satellite phones at the refinery itself and in the administration offices. These phones make communication possible and allow coordination between administration and refinery even in extreme circumstances, such as a natural disaster, when ordinary landlines and mobiles may be rendered useless.
- The completion, within 2016, of the installation of a digital radiocommunication system (TETRA), in replacement of an existing analogue system, aiming to improve communication. It is accompanied by integrated GPS, Man Down and Panic Button for protection of the personnel.

## 9. Safety of port installations

Safety measures at port facilities are of great importance, because they ensure the smooth flow of the works in the refinery, as well as the protection of the marine environment from any pollution.

It should be noted that, in 2004, MOTOR OIL became the first Greek company to be certified by the Ministry of Mercantile Marine and the Aegean for compliance with the

International Ship and Port Facility Security (ISPS) Code, which is applied according to the requirements of chapter XI-2 of the International Convention for the Safety of Life at Sea (SOLAS).

The accreditation is reviewed each year, in accordance with the existing legislative provisions.

In all areas of the port facilities security checks are carried out on crews and supplies, as well as checks on access. In 2016, 8,762 people and 1,707 vehicles entered the port facilities, after passing security checks. The security checks are conducted with the permission of the Port Authorities, pursuant to the terms laid down in the approved Port Facility Security Plan, which is based

on the International Ship and Port Facility Security Code (ISPS Code).

The Code requires that drills be held at least every sixteen months, using security scenarios that are often combined with sea pollution and/or fire scenarios, with the cooperation and participation of the local Port Authorities.

1,682 ships berthed at the quays of our port facilities in 2016.

## 10. Safeguarding workforce health

The health of our workers is a key area of care and concern. Therefore, the personnel at the refinery and the facilities undergo regular check-ups, while all Group employees are covered by group hospital care programs.

The refinery provides full coverage to personnel and infrastructures for the provision of medical services and first aid, which includes:

- Central Medical Centre staffed by 2 physicians and nursing staff, provided with the necessary hospital equipment and 3 defibrillators to deal with emergencies.
- Pharmacy.
- Fully equipped first-aid station at the Alkylation Unit, with nurse on 24-hour call.
- Three fully equipped first aid stations (at the Central Control Station, the Chemical Laboratory and the Hydrocracker unit).
- ECG device, allowing dispatch of data to a specialist cardiology centre for immediate diagnosis and provision of instructions.
- Three fully-equipped ambulances.

In addition:

- Rescue crews (Safety personnel) are also trained in rescue practices and in first aid provision.
- Employees are supplied with the necessary personal protective equipment, which is always kept up to date, in line with technological advances and changes in European specifications.

- The quality of drinking water is tested through regular analysis by independent laboratories.
- The restaurant staff undergo regular medical checks in accordance with the requirements of the law.
- Measurements are taken to establish levels of concentration of chemicals in the workplace, in line with the requirements of the relevant legislation. In 2009, the company conducted a special study that demonstrated that the concentrations of all chemical substances were below the limit values for exposure. A new study was conducted in 2013 confirming once again that the levels of chemical substances were way below the limit values.

At the head offices there is a fully equipped clinic, staffed by a general practitioner and a cardiologist, capable of responding to serious incidents, managing chronic conditions, offering advice and information on health issues, organizing seminars, blood donation and preventive check-ups, and supporting the clinics of the other companies in the Group.

Finally, company doctors and arrangements for general medical procedures and screening examinations are also in place for the benefit of all subsidiary companies of the Group (AVIN OIL, Coral, Coral Gas, OFC and LPC).

## 11. Training on safety issues

The continuous training of our employees, their briefing and the creation of a high level of safety awareness, together with the technical and organisational measures, form the essential pillars for accident prevention and the maintenance of a safe work environment. Our commitment is to train the workforce on safety issues regarding the entire spectrum of their work, in order to increase productivity and reduce risks and the frequency of accidents.

We also see that our contractors' employees are kept aware of health and safety issues, with the emphasis on general principles of accident prevention and the company's procedures ensuring safe execution of the work they undertake. Visitors are given

safety instructions in the form of a special leaflet, while a special briefing film is screened for them on entry to the refinery facilities.

The general content of health and safety training includes the

### 3. Health and Safety

following subjects:

- Fire safety - use of fire extinguishing means.
- Work Permits.
- Work in confined spaces.
- Identification of occupational hazards and risk evaluation.
- Personal Protective Equipment.
- Material Safety Data Sheets.
- Emergency response procedures and participation in relevant drills.
- First-aid.
- Presentations - analyses of Major Technological Accidents.
- Safe road transport of fuels (for the Group's commercial companies).

**FIGURES FOR HEALTH AND SAFETY TRAINING IN 2016**

	MOTOR OIL	Other companies in Group <sup>1</sup>
Total Workforce	1,190	732
Workers undergoing training	810	445
Man-hours of training	11,132	2,967
Contractors undergoing training	2,872	768
Man-hours of training	22,976	4,761

I. AVIN OIL, Coral, Coral Gas, OFC and LPC.

#### Safety Day 2016 - We achieve the Zero Goal because we care

In recent years, the Safety Day has been organised on an annual basis in the Group. In 2016, the Safety Day took place on the 13<sup>th</sup> of April with the subject "We achieve the Zero Goal because we care". The Safety Day is organised simultaneously throughout the Group, in all the companies, the refinery, offices, facilities and service stations, and the workers and associate contractors dedicate more than an hour from their work to participate in scheduled meetings. In 2016 there were more than 160 meetings throughout the Group with the participation of more than 2,000 workers and associates. Videos and slides are presented during the meetings on the subjects of Safety for People, Safety of Procedures and Road Safety. A discussion follows about how each individual, taking steps to protect the people around him or her, can contribute towards the Zero Goal, for Zero Accidents and Zero Lost Time. As a result, the participants show great interest and make personal safety-based commitments. These days have the broad support and the participation of the Group's leadership, and they play an important role in forming a uniform culture regarding the importance of Safety.

#### Workforce training

In order to raise safety awareness among personnel, safety messages and posters, the results of accident and near-miss investigations, etc., are displayed on 13 Health and Safety notice boards, reserved for this purpose, and located throughout the refinery site.

In 2016 the refinery personnel was trained on the risks of radiographic works and the new procedure, on the risks from chemical substances and the necessary Personal Protection Gear, on protection methods from fall and on rescue in the field.

Fire safety drills also continued to take place, as in every year, and were carried out by the immediate intervention teams made up of refinery training staff. The rescue teams were jointly trained 2 times at the First Search and Rescue Team (EMAK) facilities in techniques for rescue from a height in an industrial environment and 2 drills of injured person rescue were carried out at the refinery with the participation of

experienced trainers from EMAK. Moreover, the structured efforts to educate the technical staff of our facilities were continued through films and presentations/discussions on incidents, analyzing causes, effects and the corrective measures taken.

#### Briefing for Contractors' employees

In 2016, in the context of upgrading the training of the contractors' workers employed in the refinery, it was decided to provide training to the entire workforce of the contractors (2,872 persons) on security issues by an independent specialised agency. The training offered was detailed and covered key safety issues, and subjects based on optimum international practices by trainers with long experience in the refinery sector. At the end of the training the participants sat for examinations, and only those who successfully completed the course could now receive an entrance card for working at the refinery.



## Training in Fire Safety

In order to improve the readiness of refinery personnel to respond to emergency situations, as well as to rehearse the procedures of the Emergency Response Plan and check the operability of equipment, regular emergency preparedness exercises are carried out. In 2016 the programme in question involved 11 training sessions on the drill field and 41 drills, 19 of which were based on Major Accident scenarios.

The pre-scheduled drills took place in various areas of the refinery and the fire crew training field, involving rehearsal of fire crews in the theoretical and practical aspects of their duties, and their familiarisation with fire-fighting equipment and related Personal Protective Equipment. Theoretical drills were also organized in the section control rooms (for all shifts) in the presence of the personnel of each area and the fire safety crews.

The refinery engineers also participated in the fire safety drills to receive further training in the handling of scenarios of this kind.

In addition, in 2016:

- All shift-workers passed the annual training in the use of Respiratory Protective Equipment.
- Training of the rescue team continued.
- Training sessions were held to maintain training levels for fire engine drivers and reserve drivers, familiarizing them with access to various areas and the equipment in new units.
- There were training sessions for new crew leaders, as well as all the new drivers, to familiarize them with the fire engines and their movement around the refinery.

## Road safety

Road safety is a priority for the Group's commercial companies, which every day transport more than 7,500,000 litres of liquid fuel and 450 metric tons of gas across Greece and the Balkans. On an annual basis, they travel more than 24 million kilometres delivering fuel in Greece and abroad without accident or injury to drivers or others, demonstrating in practice our commitment and dedication to road safety, and our contribution to the common good. In 2016, more than 330 drivers of private and public use tank trucks received training in their special skill areas.

Fuels fall under a category of hazardous materials and their safe transport requires precautionary measures to be taken at three levels, i.e.:

- The maintenance of a high technical standard of transport equipment. i.e. road tankers.
- The promulgation of strict safety procedures and the constant monitoring of their implementation.
- Ongoing training of our own tanker drivers and drivers of the transport companies working with us.

The Group's commercial companies, carrying out their activities with a keen sense of responsibility, are continually engaged in striving to meet the above requirements, in the context of the rules laid down by the state, the Greek and global petroleum industry, and their own company policies and procedures. To succeed in this objective they operate integrated systems for recording and monitoring of road tankers carrying fuel on their behalf (company-owned or belonging to partner companies), as well as training programmes for drivers, while also undergoing

tests and certification from external accreditation agencies under the standards ISO 9001 (Quality Management), ISO 14001 (Environmental Protection) and OHSAS 18001 (Health and Safety Management).

The road tankers undergo a thorough annual safety check in accordance with the «Regulations on Safety of Loading of Tankers with Liquid Fuels at Petroleum Facilities». This check extends to the full compliance with the terms included in the European Agreement concerning the Carriage of Dangerous Goods by Road (ADR).

To comply with the ADR agreement, in 2016 all Group companies prepared the transportation security plan, describing the procedures followed in case of any threat to the transport equipment or the hazardous cargo (terrorist attack, theft, etc.).

There is also an ongoing training programme focusing on defensive and safe driving, loading/unloading procedures and fuel handling, anti-skid and anti-roll over manoeuvres, fuel chemistry, handling of customer complaints, vehicle safety equipment, fume recovery, security, etc.

In recent years the programme has also incorporated a detailed analysis of the routes taken by our tanker drivers, so that the safest route is always taken for each journey. GPS tracking devices have also been fitted to road tankers to allow closer monitoring of driver behaviour (speed, route taken, stops etc.).

# 4. Responsibility for the Environment

---

We use best available techniques and state-of-the-art anti-pollution technology

---

Protection of the environment and energy-saving are among our primary concerns.

Respect and care for the environment is a common denominator in all activities of the MOTOR OIL Group. We operate competitively but, at the same time, as a responsible corporate organisation we espouse the principles of sustainable development; that is, development which is based on environmental protection, mutual respect and responsibility towards future generations.

For these reasons, we continue with investments aimed at the steady improvement of our environmental performance. In 2016, we spent 24 million euros in our investment programme, featuring both large and smaller scale projects, making a direct or indirect contribution to environmental protection.

Also in 2016, we made further investments to upgrade and replace furnaces with the goal of further enhancing our energy savings. We expanded our application of the Advanced Process Control (APC) system to the vacuum distillation units, while APC was also applied to the alkylation unit with the aim of ensuring consistent product quality, efficiency and safety. In addition, as

part of general equipment maintenance, we completed projects to reduce energy consumption and emissions.

Our commitment to continuing to decrease our environmental footprint, as can be seen in the diagrams of the related indicators, remains steady and unchallenged. Though 2016 was not a typical year due to the regular maintenance of the refinery, there was a drop in the specific value of energy consumption while the corresponding indicators for CO<sub>2</sub> emissions, sulphur dioxide and water consumption were the same as in 2015.

Finally, as part of ongoing improvement and review of the environmental management system, as certified under the ISO 14001 standard, in 2016, three communication procedures and five operational processes were reviewed, and the annual Environmental Statement 2016 was issued in accordance with Regulation EMAS III ER 1221/2009.

The indicators and texts contained in this chapter pertain only to the MOTOR OIL refinery, except subchapters 3 and 8, which include all of the Group's companies.



A low-angle, night-time photograph of a large industrial refinery tower. The tower is illuminated by numerous yellow lights, creating a strong contrast against the dark blue sky. The structure is complex, with multiple levels of platforms, ladders, and pipes. In the background, another similar tower is visible, also lit up. The overall scene conveys a sense of industrial scale and activity.

24 million euros

in investments  
and operating  
expenses  
for the  
environment

## 4. Responsibility for the Environment

### I. Environmental Management

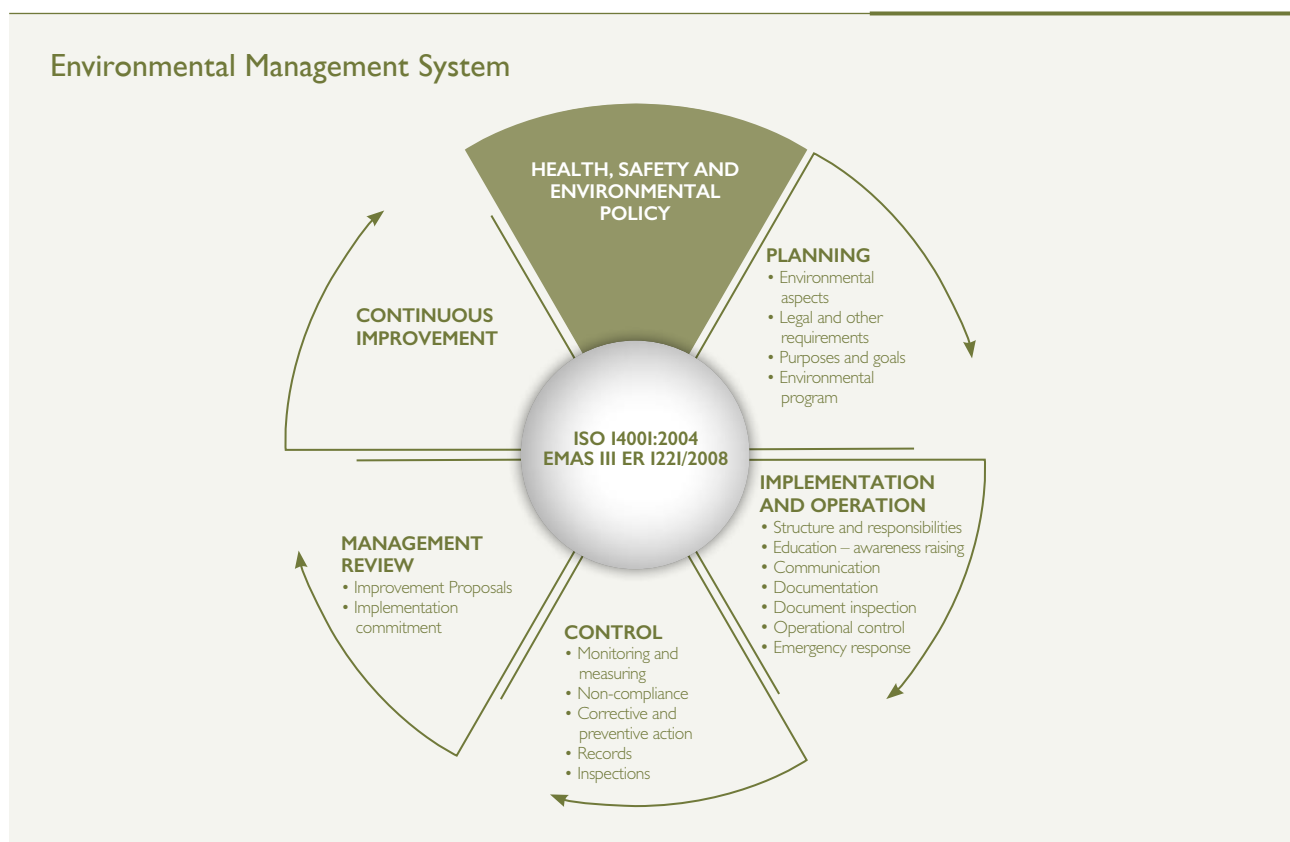
Our facilities operate in full compliance with the terms and conditions of our environmental licensing and with the requirements of Greek and European legislation. The implementation of projects and actions is based on the best available techniques and methods with the aim of constantly optimising the energy efficiency and environmental performance of our facilities.

Selection of the most efficient means and measures to reduce environmental impact covers the entire spectrum of our activities; from the selection of technologies when building new processing units, to the practices applied during the refinery's daily operation, and from the use of advanced control systems in our facilities to the training provided to employees working in them.

#### Environmental Management System

The focal commitment of the company to the minimisation of the environmental impact resulting from its operation is expressed through our Health, Safety and Environmental

Protection Policy, which is enhanced by the application of an effective environmental management system that has been certified as compliant with the ISO 14001 standard. The systematic monitoring and measurement of environmental indicators, the application of standard methods of measurement and analysis of controlled parameters, and ongoing monitoring and recording of operational parameters in combination with monthly reviews of environmental performance, all help to identify activities that require intervention and improvement. Thus, the principle of prevention is successfully implemented and resources are allocated so as to achieve the maximum possible environmental benefit.



#### Environmental Objectives

The Environmental Management System is an effective management tool for implementing the various environmental protection policy objectives, which are:

- Complying fully with all Greek and EU environmental protection

legislative requirements.

- Operating the refinery facilities in accordance with approved environmental conditions.
- Distributing products that comply with the European quality and environmental protection norms, by taking steps to

upgrade production facilities accordingly.

- Planning and implementing projects with minimised environmental impacts.
- Implementing Best Available Techniques.
- Monitoring and continually minimising the emissions of greenhouse gases, as well as those of other gas pollutants, and reducing solid and liquid waste as far as technically and economically feasible.
- Monitoring and, as far as possible, minimising, the consumption of energy.
- Pre-empting risks of environmental pollution, reducing the probability of environmental accidents, and preparing, implementing and testing the appropriate emergency intervention procedures.
- Training of, and awareness-raising among, all our personnel and contractors' employees who work on our premises, on the implementation of our environmental protection policy.
- Evaluating our environmental performance and continuously improving our Environmental Management System.
- Developing communication and dialogue with all stakeholders, especially with local communities in areas around the company's facilities.

The company's Environmental Management System was first ISO-certified in 2000, according to ISO 14001:1996. This was followed by re-certifications and in 2008, certification was expanded to include the production, trade and delivery of fuels, biofuels, basic lubricants, paraffins, asphalt, sulphur and special petroleum products. The Environmental Management System is part of the Integrated Management System, which is ISO 9001:2008 certified for quality. Therefore, the various internal operations and procedures of the Environmental Management System are themselves subject to the strict documentation imposed by the standard.

Our commitment to publish our environmental performance figures and the impact of the operations at our facilities, as explicitly set out in our Policy on the Environment, led to the voluntary adoption and implementation of the Community Eco-Management and Audit Scheme EMAS III, provided for by European Regulation 1221/2009.

The environmental management system ensures the implementation of suitable procedures to identify and evaluate material environmental impacts of our activities, and forms the basis for drawing up strategies and implementing technically feasible and financially viable programs to protect the environment. Additionally, within the framework of EMAS, the company is committed to publishing, on an annual basis, information about its environmental performance in the form of an Environmental Statement, as required by its membership to the Eco-Management and Audit Scheme System, an arrangement that has to be endorsed annually by decision of the Ministry of the Environment, Energy and Climate Change. In 2016, MOTOR

OIL issued its BV certified Environmental Statement 2015, its tenth such annual report.

It should be noted that, in the oil refining sector, the triple combination of certified compliance with ISO 14001:2004 and EMAS, in respect of environmental performance, and ISO 9001:2008 in respect of quality management, is particularly significant and provides advantages at many levels. Such a multiple certification is unusual among European refineries with such high complexity as MOTOR OIL's.

The refinery facilities, which include the principal and auxiliary units, operate under the terms and conditions described in detail in the Decision Approving Environmental Conditions for the refinery's operation. This decision is governed by the regulations contained in Directive 2010/75/EU on Integrated Pollution Prevention and Control and mandates the application of Best Available Techniques to achieve significant reduction in pollutant emissions in air, water and land. The refinery facilities fall under Directive 2003/87/EU, which establishes a greenhouse gas emission allowance trading scheme within the European Community in order to promote the efficient and cost-effective reduction of greenhouse gas emissions.

In 2016, as part of efforts to secure the ongoing evolution and improvement of the Environmental Management System, three communication procedures and five operating processes were reviewed.

### Compliance with Environmental Legislation

A key element of MOTOR OIL's environmental policy, which is applied to all company activities, is to comply with environmental legislation.

Our commitment to rigorous adherence to Greek and European legislation is reflected in our environmental performance indicators, which are reported to the competent authorities and stakeholders.

Prior-period reports are submitted to competent authorities annually, outlining:

- Emissions and plan for monitoring carbon dioxide emissions.
- Quantities and type of produced solid waste and its management.
- Quantity and quality of liquid waste.
- Results of monitoring and recording environmental quality.
- Emissions from main combustion plants.
- Annual final report for the European Pollutant Release and Transfer Register (EPRTR), in implementation of Regulation 166/2006/EC.
- Quantities of waste produced on ships and offloaded at MOTOR OIL's port facilities.



## 4. Responsibility for the Environment

Also submitted are:

- The annual Environmental Statement in accordance with the requirements of EMAS ER 1221/2009. The company is registered with the European Eco-Management and Audit Scheme (EMAS), and in the corresponding Hellenic Register, under number EL 000067.

### Refinery Communication with Local Stakeholders

MOTOR OIL uses various means of keeping Local Authorities and other stakeholders informed of its activities, either by involving its own staff in conferences and meetings, or keeping local organisations informed about its investment plans and its programmes relating to environmental protection.

Besides briefing Local Authorities, the company also maintains open communication lines with refinery neighbours, listening

and responding to any complaints they may have. Recording, investigation and evaluation of complaints from local people are all covered by a specific procedure to ensure the appropriate immediate or long-term corrective action is taken, in line with the causes of the nuisance.

The fact that in recent years the number of complaints from the local community has been kept at low levels demonstrates the efficacy of the aforesaid measures. Specifically for 2016, we received 21 complaints by neighbours, with five of them concerning nuisance from emissions, ten from noise and six from odours. The increased number of complaints over 2015, mainly with regard to noise, arose from a period when operations at the refinery were suspended for maintenance and upgrading of the equipment during June-July 2016.

## 2. Environmental Impact Management

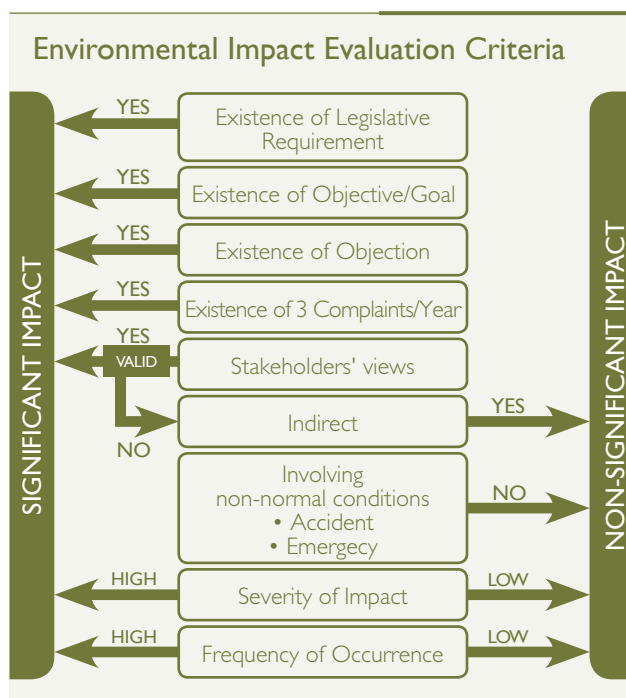
MOTOR OIL, in striving to continuously improve its environmental performance, over and above consistent legal compliance, implements a programme of measures for the prevention and management of the environmental impacts that are unavoidably associated with its operations.

An important tool in this endeavour is the measurement, regular evaluation of results, and the systematic assessment of the environmental impacts at all stages of the production process. This assessment is based on a set of criteria -including legislative requirements and stakeholder views, which lead to the classification of impacts according to their significance and their characterisation as significant or non-significant. This classification procedure is also carried out whenever there are any changes to the refinery's configuration, re-evaluating the classification and characterisation of the impacts.

This procedure for classifying the environmental impacts associated with the refinery's operation, and their significance classification, has led to the following impacts being classified as significant, therefore constituting the challenges we are called upon to manage:

- Gas emissions from fixed combustion sources and from the refinery's production processes.
- Energy and water consumption.
- Hazardous and non-hazardous solid waste.
- Liquid industrial effluents and urban liquid waste.
- Noise.

The above environmental impacts are recorded on a regular basis, and suitable environmental indices are used for their monitoring, on the basis of which the appropriate actions are planned and implemented so as to ensure that proper measures are taken, and that there is effective management and continuous improvement of the company's environmental performance.



When new projects are being planned, alternative designs are evaluated, taking into account their respective environmental impacts, with the aim of minimising these impacts as far as practicable, incorporating Best Available Techniques and choosing the most environmentally friendly solution.

### 3. Environmental Investments and Expenses

The company's investment policy is oriented towards producing products that comply with European quality specifications, using technologies that minimise environmental impacts, and towards capital investments aiming at improving and enhancing the refinery's environmental performance.

Between 2000 and 2016, the Group realised an investment programme totalling 1,563 million euros (as shown in the relevant table), the major part of which related to the construction of the new Crude Distillation Unit, as well as the Hydrocracker Complex, which produces clean fuels. From

2000 to 2016 investment related to the environment amounted to 791.5 million euros, i.e. 50% of total investment. In 2016, total investments amounted to 86.4 million euros, of which 24 million euros concerned projects, whose main purpose was the improvement and protection of the environment.

ENVIRONMENTAL INVESTMENTS AND OPERATING EXPENSES 2000-2016 (MILLION EUROS)									
YEAR	2000-2009	2010	2011	2012	2013	2014	2015	2016	TOTAL
Total level of investments	1,043.1	123.2	71.3	67.6	68.7	60.7	42.4	86.4	1,563.4
Investments relating to environment	591.1	33.0	36.1	16.4	18.7	11.0	8.4	18.9	733.6
Environmental operating expenses	26.7	4.6	4.0	3.3	4.0	4.5	5.7	5.1	57.9
<b>Total environmental investments and operating expenses</b>	<b>617.8</b>	<b>37.6</b>	<b>40.1</b>	<b>19.7</b>	<b>22.7</b>	<b>15.5</b>	<b>14.1</b>	<b>24.0</b>	<b>791.5</b>

In 2016, the application of the Advanced Process Control (APC) system was expanded to cover the vacuum distillation units, while the application of APC to the alkylation unit is currently under way, with the aim of ensuring optimal control and ongoing automated regulation of their operation. There are multiple benefits from the operation of the new system, in terms of both process and environmental safety, due to the significant savings of energy and the consequent reduction of the carbon footprint in the production process.

Finally, the design phase is still in progress for the upgrade of the vacuum distillation units by replacing the 3 old furnaces with 2 new, technologically advanced and more efficient ones, which will have a shared system that heats the combustion air, thus increasing the thermal performance. Regarding the above project, it is important to note that it is a modernisation project, with significant environmental benefits, including:

- **Optimisation of Energy Efficiency**

The thermal efficiency of the new furnace is as high as 91%, making an important contribution to optimizing energy efficiency.

- **Energy-Saving**

The new furnaces incorporate forced draft technology, and use less energy than the older furnaces.

- **Reduction in Point Emissions of Pollutants**

The enhanced energy efficiency achieved by replacement

of the old furnaces has a direct impact on reduction of atmospheric emissions (because of the improved combustion process and reduction in use of fuel). The burners in the new furnace are low NO<sub>x</sub> burners, which helps reduce the quantity of NO<sub>x</sub> emitted in the furnace fumes.

791.5 million euros

in environmental investments and operating expenses from 2000 to 2016

Within the Group there is no production of renewable sources of energy, and thus there was no investment in this area.

## 4. Responsibility for the Environment

### 4. Best Available Techniques

Best Available Techniques (BAT) are techniques that can prevent (primary prevention measures that are intrinsic to the production process itself), or control (secondary measures or “end-of-pipe” techniques) - in the most efficient manner - the pollution caused by an industrial activity, while being economically feasible and technically practicable. Best Available Techniques per sector are described in the corresponding Reference Documents (BREFs). The revised conclusions of the BREFs for refineries were issued in October 2014.

The new Directive 2010/75 (on industrial emissions) aims at the integrated prevention and control of pollution that can be caused by industrial activities, and the assurance of a high level of protection of the environment and links the legislated limit values of industrial emissions with the levels that are ensured with the use of the Best Available Techniques. The integrated approach is based on the overall environmental performance of a facility and covers emissions into the atmosphere, water and subsoil contamination, generation of solid wastes, use of raw materials and energy, noise, accident prevention and the rehabilitation of worksites.

In order to minimise environmental impacts, MOTOR OIL incorporates the aforesaid BATs either into the original plans for a unit, or in cases of modernisation, expansion or modification of existing units and processes. At the same time, the company incorporates automations and control systems into the operation of the refinery, that contribute to efficient management of raw materials and energy, while ensuring high levels of reliability and safety in the units. Finally, Best Available Techniques that reinforce pollution prevention have been adopted, and are applied in the refinery's daily operations. Some typical examples of BAT applications in the refinery are shown in the following table.

---

#### A. Energy System - Furnaces, Boilers, Gas Turbines

*1. Use of efficient energy generation techniques, e.g. generating energy by gas turbines, combined-cycle facilities, efficient operation of boilers and furnaces*

*2. Increasing the energy efficiency of the refinery by:*

- Upgrading of furnaces and boilers.
- Use of optimal combustion programmes.
- Balancing generation and consumption of energy using automated control systems.
- Optimal use of steam in the stripping process and use of steam traps.
- Promotion of energy integration in production processes, through analysis of optimal energy use.
- Promotion of heat and energy recovery at the refinery.
- Use of heat recovery boilers to reduce use of fuel in generation of steam.

*3. Use of refinery clean gas fuel, and, if a supplementary supply of energy is required it can be achieved through the use of liquid fuel in combination with techniques to control pollution, or use of gas fuels (natural gas, LPG), for example:*

- Optimisation of the use of refinery gas fuel, or natural gas (with low sulphur content).
- Balancing and control of the system for generation of refinery gas fuel.
- Increasing use of gas fuels with higher ratio of hydrogen to carbon.
- Use of good combustion techniques.
- Reduction in fuel consumption through the introduction of forced-draft furnaces (increased energy efficiency).

*4. Control of NO<sub>x</sub> emissions*

- Introduction of Low-NO<sub>x</sub> burners.
- Use of high thermal efficiency techniques, with optimal control systems.

*5. Control of particle emissions*

- Use of steam injection techniques.

- Use of a catalyst which will resist wear caused by friction in the catalytic pyrolysis unit.
- Use of fuels with low sulphur content.

#### *6. Limiting emissions through continuous monitoring of the sulphur content in fuel*

### **B. Management and Automated Control Systems**

- The company has installed a distributed control system - DCS - to oversee its production process. The DCS system makes a significant contribution to reducing the environmental impact of the production process, through automation of the process and optimised monitoring of operating parameters.
- Application of Management Systems for quality, the environment, health and safety (ISO 9001, ISO 14001, OHSAS18001).
- Use of Advanced Process Control systems to minimise operation fluctuations and decrease energy requirements.

### **C. Anti-Pollution Tehnology Units**

- Units to treat gases with amine in order to remove hydrogen sulphide.
- Sulphur recovery units, with an efficiency level of  $\geq 99.9\%$ .
- Sour water stripping units with an efficiency level of  $\geq 99.9\%$  in respect of hydrogen sulphide.
- Organic treatment unit for liquid industrial waste.
- Activated sludge sewage treatment unit.
- Contaminated soil bioremediation unit.
- Sludge de-oiling/de-watering units, in which the volume of sludge is significantly reduced.
- Electrostatic filter at the Fluid Catalytic Cracking unit.
- Vapour recovery system at the Truck Loading Terminal.
- Availability of emergency systems for maintenance work and response to system disruption (load-shedding systems, emergency amine systems, multiple wash down systems).

### **D. Ancillary Facilities**

- Desalination of water using reverse osmosis technology, using less sea water and feeding the units with recycling of cooling water.
- Power and steam cogeneration plant.
- Recycling of cooling water.
- Partial use of cooling tower with desalinated water aiming at decreasing the use of sea water.

### **E. Prevention and Monitoring Measures**

- Limiting fugitive emissions from various sources (oil separators, unit equipment, tanks, piping, etc.) by placing second-tier seals on floating-roof tanks, using special valves (low-leaking) and double-seal pumps, implementation of international construction and piping codes, and so on.
- Implementation of leak detection and repair programme (LDAR) to detect and respond to fugitive emissions and volatile organic compounds from all kinds of equipment.
- Automated tank cleaning method.
- Heat exchanger maintenance and cleaning programme.
- Equipment inspection programme.
- Atmospheric emission monitoring programme, through use of automated, highly accurate analysing devices, as well as model laboratory methods.
- Liquid waste monitoring programme, using model laboratory methods.
- Use of techniques to reduce production of wastes at source.
- Reduction in volume of solid wastes and recovery or regeneration of catalysts.
- Solid waste management using specialist companies.
- Recycling of solid waste where possible.

## 4. Responsibility for the Environment

### 5. Energy Efficiency

Rational use of energy – as well as other scarce resources, like water – is for us an important parameter in our exercise of responsible business activities and our commitment to the principles of sustainable growth.

Thus:

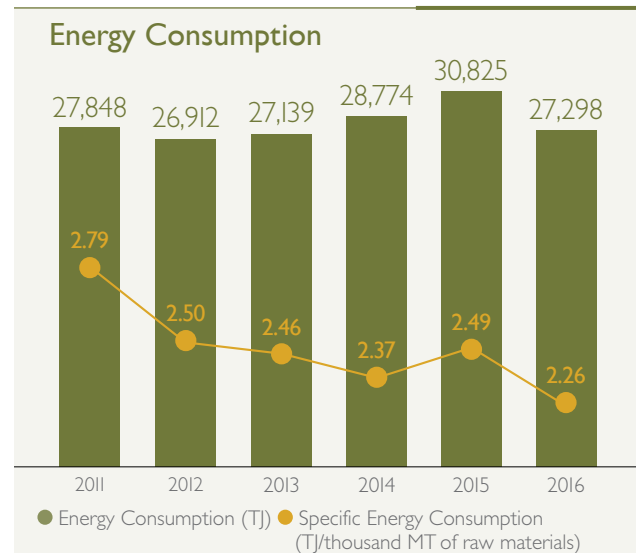
- Measuring and improving, on a continuous basis, our performance with respect to the use of energy and the reduction of carbon dioxide emissions.
- Investing in the application of economically feasible technologies that contribute to the reduction of emissions.
- Cooperating with the competent state authorities and other stakeholders in planning and implementing technologically feasible and financially viable environmental protection policies.
- Reporting our actions and results to all stakeholders.

#### 5.1. Energy Efficiency Improvement

The process of refining crude oil into final products is highly energy-consuming. Requirements for energy (i.e. electric power, fuel oil, fuel gas and natural gas) are such that its rational use is of paramount importance, both for the environment and for the company's economic results. The refinery's "energy footprint", therefore, is an important consideration that leads us actively to seek to identify areas where there is potential for enhancing energy efficiency, and to implement appropriate projects through the use of Best Available Techniques or equivalent technologies.

The refinery has designed and is gradually implementing an investment programme aimed at improving energy efficiency, primarily in the older units which were less energy-efficient due to their design. Thus, in 2012, one additional power-steam cogenerator was installed to minimise boiler use; in 2014, the thermal pyrolysis furnace was replaced; and in 2016, the air preheating furnace of the Crude Distillation Unit was replaced, while additional heat recovery exchangers were installed in the Thermal Pyrolysis Unit. Also in 2016, the project to upgrade the furnaces at the Lubricant Vacuum Distillation Unit began and is expected to demonstrate initial positive results in 2017, while the upgrade of the furnace in the Lubricant Extraction Unit has also been planned; the application of the Advanced Process Control system has been extended to the Lubricant Vacuum Distillation units and is under way in the Alkylation Unit. In the past, APC systems had been installed in almost all production units, and this year marks the ninth since natural gas was introduced.

As part of optimising operations, in 2016 an extensive maintenance programme was undertaken whereby almost all combustion facilities were repaired and generators maintained, while catalysts in the Hydrocracker, Diesel Desulphurisation and Hydrogen Production units were replaced. The catalyst in the Claus flue gas processing unit in particular was upgraded, achieving a reduction in energy consumption. In addition, a number of projects to restore and optimise the steam and condensate network have been implemented and have already shown positive results in heat and water recovery.



Energy consumption and overall performance of the facilities are systematically monitored, while the energy management system is expected to receive ISO-50001 certification in 2017. It is noted that energy consumption for 2016 in absolute numbers showed a drop; however, this is not representative since the extensive maintenance programme at the refinery meant energy-consuming units were out of operation. Moreover, per-unit energy consumption showed a slight decrease and amounted to 2.26 TJ, which was 10% less than 2015. Our long-standing commitment to continue to reduce energy consumption is depicted in the diagram below showing the decrease in specific energy consumption over time.



### Use of Natural Gas

Introducing the use of natural gas to the refinery in 2008 was an important step towards reducing its energy footprint, while also improving financial and environmental results, given that the use of natural gas usually reduces CO<sub>2</sub> emissions and is for the most part the economically most efficient way of generating electricity and producing hydrogen. Natural gas is used:

- As an alternative raw material for the hydrogen production unit (instead of naphtha or LPG), which allows the quantities of carbon dioxide emitted to be reduced by approximately 8% and 19%, respectively.
- As an alternative fuel for the Power Cogeneration Plant gas turbines, instead of either fuel gas or propane, achieving a reduction of carbon dioxide emissions by as much as 16%.
- As an alternative or supplementary fuel for the refinery's pre-heat furnaces and steam boilers, thus both increasing energy efficiency and significantly reducing emissions of air pollutants.

### Power and Steam Cogeneration Plant

The Cogeneration Plant now includes five gas turbines, with a total active power of 85MW, and three boilers recovering heat from the exhaust fumes generated. These boilers generate about 140 tons of high and low pressure steam per hour, making the refinery self-sufficient in electricity – as it eliminates the need to draw power from the Public Power Corporation grid – and meeting most of its need for steam.

The operation of the Plant also contributes to the reduction of greenhouse gas emissions at a national level by drastically reducing electricity consumption from the national grid, the production of which would require a different fuel mix. Moreover, heat recovery and steam generation at the refinery reduce the use of boilers.

The resulting benefit for the environment - in terms of lower CO<sub>2</sub> emissions due to own generation of electricity - is indicated in the following table:

In addition, the Power Management System (Best Available Technique), which was upgraded in 2011, protects the refinery from partial or complete shutdown owing to a failure of the internal or external power network, significantly increasing the level of safety and reliability, thereby improving environmental efficiency.

AVOIDING CO <sub>2</sub> EMISSIONS (TONS) BY COGENERATION OF ELECTRICITY AND STEAM	
2013	336,000
2014	332,000
2015	310,000
2016	328,000

### Upgrading of Preheatig Furnaces and Boilers

The upgrading of the furnaces is intended to ensure more effective use of the heat from the exhaust fumes, thereby reducing consumption of fuel, CO<sub>2</sub> emissions and emissions of other atmospheric pollutants. A rolling programme is under way to upgrade the refinery furnaces, introducing forced draft technology – which increases the efficiency of a furnace by more than 6% – and replacing the existing boilers with new, more energy-efficient boilers emitting fewer NO<sub>x</sub>. For example, upgrading of the crude oil preheating furnace (the refinery's largest) at the Crude Distillation Unit in 2007 resulted in an increase in thermal efficiency from 80% to 87%. In 2014, with the completion of upgrading of the Visbreaker unit, a new improved-efficiency pre-heating furnace was installed, allowing a saving of up to 30% in fuel use compared with previous years. Moreover, the project to replace the furnaces of the vacuum distillation unit got under way in 2016, with initial results of the anticipated decrease in fuel consumption expected soon.

### Recovery of Gases and Condensates

The recovery of condensates, which are then used in the steam boilers to produce steam, was maintained at high levels. Using the energy content of the condensates means reducing the gas and liquid fuel required to generate steam in the steam boilers. Continuous care is also taken to maximise recovery of gases, so that they can be used as fuel and their combustion in the flare is minimised.

### Desalination

Desalination of seawater using reverse osmosis technology is the most energy-efficient method. Extensive use is made of this technique, with four units in operation. The potential for increasing production with a new unit or making improvements to existing ones is also being explored as a means of completely doing away with the use of thermal units to produce water.

## 4. Responsibility for the Environment

### Monitoring and daily Practice

The energy performance of production units is constantly monitored, so as to correct any malfunctions that come to light. The Advanced Process Control system, through continuous monitoring, achieves the optimisation of energy use in the units where it has been installed. The APC system is fully operational for the crude distillation units, the vacuum distillation units, the hydrocracker and hydrogen production units and the diesel hydrodesulphurisation units, making a significant contribution to optimizing operations and providing direct control of their most important operational parameters. Automated sulphur and distillation analysers have also been installed and are used by the APC to accurately adjust the processes and minimise energy consumption.

With the same aim, the refinery's preventive maintenance programme provides for:

- The systematic re-tubing, repair and cleaning of heat exchangers and air coolers in order to maximise heat recovery and reduce consumption.
- Replacing, through annual programmes, of pipeline and equipment insulation, thus minimizing losses to the environment.
- The maintenance and/or replacement of rotating equipment, whose energy performance has fallen below specified levels, as a result of length of use.
- Repairing and/or replacing of the refractory material, burners and tubes of pre-heat furnaces.

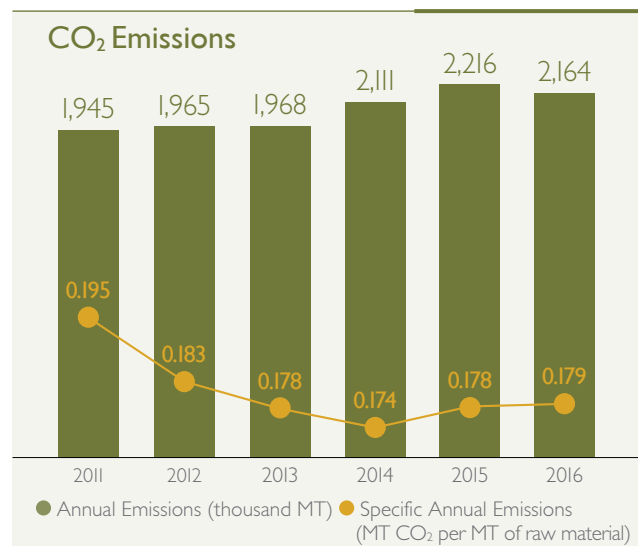
## 5.2. CO<sub>2</sub> Emissions

2016 was the fourth year of implementation of the new system for monitoring emissions of greenhouse gases for the period 2013-2020. Apart from the need to reduce CO<sub>2</sub> emissions, this phase of application will also be subject to rigorous specifications relating to accuracy of measurements and assessment of their relative uncertainty.

In order to comply with these requirements, MOTOR OIL:

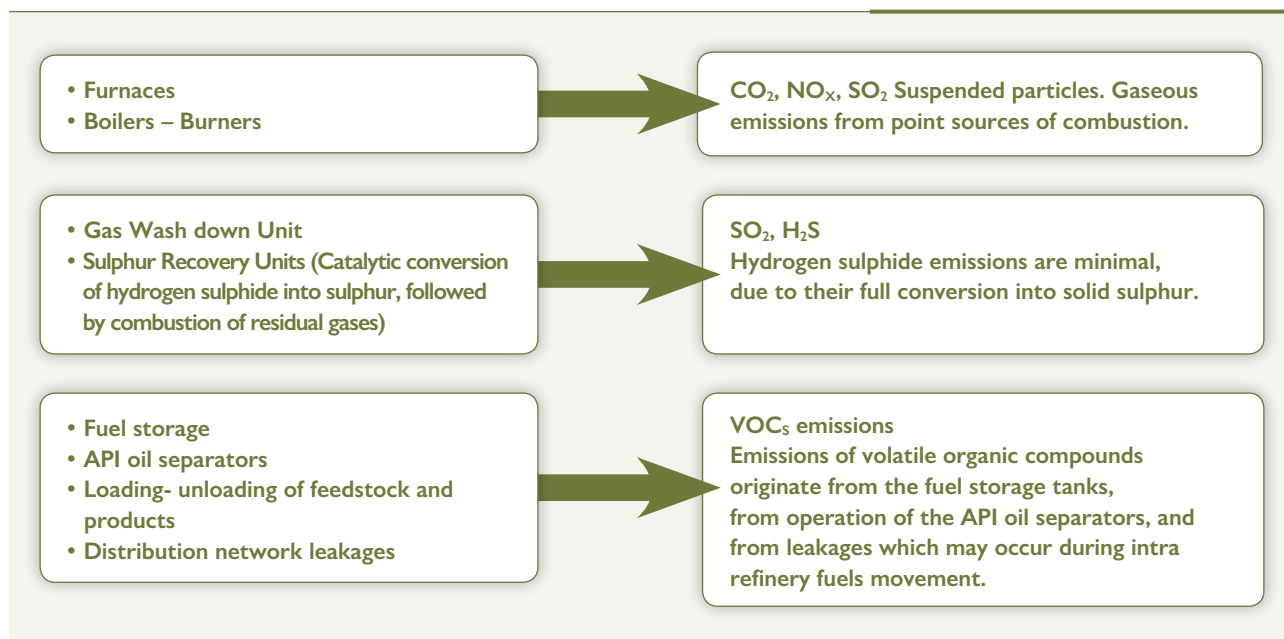
- Uses the appropriate methodology to monitor CO<sub>2</sub> emissions from its facilities, the methodology resting on methods of calculation based on flow analysis measurements and analyses of fuel quality. In 2016, the emissions monitoring plan was revised as part of ongoing improvements in monitoring and calculating CO<sub>2</sub> emissions.
- Calculates at the refinery chemistry laboratory – certified to EN 17025:2005 standards – the quantity of carbon contained in the refinery gas fuel using the gas chromatography method.
- Submits to the competent ministry annual reports on CO<sub>2</sub> emissions, which are verified as to their reliability and validity by a certified external agency.

Total CO<sub>2</sub> emissions for 2016 were 2,164 thousand tons. Also in 2016, a drop in total emissions was noted, due to suspended operation of units undergoing maintenance, while the specific amount was at about the same levels at previous years.



## 6. Air Quality Management

It is a fundamental duty of our company to assure air quality at and around our refinery. The achievement of ongoing improvement in this area is not just a response to legal requirements; it is also due to our commitment to the principles of Corporate Responsibility, according to which we regard air quality as a material issue.



### Emissions Monitoring

To protect and improve air quality, air pollutant emissions are monitored using a wide range of techniques; state-of-the-art measurement equipment is employed. The measurement programme, including continuous as well as intermittent readings, covers both point and diffused emission sources.

*In the peripheral zone of the refinery*, air quality is monitored at four stations:

- Three fixed monitoring stations are capable of continuously measuring the concentration of hydrogen sulphide (H<sub>2</sub>S) and sulphur dioxide (SO<sub>2</sub>).
- A mobile station equipped with automated state-of-the-art measuring and recording devices, which can perform a wide range of measurements, including meteorological parameters (wind speed and direction, air temperature and relative humidity), and the concentrations of nitrogen oxides (NO, NO<sub>2</sub> and NO<sub>x</sub>), sulphur dioxide (SO<sub>2</sub>), hydrogen sulphide (H<sub>2</sub>S), carbon monoxide (CO), methane, total hydrocarbons, hydrocarbons excluding methane (CH<sub>4</sub>, NMHC, THC), benzene, and particulate matter PM<sub>10</sub>.

Within the refinery, flue gases from the stacks of the main combustion plants (point emissions) of the Fuels, Hydrocracking and Lubricants complexes are continuously monitored by online analysers, which are certified to the EN14181 standard. The parameters monitored are concentrations of oxygen, temperature, flow and pressure of flue gases. As in the case of the main refinery stacks, the main pipelines channelling gases to the flares of the Combustion, Lubricants and Hydrocracking units are subject to continuous

flow measurement. At the Catalytic Cracking Unit there is continuous monitoring of the flow, humidity, pressure and temperature of the flue gases, the concentration of oxygen and carbon monoxide, of sulphur dioxide, of nitrogen oxides and of suspended particles.

In 2016, the installation of online analysers of emissions (nitrogen oxides, sulphur dioxide and suspended particles) and operating parameters (flow, humidity, pressure, temperature, oxygen) at two power plants was completed.

It should be noted that all analysers are connected to the refinery's Distributed Control System (DCS), a configuration that allows for the complete control of the combustion taking place in the furnaces.

Emissions from the refinery's other stacks are monitored every three months by a suitably accredited external organisation.

*An automated performance control system* operates at the Sulphur Recovery units, which continuously monitors and records H<sub>2</sub>S concentrations at the entry points, and H<sub>2</sub>S and SO<sub>2</sub> concentrations at the exit points of these units. Also, the H<sub>2</sub>S/SO<sub>2</sub> ratio is continuously measured, recorded and adjusted, so as to ensure maximisation of recovery performance (which is in the order of >99.5% in the case of the new, SCOT-type units). The smooth operation of the afterburners (incinerators) associated with these units is achieved through continuous monitoring of SO<sub>2</sub> and O<sub>2</sub> at the exit points, and of the temperature at the radiant section of the furnaces. Operation of both the Sulphur Recovery

## 4. Responsibility for the Environment

units, and the afterburners, is automatically controlled via the refinery's Distributed Control System (DCS).

### Clean fuel

#### *Integrated Sulphur Management System*

Refineries face the following challenge: the amount of sulphur in the available crude oil types is increasing over time, while the specifications for allowable sulphur content in the fuels produced have reached extremely low levels (e.g. for petrol and automotive diesel, the 2009 specification for sulphur content is a maximum of 10 ppm or the equivalent of 0.001%). Moreover, the maximum acceptable level of sulphur emissions is also low, since the content of sulphur dioxide in the atmosphere around a refinery, on an hourly basis, should not exceed 350 µg/m<sup>3</sup>. In this context, the removal of sulphur coming into the refinery with crude oil - at a concentration which in 2016 ranged between 0.5% and 4.0% - is a significant challenge.

MOTOR OIL, as a responsible corporate citizen with respect for the environment, has in place a particularly effective system which incorporates Best Available Techniques, in order to achieve the best results, both in terms of maximising the degree of sulphur removal and minimising the amount of energy consumed.

In this way, and through the Hydrocracker Complex, MOTOR OIL produces and markets petrol and diesel with a sulphur content below 10 ppm. This results in reduced sulphur emissions from the refinery, while the overall rate of hydrogen sulphide conversion into elemental sulphur in the new SCOT-type Sulphur Recovery units is in the order of 99.95%.

Elemental sulphur is initially produced in liquid form, which by cooling and appropriate processing, is converted to a solid granular form, stored in silos for sale as a raw material for the production of sulphuric acid and fertilisers. The whole process is carried out in a completely closed circuit, thus avoiding the dispersing of sulphur particles in the air, and minimising entirely any environmental impacts.

### Controlling emissions

Apart from the measures to control concentrations of airborne pollutants, a range of measures has been taken within the refinery to limit atmospheric pollution, such as:

- Installation of an electrostatic filter on the outlet of the Catalytic Pyrolysis unit, intended to reduce emissions of suspended particles from the catalyst. This reduces total emissions of suspended particles to levels far below the permitted limits.
- Desulphurisation of gases used as fuel in the refinery before they enter the gas fuel system, reducing emissions of sulphur dioxide.
- Installation of burners with low NO<sub>x</sub> emissions, both in the design of new furnaces and in the upgrading of old ones, in order to reduce their emissions. In this context, the new furnace of the thermal pyrolysis unit has incorporated burners with low NO<sub>x</sub> emissions.
- Furnace cleaning while in operation, aiming at increasing heat induction, saving fuel and decreasing flue gas temperature.
- Installation of closed circuits in the gas processes, relieving pressure of gases by safety valves to the flares, placing of second-tier seals on floating-roof tanks, placing of floating tops on the oil separators and installation of a steam recovery system at the Tanker Loading Terminal, as well as measures to reduce emissions of hydrocarbon gases, in tandem with the implementation of the system of bottom-loading tankers.
- Installation of steam recovery units for loading of petrol at all Avin Oil and Coral facilities, as provided for in legislation, and at all service stations for use in unloading of petrol from tankers to tanks (in accordance with the provisions of Directive 94/63 [Stage I]).
- Bottom-loading of road tankers.

## Leak Detection and Repair (LDAR)

A modern refinery comprises many different types of installed equipment, through which large quantities of raw materials circulate, as well as intermediates and final products. In such a system, it is to be expected that there will be particular points with a higher risk of hydrocarbons being accidentally released into the atmosphere. In order to limit fugitive emissions from the equipment, a programme has been implemented featuring regular controls at selected points (better known as LDAR – Leak Detection and Repair) in order to identify and repair possible leaks.

Fugitive emissions may arise from leaks in valves, pumps, flanges and other related equipment installed on pipelines, pressure vessels, reactors or storage tanks.

In 2016, 6,171 points were inspected as part of the LDAR programme at the MOTOR OIL refinery, covering all production units, the Truck Loading Terminals, port facilities, storage tanks and oil separators. The various points were checked by refinery staff at least once a year, using portable equipment to measure volatile carbon concentration. In the event that concentrations are found to exceed 5,000 ppm, a repair request for the equipment checked is issued. In 2016, 15,634 checks were carried out, identifying 6 points requiring attention.

### In numbers

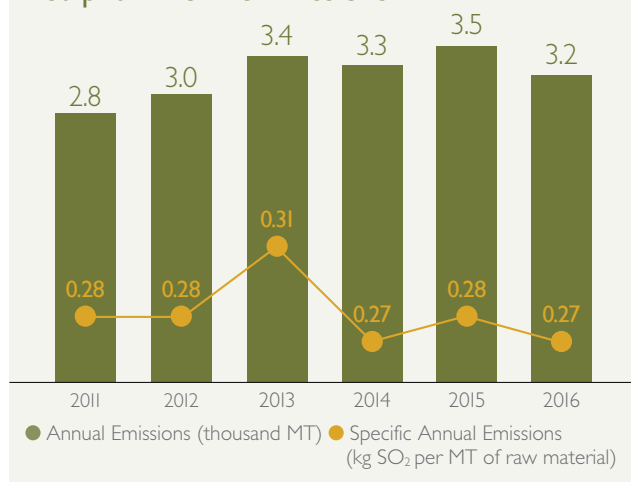
The diagram below shows total annual emissions of sulphur dioxide, as well as emissions per ton of raw material. In 2016, there was a decrease in the total emissions and the emitted SO<sub>2</sub> value per ton of raw material compared to 2015.

The reduction in total emissions is due to the refinery's maintenance schedule which kept some units out of operation for about a month. The specific SO<sub>2</sub> amount was also down due to favourable economic factors that prevailed in the oil refining sector in 2016 which allowed for the use of environmentally friendly fuels instead of other traditional ones (fuel oil). In general, however, our commitment to achieving ever lower levels of emissions remained constant.

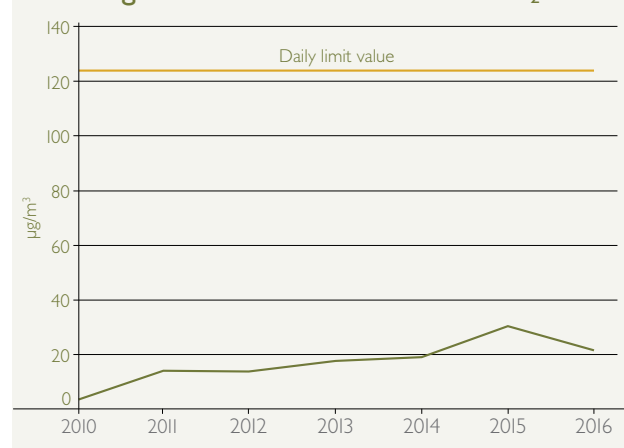
As far as air quality during 2016 is concerned, the processing of the recordings at the four air quality monitoring stations, in the context of the emissions monitoring programme, has shown, as in previous years, that air quality in the vicinity of the refinery remains highly satisfactory. Detailed figures for the last five years show that there has been no exceeding of the hourly limit values and daily levels permitted by legislation, and the recorded values are much lower than the limit values allowed.

The following diagrams show the average annual values of the last seven years for SO<sub>2</sub>, NO<sub>2</sub> and suspended PM<sub>10</sub> particles. We note that in 2016 the average daily concentration of suspended PM<sub>10</sub> particles exceeded the legal limits for 2 days (28 February and 1 March) due to the meteorological conditions prevailing in the area (transfer of dust from Africa). These excesses, as set out by the environmental terms, were declared to the competent authorities.

### Sulphur Dioxide Emissions

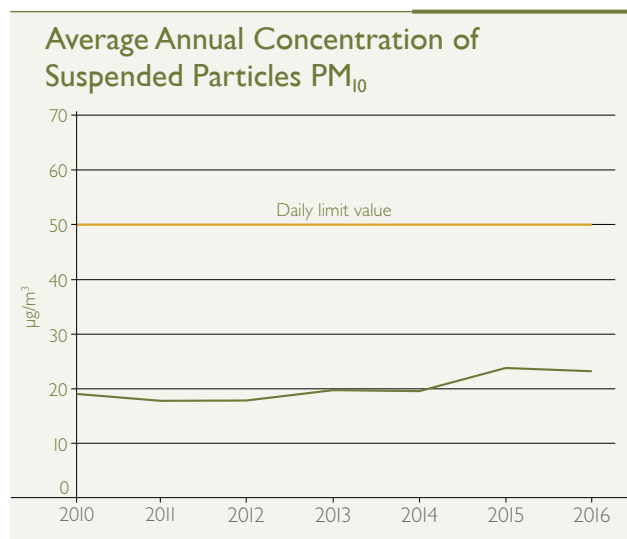
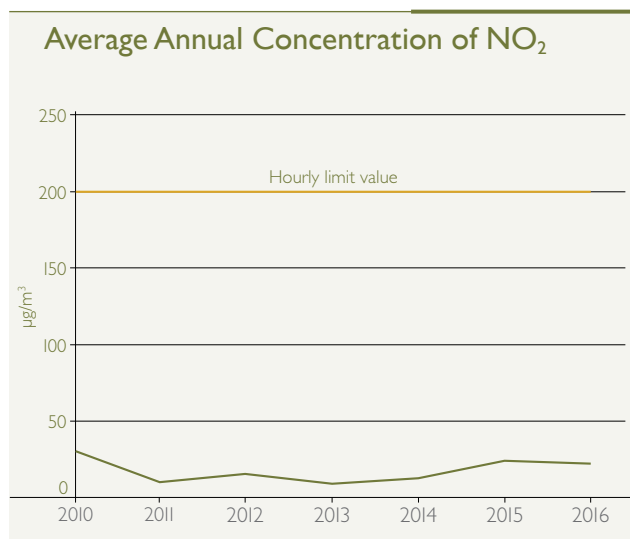


### Average Annual Concentration of SO<sub>2</sub>





## 4. Responsibility for the Environment



Further related information on control of emissions during 2016 can be found in the Environmental Statement 2016, which presents diagrams relating to all air pollutants.

## 7. Liquid Waste Management

Liquid waste produced by the refinery's various processes fall into two categories: industrial waste and urban waste.

The management and processing of liquid waste is a material issue for the company, which incorporates Best Available Techniques, while due to their different pollutant load, the industrial and urban waste streams undergo different types of processing prior to their final disposal. Industrial liquid waste is pre-processed and then taken to the Liquid Industrial Waste Treatment Plant, while urban waste is removed to the Urban Waste Treatment Plant.

The effectiveness of operation of the Industrial Waste Water Treatment Plant is evidenced by the fact that concentrations of various pollutant substances at the plant outlet are clearly below relevant limit values. In the case of some substances (including benzene, toluene, ethyl benzene, xylene and a number of heavy metals), their concentrations are very much below corresponding limit values, approaching the limits of detection in some cases.

SUPPLY AND CONCENTRATIONS OF POLLUTANT PARAMETERS AT OUTLET OF LIQUID INDUSTRIAL WASTE TREATMENT PLANT (average annual values)					
Parameter	AVERAGE VALUE				LIMIT VALUE
	2013	2014	2015	2016	
Supply (m <sup>3</sup> /day)	9,485	9,817	10,070	9,592	
pH	7.4	7.5	7.6	7.1	6-9
Temperature (°C)	25.4	25.4	27.5	30.2	35
Oil (mg/l)	2.2	2.5	2.1	1.6	10
BOD <sub>5</sub> (mg/l)	24.5	24.5	23.8	24.6	40
COD (mg/l)	104.9	106.0	105.3	106.0	150
NH <sub>3</sub> (mg/l)	13.4	13.5	13.4	13.5	15
Phenols (mg/l)	0.2	0.3	0.2	0.3	0.5
Sulphurs (mg/l)	1.1	1.1	1.1	1.1	2
Suspended solids (mg/l)	16.7	17.7	19.0	19.6	40

- Monitoring and control of subsoil and aquifer quality, based on hydro-geological studies submitted to the Ministry of the Environment, Energy and Climate Change, takes place at 10 boreholes. According to the approved environmental terms, during 2016, two sets of samples were taken at these boreholes – one every six months- in order to determine the value of a number of parameters, such as concentrations of heavy metals

and hydrocarbons, the results of which were found to meet legislative requirements.

- Sampling and measurements continued in 2016, to monitor conditions in the seawater of the coastal area near the refinery. The study was conducted by the Geochemistry section of the Faculty of Geology and Geoenvironment at the University of Athens.

## 8. Solid Waste Management - Recycling

Management of the solid waste generated by refinery operations is a material issue for the company. Waste management is based on an integrated process covering all stages in the life cycle of the waste and includes the following methods: processing within the refinery and re-use; recycling outside the refinery; recovery outside the refinery; final disposal outside the refinery. The main aims of the solid waste management programme are:

- Reduction of quantities produced, at source,
- Separation into hazardous and non-hazardous waste at source,
- Maximum exploitation prior to final disposal, through recycling or re-use or recovery of useful components or regeneration, and finally,
- Safe transportation and final disposal without putting at risk human health or the environment. Only licensed companies specializing in the handling of solid waste are used for carrying out disposal of such waste. Spent catalysts, which, depending on the particular case may be classified as hazardous solid waste, are disposed of in a number of ways (either exported, or regenerated for re-use by specialised firms abroad, or used in cement manufacture). Empty hazardous substance containers are also disposed of by licensed companies.

As part of its integrated solid waste management and in accordance with the national hazardous waste management plan focusing on applying environmental, innovative and economically viable technologies, MOTOR OIL has

already begun to implement a biopiling method to process contaminated soils with the installation of a bioremediation facility. The Ministry of the Environment and Energy issued a permit for the unit in 2014 and it commenced operation in 2015.

The company, as a solid waste producer, submits an annual report to the competent departments of the Ministry of the Environment and Energy which records all types of solid waste arising from its operations and how solid waste is handled, while identifying the legally-approved recipients.

As far as used lubricants and their packaging is concerned, contracts are in place with a firm specialised in used mineral oil recycling and with a firm specialised in handling packaging materials. These two contracts provide for recycling of used lubricants and their packaging, thus contributing to the protection of the environment and the rational use of raw materials. We also collaborate with accredited firms for recycling other categories of solid waste.

### RECYCLING - SOLID WASTE DISPOSAL (MT/YEAR)

	2012	2013	2014	2015	2016
Batteries	5.2	4.5	11.1	1.04	5.32
Tyres	7.1	4.0	2.9	0.7	5.0
Lubricants <sup>1</sup>	2.2	192.1	27.5	1.4	82.8
Wooden packaging	39.5	88.7	98.4	115.7	130.1
Paper and Paper packaging <sup>2,3</sup>	38.3	156.6	171.8	203.0	167.2
Plastic and plastic packaging	44.1	228.2	233.4	214.8	215.7
Metal (scrap)	1,000	1,431	1,597	2,198	2,205
Electrical/electronic equipment	1.2	0.9	5.7	1.9	1.2
Contaminated soil	0	0	0	403.4	567
Contaminated packaging	27.1	20.6	13.8	8.7	16.8

## 4. Responsibility for the Environment

RECYCLING - SOLID WASTE DISPOSAL (MT/YEAR)					
	2012	2013	2014	2015	2016
Asbestos-containing materials	13.3	0	0	12.7	17.8
Printer cartridge packaging (units)	2,183	369	825	712	494
Spent catalysts for recycling	44.3	1,133	2,818	2,747	2,129

1. These quantities refer to the refinery alone, since corresponding reliable figures for the AVIN OIL and CORAL retail networks are not available.

2. Recycled and non-chemically bleached paper is being used by all the companies of the Group.

3. Money raised from paper and toner cartridge recycling at the Group Head Office is donated to the "ELPIDA" Foundation.

### Reprocessing of Raw Materials

The various stages of refining create by-products with specifications that deviate significantly from the desirable ones, in which case it is necessary to reprocess. The effort made is towards the direction of utilising them, as much as possible in later stages of refining, in order to minimise the consumption of energy and the capacity that is committed for reprocessing. The goal is to restrict the overall reprocessing to the crude oil units. The quantities that were reprocessed are presented next:

RECOVERY OF RAW MATERIALS (Mt)	
2013	87,300
2014	64,700
2015	88,200
2016	109,300

## 9. Water Management

MOTOR OIL views water resource management as a material issue and has consistently implemented measures to reduce and rationally manage water consumption at its refinery.

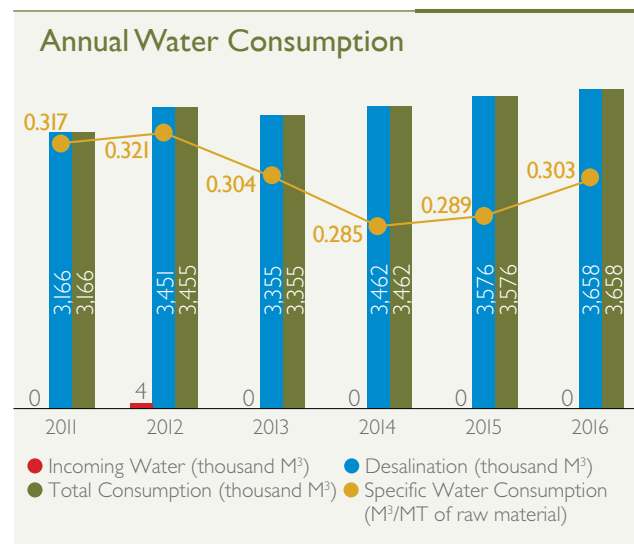
The water used in the various parts of the refinery originates 100% from sea water processed at desalination units. The desalination is effected using both Multi-Stage Flashing and Reverse Osmosis techniques, the latter being the preferred method from an environmental and economic perspective. The refinery's desalination system has 3 MSF units and 4 RO units. This system allows full coverage of the refinery's water needs, eliminating the need to purchase additional fresh water on the open market.

The steady increase of production at the refinery in recent years has resulted in a subsequent increase in total water use. Conversely, a downward trend has emerged in the quantity of water consumed per ton of raw materials, which at the end of 2016 amounted to 0.303 m<sup>3</sup>/ton raw material. This was slightly increased due to the periodic maintenance of units requiring water but without contributing to production.

The effort to reduce the quantity of water used per ton of raw material is part of our primary goals and a number of actions and investments have been made in this regard with projects to improve energy efficiency at the refinery (reduced steam consumption, operational improvements, etc.).

### Re-use and Recycling of Water

One of the important processes at the refinery is the processing



of the acid water flows generated in different phases of the production process. About 35% of this water flow is recycled to feed the crude oil desalinators, while the rest is channelled to the Industrial Waste Water Treatment Plant, allowing a proportional reduction in consumption of fresh water and in the volume of wastes needing treatment.

## 10. Noise Management

MOTOR OIL makes every effort possible to reduce environmental noise levels at the boundaries of the installation, carrying out measurements at regular intervals at set points around the facility and taking a number of measures.

Results of measurements for 2016 are set out in the table below and show that noise levels are lower than the legal limits laid down in the environmental operating conditions of the refinery.

	AVERAGE MEASUREMENT FOR JANUARY 2016 (DBA)	AVERAGE MEASUREMENT FOR JULY 2016 (DBA)	AVERAGE MEASUREMENT FOR OCTOBER 2016 (DBA)	LEGAL LIMITS (DBA)
Perimeter of refinery facility	54.5	54.0	55.2	65.0
Southern refinery perimeter	52.7	52.4	52.3	55.0

Particular care is also taken with the new projects being carried out at the refinery. In the design of each new project (e.g. construction of new tanks, regular unit maintenance) special measures are taken, such as the installation of silencers, the

placing of sound curtains and the procurement of equipment with low noise emissions, in order to add as little as possible to the overall noise pollution caused by the refinery.

## II. Protection of the Marine Environment

Due to its location, the operation of MOTOR OIL's refinery is completely linked with the marine environment. Owing to the extensive impacts of a potential pollution incident, both for the marine ecosystem and the economic and social life of adjacent areas, as well as the tremendous expense that rehabilitation would involve, extensive prior planning and preparation for prevention of, and successfully responding to, such incidents is imperative.

It should be noted that no parts of the refinery abut on natural habitats or protected areas which might be affected by its operations.

In order to comply with these requirements, MOTOR OIL:

- Implements all necessary active and passive protection measures to minimise the risk of oil spills during the operation of its refinery. In 2016 not a single leak was reported.
- Implements all necessary measures and provides all equipment for the safe sail in and sail out of tankers at its port facilities, as well as for the safe loading/unloading thereof.
- Keeps on hand all necessary equipment for response to a small or medium-scale local contamination incident (Tier-I/2). It also keeps on hand a stock of oil slick dispersant, which can be used only with the consent of the Port Authorities.
- Checks the readiness for implementation of the existing anti-contamination plans and maintains a high degree of readiness among staff to use the equipment involved, with an annual programme of drills. It should be noted that the scenario in the above drills involves more general refinery safety issues as well as security issues for the port and vessels.

- Is a member of international and regional organisations, whose aim is the prevention and timely response to oil spill incidents (see Participations - Collaborations section in chapter I).

# 5. Social Responsibility



We stand side by side with the community, offering consistent and long-lasting support.

Our standing objective is to follow a course of constant growth and creation of value for all stakeholders, effectively playing our social role, and increasing our contribution to society.

Our sense of responsibility to society is expressed, first and foremost, through our contribution to the general recovery and consolidation of our nation's economy. It is of vital importance to us that our activities should benefit the society in general, by way of direct and indirect job creation, fostering local entrepreneurial activity and purchasing goods and services from the domestic and local suppliers.

Moreover, we wish to see all our business activities interact positively and productively with the social environment in which we operate. It is for these reasons that the Motor Oil Group implements a program of donations and sponsorships, addressed directly to local

communities, designed to help improve quality of life, protect the environment and foster a healthy social and cultural life in local communities and across the country as a whole. In this context, in 2016 we spent 3.7 million euros in projects of social solidarity and various sponsorships.

It is one of the Group's strategic objectives to bring prosperity to the communities around or in the general area of its refinery and the facilities of its commercial companies through job creation, support for the local market, and general social care.

Finally, according to the supplementary indices of the Oil & Gas Sector, our Group does not operate in areas where there are native populations, or where such populations might be affected by our activities, nor were there any significant disputes, involuntary movements of personnel or other impacts on local communities or native populations in 2016.



662.4 million euros

for the social  
product

37 million euros

in social  
solidarity  
projects and  
sponsorship  
in the past  
10 years

3.7 million euros

for 2016



## 5. Social Responsibility

### I. Economic Benefits to Society - Social Product

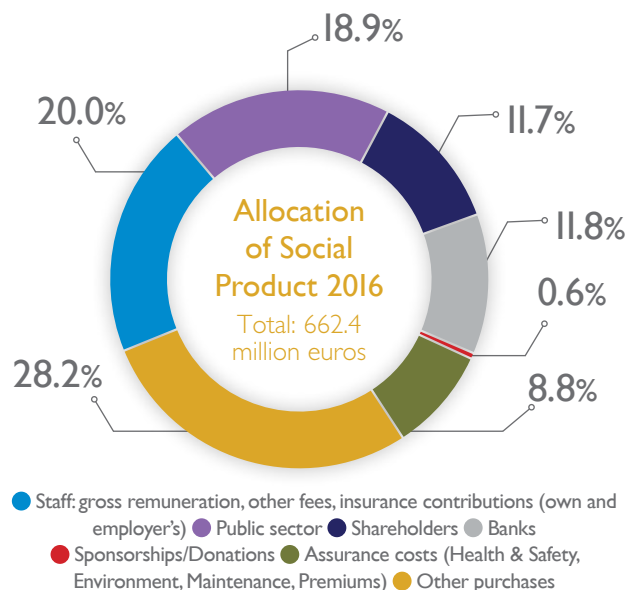
The overall scale of the Group's operations, combined with its consistent focus on steady growth, result in a very significant contribution to the country's economic development. This contribution, based on our successful business activities, is made through the generation of value, the creation of jobs and our contribution to the broader social progress.

Our operations in the critical energy sector reduce our country's dependence on foreign sources of petroleum products. Moreover, our interaction with stakeholders creates primary value for their benefit and secondary value too, in that it contributes to the value they in turn generate for the economy and for society as a whole.

In 2016, the Group's total revenues from economic activities amounted to 6,294.5 million euros. Out of these, 4,932.4 million euros were used to purchase crude oil, other raw materials and finished products. This represents 78.4% of revenues, a justifiable amount given the nature of Group activities.



The Social Product is that part of our income allocated to selected stakeholders, i.e. the workforce, the state, shareholders, banks, suppliers (not including suppliers of crude oil, other raw materials and finished products), as well as society at large (donations and sponsorships). It also encompasses the cost of



securing operations, including expenditure for Health, Safety and the Environment, insurance of facilities, repairs and preventive maintenance.

Based on the above, the Social Product returned to stakeholders in 2016 amounts to 662.4 million euros.

#### SOCIAL PRODUCT 2016 (MILLION EUROS)

TOTAL INCOME  
TO BE DISTRIBUTED  
**6,294.5**

REVENUES FROM CUSTOMERS  
AND OTHER SOURCES  
**6,467.7**

Net Debt  
Change  
**(173.2)**

STAKEHOLDERS  
**5,407.9**  
SUPPLIERS - RAW  
MATERIALS  
**4,745.5**

**STAFF**  
Gross remuneration,  
other fees, insurance  
contributions (own  
and employer's)  
**132.7**

**SOCIETY**  
Donations -  
Sponsorships  
**3.7**

**PUBLIC  
SECTOR**  
Taxes and  
Duties  
**125.1**

**SHAREHOLDERS**  
Dividends  
**77.7**

**OTHER  
PURCHASES**  
**186.9**

**BANKS**  
Interest  
**78.2**

**ASSURANCE**  
Health & Safety,  
Environment,  
Maintenance,  
Premiums  
**58.1**

BALANCE  
**886.7**

INVESTMENTS FOR DEVELOPMENT,  
HEALTH, SAFETY AND ENVIRONMENT  
**86.4**

CASH  
**800.3**

### Support of local entrepreneurship

As the largest enterprise and employer in the Prefecture of Corinth, MOTOR OIL makes a direct or indirect financial contribution to a large number of businesses and families in the region (approximately 600 refinery employees live in neighbouring municipalities). Moreover, the company supports local initiatives to encourage entrepreneurship.

We have a policy of preferring local businesses when it comes to supplying the refinery with services, consumables, food, etc. - even when there are financially more advantageous offers from outside the area. In 2016 we spent 16.5 million euros, thereby providing further support to the economy of Corinth and the surrounding region. We further paid roughly 1.1 million euros in municipal and property taxes.

## 2. Customer Service and Respect

All the MOTOR OIL Group companies operate having customer service as a top priority. The Group's long experience in combination with a high level of expertise, and its rigorous insistence on high quality, guarantee comprehensive, integrated service and ongoing development of relations of trust with customers and associates.

### The Refinery

MOTOR OIL conducts quantitative and qualitative customer satisfaction surveys covering the full spectrum of its clientèle. This aims at establishing an objective view of their level of satisfaction, by obtaining feedback about their perception of the quality of services rendered, and their overall impression of its corporate image.

The basic objectives of these surveys are:

- Assessing customer satisfaction.
- Evaluating the importance of the entire range of MOTOR OIL's individual services.
- Determining aspects of current products, services and provisions that require improvement.
- Determining the criteria applied by those selecting MOTOR OIL as a supplier, and assessing their impression of MOTOR OIL's image as a supplier.

Survey data are evaluated, with a view to building on the company's strengths and to detecting in particular the company's weaknesses and taking appropriate corrective action, thereby demonstrating the customer-focused nature of the company's strategy. Over time this process has led to a reduction in the number of complaints about the refinery; in 2016, there were just 4 complaints, 2 of which on quality issues and the other 2 on delayed delivery. All complaints were successfully resolved.

### Our Commercial Companies

The Group's commercial companies have integrated systems for serving the thousands of customers who place their trust in them every day.

More specifically, they have full quality and quantity control systems for their fuels, carried out at all stages of transportation from the refinery or the depot to the retail stations. With the support of our specialised chemical laboratories, as well as the special Quality Control Mobile Units (vans) which carry out unannounced checks at our retail stations, we take active steps to ensure the quality and quantity of our products. In 2016, the

Coral, Avin Oil and Cyclon service stations continued using their state-of-the-art vans, which travelled around Greece carrying out thorough quantity and quality controls. These are usually unannounced and cover all the companies' retail stations. In 2016, 2,300 visits were made to the Group's retail stations all across Greece.

Moreover, the groundbreaking technology of the molecular marker in all differentiated Shell fuels, and the special Smart Ring for deliveries of heating oil to homes and diesel to vessels, mean that customers can feel absolute confidence in Shell fuels, in terms of quantity and quality.

At the same time, a number of market researches are carried out, collecting and evaluating data on levels of service, fuel quality, customer selection criteria, etc.

Our service stations are also subject to inspection by unannounced visitors in the Mystery Motorist programme. The scheme allows evaluation of the level of service and customer satisfaction using a questionnaire covering such areas as efficiency, service, cleanliness and speed of transactions. In 2016, some 2,500 secret visits were carried out at Shell service stations and 600 visits at Avin service stations. The results of these are presented to the Retail Sales Departments of the company, which in turn discuss them with the retail station managers and take corrective measures where necessary.

Shell retail station customers can now express their opinion through Voice of Customer, an innovative online consumer survey application, through PC and mobile phone, where customers can give their opinions after a visit to a retail station. This platform generates more than 10,000 filled-in questionnaires each month, giving us the opportunity to quickly analyse the results and resolve any problems our customers may encounter.

Finally, the Egnomi tool was launched in 2015, which is used to easily and quickly collect consumer opinions on-site at Shell gas stations, based on questions appearing on device screens. The

## 5. Social Responsibility

replies are collected immediately, providing the company with a daily barometer of customer satisfaction and experience at the Shell stations. The Egnomi application provides more than 45,000 answers every month.

Coral Gas aspires to be the leading company in Greece and is continuing efforts to offer innovative products to its customers. It has introduced significant innovations, and it now distributes all its packaged products to the market with special safety valves (the traditional liquefied gas bottles with FLV, GoGas with triple security and the new container with an ILL Flow Limiter Valve)

significantly raising the level of safety and protecting the consumer by applying the latest solutions for all domestic and professional liquefied gas applications.

Finally, in 2016, significant steps were taken to improve service of our final consumers and corporate customers. Avin installed a new state-of-the-art call center, and established procedures to further automation and quick response to customer requests. At the same time the new Coral NET, Avin Portal and Cyclon Portal online platforms were launched, aiming at faster and better service for corporate customers.

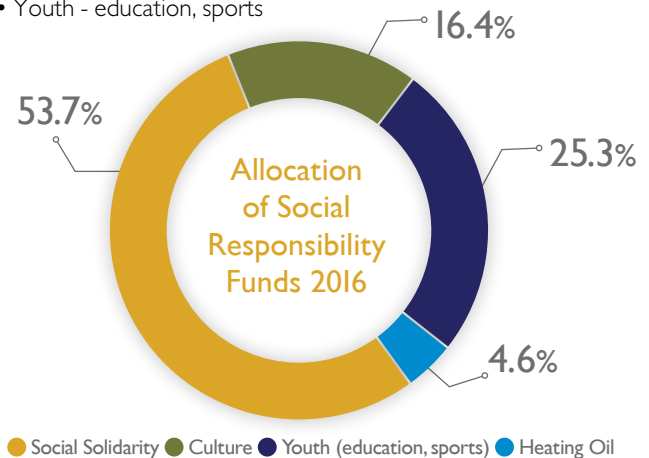
## 3. Social Solidarity and Sponsorships

Through our social responsibility projects we seek to demonstrate a steady, consistent support for the community, providing support for values which will improve the life of the community - in education, health care, culture, sports and entrepreneurship.

In 2016, as in previous years, our company's social action focused on the financing and promotion of social solidarity programs across the country, though our primary focus was placed on organizations and agencies based mainly in municipalities in the vicinity of our facilities. Our main objective was to relieve poverty among the most vulnerable social groups, and to help them meet their basic needs. To this end, we have promoted actions designed to bring relief to our fellow citizens, while also supporting cultural agencies, educational institutions, organizations engaged in charitable and humanitarian work, as well as local government agencies.

The actions we have supported were chosen by the relevant executives of the company at the local and central levels, in accordance with the procedures set out in the relevant policy and in implementation of our strategy for social responsibility, which is structured along the following key axes:

- Social solidarity
- Culture
- Youth - education, sports



### 3.1 Social Solidarity

Our company's objective is to promote and support actions designed to relieve the needs of less advantaged social groups. To this end, the company offers help to agencies that have demonstrated significant work in this area over a number of years.

As we have been doing through the years, in 2016, with the financial crisis continuing to affect our country, we provided support for many community actions, provided food for the indigent through municipal and church organizations, supported the work of charitable organizations and foundations, supported actions for health and supplied large quantities of heating oil to the municipalities bordering on our refinery facilities and other selected areas across the country.

#### Fighting Poverty

The economic crisis affecting Greece over the last few years has had as a direct result a dramatic increase in cases of poverty. In

response to this need, our company has undertaken to support the most vulnerable social groups, both by supplying the neediest with staple goods, and by specific grants of money.

Actions have focused mainly on the Prefecture of Corinth, the final recipients including the Municipality of Loutraki-Agioi Theodoroi, the Municipality of Corinth and bordering communities, members of poor families, associations, and societies providing support services, and so on.



## The Food Bank

The Motor Oil group has supported the Food bank operating in the Municipalities of Loutraki and Corinth and in the Municipal Ward of Agioi Theodoroi, playing an active part in meeting the basic needs of families in financial difficulty.

Among other things, our company has provided foodstuffs, helping to ensure the continued operation of an institution responding to the difficult social and economic challenges of the present day.

The donation by the Motor Oil group has helped the more general endeavor, through which more than 1.700 families in financial difficulty have found relief.

Additionally, in an effort to help families facing financial difficulties in Corinth and the surrounding region during Christmas and Easter holidays, MOTOR OIL distributed 1,240 food stamps to help them meet nutritional needs and put food on the holiday table. During the holiday period also financially supported, again through donations in the region of Peloponnesus, the municipality of Corinth, the municipality of Loutraki, the Agia Olympia foundation, the Kivotos tou Paidiou children's charity, churches, etc. The company has also supplied foodstuffs to the food and clothing bank set up in 2013 by the Metropolitan Church of Corinth, which supports 140 families in great need, and has also helped the Special Vocational Education and Training Workshop of Corinth to provide meals to its students. It also provided food to the Efthymio Center, thus helping provide meals to the children studying there. Finally, it provided assistance to the Women's Association of Agioi Theodoroi, which prepares and distributes snacks to 70 children of financial vulnerable families studying at the 1st Primary School of Agioi Theodoroi.

### Donation of Heating Oil and Lubricants

During the winter of 2016, the company made available around 213,000 litres of free heating oil, worth 173,000 euros.

This social programme is intended to help with the cost of heating orphanages, nurseries, municipal childcare centres, secondary schools, elderly people's homes, churches and church foundations located in areas bordering on the refinery, as well as other recipients in other parts of the country. Among the recipients were the Hospital of Corinth, the Foundation for the Protection of Minors "To Hamogelo tou Paidiou", the Corinth prisons, all the schools of the Municipalities of Corinth, Loutraki and the municipal communities of Agioi Theodoroi, Isthmia, Saronic, Solygeia, and more than 20 schools of the Municipality of Perama, churches, etc.

We have also supplied lubricant oils to government services in the Municipality of Corinth and the surrounding region. The main recipients were the Corinth Police Department, the Loutraki Police Department, the Kiato Highway Police, the Attiki Odos Highway Police, the Corinth Port Authority, etc.

### Supporting Charitable Organizations and Institutions

Our objective is to make a contribution to improving living conditions for people with problems, helping organizations and

foundations which offer high-quality services to assist them in their rehabilitation and reintegration into the community.

Specifically:

- We have supported the activities of the Marianna V. Vardinoyannis Foundation. Set up by its President, UNESCO Goodwill Ambassador Mrs Marianna V. Vardinoyannis, the Foundation seeks to promote issues related to protection of children's rights while improving living conditions for children in all areas.
- We supported through a sponsorship the model camp for children with cancer organised by Elpida Youth, the youth committee of Association of Friends of Children with Cancer ELPIDA.
- We have supported the humanitarian agency Lifeline Hellas, helping with the organization of an event, the revenues of which will be used to offer medical equipment to the Neonatal Intensive Care Unit of the "Elena Venizelou" Hospital.
- We have provided financial support to associations and agencies involved in community work, such as the Women's Association of Agioi Theodoroi, the Evaggelismos tis Theotokou Church of Agioi Theodoroi, the association of kidney patients of Corinth "I Elpida" etc.
- In the area of health care, we assisted the General Hospital of Argolis and the work of its Orthopaedic clinic, as well as the Haemodialysis Unit of the General Hospital of Corinth with the donation of technical equipment and supplies. We also supported the Agioi Theodoroi regional section of the Greek Red Cross, as well as the Hellenic Institute of Cardiology, offering financial support for the conduct of free check-ups.



## 5. Social Responsibility

### Support for the Elderly

For more than ten years, Motor Oil has been continually engaged in a very important social initiative in collaboration with the elderly Day Care Centres of the Municipalities of Corinth and Agioi Theodoroi. The initiative involves the provision to elderly people of a full lunch and milk and yoghurt for supper – supplied every day, 365 days a year. The food is prepared at the refinery canteen, and is the same meal that is enjoyed by the refinery workforce.

In 2016 the refinery canteen provided meals for 107 elderly people at the Corinth and Agioi Theodoroi elderly people's Day Care Centres.

### Support for Local Authorities and Other Agencies

The Group has traditionally supported the local communities it operates in. To this end, we do our best to provide effective assistance, meeting the needs of local authorities and actively helping them in their work.

As an indication, in 2016 the Motor Oil Group donated 6 new vehicles to the Coast Guard, thereby assisting them in meeting their operational needs. We also supported through sponsorships the Fire Brigade (1<sup>st</sup> Unit for Disaster Situations - EMAK), the Corinth Port Authority, the Corinth Mechanical Corps School, for the purchase of new technical equipment.

It also provided financial assistance to the Municipality of Ermionis for the repair of a playground and the creation of higher quality and safer play area for the region's children.

In addition to other things, in 2016 our company provided financial assistance to various agencies, including the Federation of Local Improvement Societies of Agioi Theodoroi, the Local Improvement Societies Glykia Zoi, Ano Glykia Zoi, Klara Elias of Sousaki, Corinth, the Alkyon Local Improvement Society, the Protoporos Society, etc.

The financial aid we provided consisted in donations for functional needs, indoor and outdoor spatial reconfiguration projects, building maintenance, road completion and clearing, road surfacing, lighting, water supplies and rainwater drainage pipes, cement laying, covering fixed expenditure, advertisements, safety and creation of children's recreation grounds, and so on.

Our company was a sponsor in the annual Iraqi-European business forum and the 5<sup>th</sup> Arab-Hellenic Business Conference organised by the Arab-Hellenic Chamber of Commerce and Development.

Finally, it supported with a sponsorship the "International criminal law and modern reality" conference organised by the European and International Criminal Law Institute.

### The Environment

We support activities and programmes, which make an active contribution to improving infrastructures and raising public awareness of environmental protection and sustainable development issues.

MOTOR OIL provides support to many environmental associations and organizations, such as MEDASSET (Mediterranean Association to Save the Sea Turtles), etc., making an active contribution to policies promoting environmental protection.

MOTOR OIL has also provided consistent support over the years to the Agioi Theodoroi Forest Protection Society, which plays an important role in forest protection and firefighting within and beyond the Municipality of Agioi Theodoroi.

In 2016 we also supported the Association of Friends of Diving of the Corinth Prefecture for the purchase of a boat that is necessary for the association's main work, which is the cleaning of the area's seabed.

In respect of water supplies, the company this year met the water needs of about 190 homes near the refinery. The water, produced at the refinery by reverse osmosis, is used to water gardens and for cleaning purposes. The supply of water to these houses, not provided by the Agioi Theodoroi water system, relies on the network of pipes laid and maintained by MOTOR OIL. In 2016, 84,000 cubic metres of water, worth more than 75,000 euros, were supplied free of charge.

## 3.2. Culture

We believe in the role of the arts, culture and history as main components of a healthy social development. We strive to offer support to activities which highlight and promote our cultural and historical heritage.

The company in particular:

- Supported the Patriarchate of Jerusalem in the restoration of the underground Byzantine church (crypt) of the Holy Monastery of the Forerunner, a project which is under the supervision and protection of UNESCO.
- Provided assistance to the Hellenic Institute of Marine Archaeology in the excavation of a shipwreck of the Mycenaean era (1,200 BC) which was discovered on the Modi islet of the Argosaronic Gulf. The results of the excavation which have been announced at scientific conferences in Greece and abroad were very well received since they offer a lot of new information on transit trade across the Aegean during a very important period of Greek history.
- Financed the publication of the "Short History of the Hellenic Navy 1821-1945" by the Naval History Department.
- Financially supported the publication of book "The People of the Naval Mutiny" by retired Vice-Admiral Ioannis Paloumbis, published by the Hellenic Maritime Museum.
- It also supported the journal Periplous Naftikis Istorias [A Voyage through Maritime History] published each quarter by the Greek Maritime Museum, and assisted the Hellenic Maritime Association in publishing its journal Naftiki Ellas [Maritime Greece], a traditional maritime magazine published every month by the Hellenic Navy Print Shop since 1928.
- Supported the conduct of the Mediterranean Photography Festival organised in Rethymno by KOLEKTIV 8, an arts organisation.
- Made a significant donation to the Cretan "Vrakoforoï" Association for its work to preserve and disseminate the Cretan cultural traditions as well as to the Pan-Cretan Association for the re-publication of a book on the historical Monastery of Arkadi.
- Supported the "Friends of Music" Association of the

Municipality of Loutraki - Perahora, which organised the Loutraki Festival 2016, with the participation of many young musicians.

- Was a sponsor of the 14<sup>th</sup> Theatre Festival "Corinth 2016" organised by Corinthian Theatre "Vassilis Rotas".
- Provided assistance to the Public Library of Rethymno for the purchase of new furniture.
- Also supported via donations the cultural work of organisations such as the Loutraki Cultural Association, the Isthmia Cultural Association, the Agios Pavlos Cultural Association of Kechries, the Association of Corinthian Writers, etc.

Throughout the year 2016 MOTOR OIL has provided support to local newspapers and magazines in the Municipality of Corinth and Loutraki, which are having difficulty in meeting their publishing costs, as well as supporting radio and TV stations.

The MOTOR OIL Group has provided financial support for cultural associations and agencies not just in communities near its facilities, but elsewhere in Greece as well.

#### **Institute for the promotion of journalism**

The Institute for the Promotion of Journalism was founded by Nasos Botsis and has been engaged in important and valuable work since 1980. Its activities include the conferring, every year since 1982, of Journalism Awards, presented by the President of the Republic at a special ceremony. In order to contribute to promoting the institute, the Motor Oil group has acted as a sponsor, providing financial support for its invaluable social, cultural and educational work.

## 3.3. Education and Youth

We provide consistent support in the sphere of education, support which reflects our belief in the power of knowledge to cultivate our minds and characters and to turn us into active citizens heeding the call of conscience. It is for these reasons that we take such a keen interest in assisting and promoting the work of education, research and technology.

In 2016, the Motor Oil group:

- Provided assistance to the Agioi Theodoroi children's day care center, 1<sup>st</sup> and 2<sup>nd</sup> Kindergarten, the 1<sup>st</sup> Primary School, the Junior High and General Senior High School, the Episkopi Junior and Senior High School, Rethymno, the 3<sup>rd</sup> Primary School of Loutraki, the Kyra Vrysi kindergarten and the Special Junior High of Chania, helping all the schools to meet their operational needs. Moreover, it provided computers, interactive boards and printers to the 13<sup>th</sup> Primary School of Rethymno, the 1<sup>st</sup> General Senior High School of Rethymno and the Primary

School of Gerani, Rethymno, helping the schools to provide more effective teaching for their students.

- Provided financial assistance to the Episkopi Junior and Senior High School, Rethymno, the Episkopi 6<sup>th</sup> Primary School, Rethymno, the Ermioni General Senior High School, the Kranidi General Senior High School, the Spili General Senior High School, the Agioi Theodoroi General Senior High School, the Argyroupoli Primary School, Rethymno, assisting them in the organisation of events, the running of student exchange programs and school trips.

## 5. Social Responsibility

- Helped - through purchase of toys, invitations and lottery tickets - the Corinth Special Kindergarten and Primary School, children's day care centres, kindergartens and primary schools in Agioi Theodoroi, the General Senior High School in Agioi Theodoroi, kindergartens in Isthmia and the Isthmia Special School.
- Financially supported the reconstruction - replacement of the flooring of the school yard of the 1<sup>st</sup> Primary School in Kranidi, improving the school's safety standards.
- Provided financial assistance in the installation of new air-conditioners at the Rethymno 3<sup>rd</sup> Primary School.
- Supported with a sponsorship the conduct of the 4<sup>th</sup> Festival of Architecture Schools in Corinth, which has produced ideas and designs for improving public spaces and the regeneration of the area.
- Provided heating oil to dozens of schools in Corinth, Perama, Crete, Ermioni and Styliada as well as other areas in Attica and across Greece, helping schools to run smoothly and providing better conditions for learning.

---

### Scholarship program in association with the Athens School of Fine Arts

In 2012 Motor Oil embarked on a strategic collaboration with the Athens School of Fine Arts, in an effort to support education and the arts and to help young people wishing to continue their studies abroad.

The collaboration involves the granting of a 12,000 euros scholarship each year to a graduate of the School to allow him or her to pursue postgraduate studies in the visual arts at a foreign university and 2 additional awards of 2,000 and 1,000 euros each. The successful candidate is chosen by a five-member panel, and the award-winning work becomes the property of Motor Oil, the hope being that over time a permanent collection of works can be built up for display around the company's premises.

At the same time, along with their portfolios the candidates submit 1-2 original works to be shown in an exhibition to be staged at the head offices of the group over a six-month period.

---

### "Vardinoyanneion Foundation"

The Vardinoyanneion Foundation, whose main sponsor is Motor Oil, was established in 1989 and is administered by a seven-member board of trustees. Its purpose is the granting of scholarships, awards and grants to candidates who have distinguished themselves academically or who are in need of financial support to do undergraduate or postgraduate studies at colleges and universities in Greece or abroad.

The areas of study and the scholarships available are not fixed, but change each academic year, by decision of the board of trustees.

In the academic year 2016-2017 support was given to 71 students in the following areas (by way of example): economics, history, biology, psychology, chemistry, etc. Pre-graduate scholarships were also given to 2 students in the area of Information Technology, 1 in Maritime Studies, 1 in Chemical Engineering, and 1 in Naval Architecture and Marine Engineering.

Since the Foundation began its scholarship program, 167 scholarships and 1,788 bursaries have been granted.

### Educational visits to the Refinery

Every year we arrange visits to the refinery for students at universities and technical colleges, Armed Forces schools and ordinary secondary schools. The idea is to allow visitors to learn about the operation of one of the most advanced

refineries in Europe, with presentations and a guided tour of the production facilities and workplaces, with information on the environmental protection programs run by the company, as well as on its varied program of community work - both in local communities and in society as a whole. During the 2016 program, around 741 persons visited the refinery and the facilities of our commercial partners.

### Student Internships

Every year the company takes on a number of students for paid summer internship, lasting from one to two months. The students fill various positions in the refinery and at head office.

In addition to this, we give a number of students the opportunity of a six-month internship, when this forms part of the degree course they are taking. We also provide positions for foreign students to gain work experience, in collaboration with the International Association for the Exchange of Students for Technical Experience (IAESTE).

As part of this activity in 2016 we filled 90 trainee positions of 1-2 months, and 36 positions of over two months, at a total cost of more than 197,000 euros.

## Shell Eco Marathon

Coral, owner of the Shell trademarks in Greece, actively supports the Shell Eco Marathon, a global initiative, whose main aim is to promote sustainability in transport, innovation and energy efficiency. Coral invites schoolchildren and students from Greece to compete in this leading educational programme organized by Shell, with teams from all over Europe, constructing energy-efficient vehicles. The winning team will be that which travels the greatest distance with the equivalent of one litre of fuel of its own choice: Traditional internal combustion engines burning petrol or diesel, engines using biofuels, electric motors, hydrogen cells or solar panels are concealed beneath the exterior of modern, futuristic vehicles which cut a striking figure on the race track.

Greek teams from leading universities and technical colleges in Greece, as well as schools all over the country, have been participating since 2004 in the Shell Eco Marathon. In 2016 the Greek teams won 3 out of the 5 off-track awards!

The Prometheus Team from the National Technical University of Athens took part for the eighth year running. It ranked 16<sup>th</sup> with the Battery Electric class reaching 287 km/kWh with its prototype electric vehicle Pyrphorus, while also winning the Technical Innovation and Communication Strategy off-track Awards.

The Poseidon Team from the Mechanical Engineering, Electrical Engineering, Automation Engineering Departments of the Piraeus Technical Educational Institute and the Departments of the School of Administration and Economy of the Piraeus University, took part in the competition for the fifth consecutive year with their vehicle Triiris. It was entered in the Prototype (Battery Electric) category and won 19<sup>th</sup> place, achieving a rate of 248km/kWh.

The team TUC Eco Racing of the Production Engineering and Management School of the Crete Polytechnic, in its 8<sup>th</sup> year of participation won one of the most important off-track awards, the Safety Award, for the 3<sup>rd</sup> time in its history.

## 3.4. Sports

We have offered our support to sports and are also happy to offer substantial assistance to smaller clubs and sporting associations in the amateur sector.

During the year 2016 the MOTOR OIL Group has supported the Episkopi Sports Club, Rethymno, and the women's team of the Rethymno Volleyball Club (OPER).

It also provided assistance to the Kymi Gymnastics Association KAE, the "Ermis" Sports Club of Zoniana, the Spili Sports Club, the "Poseidon" Sports Club of Loutraki, the "Corinth" Pan-Corinthian

club, the Ermionis Sporting Association, the Koronis Sporting Club of Koilada, the Corinth Tennis Club, the Isthmia Sporting Club, etc.

Finally, every year MOTOR OIL makes a doctor and a fully equipped ambulance available for the famous Spartathlon long-distance race, also supporting the Control and Aid Centre located in front of the refinery.

## AVIN OIL S.A. great sponsor of the Rethymno KAE basketball team

AVIN Oil supported once again the Rethymno KAE team in its participation in the 2015-16 Basket League season. Our company has demonstrated its steadfast support for the Cretan representative in the large league of Greek basketball, as a valuable ally to a club that teaches fair play and solidarity. We supported the "Shoot in Crete" program for the 2015-16 season, giving once more the opportunity to the young students of Rethymno and the neighbouring prefectures to meet their idols. More than 20 visits were made to primary schools of the region of Crete, where players from our team, apart from getting to know the children, also offered material-technical sports equipment and invited the children to our home-court games, which were held in the School Court of the Melina Merkouri Gymnasium.

## 6. Global Compact: Communication on Progress 2016

### 6. Global Compact: Communication on Progress 2016

MOTOR OIL participates in the United Nations Global Compact, which constitutes the biggest Corporate Responsibility initiative in the world. In year 2008, MOTOR OIL became a signatory of the UN Global Compact; at the same time the company became a member of the Global Compact Network Hellas.



The Global Compact incorporates ten fundamental principles relating to human rights, labour rights, environmental protection and anti-corruption. We are committed to these principles, which we have integrated in the policies and processes of the company. MOTOR OIL's Sustainability Report 2016 contains information relating to our social and

environmental practices and the outcomes thereof, which underline our commitment to the Global Compact. The following chart lists the compliance of MOTOR OIL with the ten Global Compact Principles, by making reference to the relevant chapters of the Sustainability Report 2016, and to the GRI indicators taken into account in compiling the Report.

THE TEN PRINCIPLES OF THE GLOBAL COMPACT		REFERENCE IN THE SUSTAINABILITY REPORT OR DESCRIPTION OF THE IMPLEMENTATION APPROACH	GRI INDICATOR (G4)
<b>HUMAN RIGHTS</b>			
Principle 1	Businesses should support and respect the protection of internationally proclaimed human rights.	Chapters 2 and 3. Full compliance with relevant Greek legislation and international conventions.	G4-I0, G4-II, G4 LA5-8, G4 HR4
Principle 2	Businesses should make sure that they are not complicit in human rights abuses.	Chapter 2. Full compliance with relevant Greek legislation and international conventions.	G4 HR4
<b>LABOUR</b>			
Principle 3	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.	Chapter 2.	G4-II, G4 HR4
Principle 4	Businesses should uphold the elimination of all forms of forced and compulsory labor.	Chapter 2. Full compliance with relevant Greek legislation and international conventions.	There is no reference of an indicator, as this has not emerged as a material issue during the G4 process.
Principle 5	Businesses should uphold the effective abolition of child labor.	Chapter 2. Full compliance with relevant Greek legislation and international conventions.	There is no reference of an indicator, as this has not emerged as a material issue during the G4 process.
Principle 6	Businesses should uphold the elimination of discrimination in respect of employment and occupation.	Chapter 2.	G4-I0, GA LAI
<b>ENVIRONMENT</b>			
Principle 7	Businesses should support a precautionary approach to environmental challenges.	Chapters 1 and 4.	G4 EC2, G4-ENI9, G4-EN31, GA EN32
Principle 8	Businesses should undertake initiatives to promote greater environmental responsibility.	Chapters 1 and 4.	G4 EN3-4, EN6, EN8-I0, ENI5-I6, EN20-26, EN29, EN31-33
Principle 9	Businesses should encourage the development and diffusion of environmentally friendly technologies.	Chapters 1 and 4.	G4-EN6, ENI0, ENI9, EN31
<b>ANTI-CORRUPTION</b>			
Principle I0	Businesses should work against corruption in all its forms, including extortion and bribery.	Chapter 1.	G4-I5, G4-34, G4-56 G4 S05



## 7. GRI Compliance Level

The MOTOR OIL Sustainability Report, which has been published every year since 2002, is the main tool available for communicating with our stakeholders about the Group's efforts and performance in achieving sustainable development through the application of the principles and objectives of Corporate Social Responsibility. It contains the most important facts and data relating to the previous year's financial, social and environmental performance.

The Sustainability Report 2016 has a similar structure to previous editions, so as to facilitate comparisons of performance over time. The information and data presented in the Report concern the parent company MOTOR OIL, the Group subsidiaries AVIN OIL, CORAL, CORAL GAS, OFC and LPC which are controlled by MOTOR OIL, and whose activities have a significant impact on issues considered as material for sustainable development.

The compilation of the Sustainability Report 2016 is based on the Global Reporting Initiative (GRI) guidelines, just as in the six previous editions, and specifically of the G4 edition - In Accordance - Core. The GRI guidelines have provided a sound basis for the selection of the material issues that had to be covered by the Report, for an effective communication with stakeholders.

The Sustainability Report 2016 is not certified by an external certification authority.

### Report Methodology (Materiality Assessment)

One of the most important and fundamental guidelines of the Global Reporting Initiative is the concept of materiality. An organization must report on those matters which have the most significant economic, environmental and social impact, or those matters viewed as most significant by its internal and external stakeholders. Within this context, and in order to determine which issues are material to us, we have actively involved our stakeholders in order to arrive at a list of issues for this edition of our report.

### Materiality Assessment Procedure

Given the nature of our business it is evident that our report will lay emphasis on matters of safety and the environment, financial results, as well as our social contribution, which are of major importance to our stakeholders. In selecting and ranking the material issues, we have used a detailed procedure based on the principles of relativity, importance and ranking. This procedure involved:

**Step 1:** Determination and understanding of the issues significant to our stakeholders, through a process of research and focus groups made up of employees, local community, suppliers and customers and through benchmarking in the energy sector. More specifically, by benchmarking the latest company reports in the sector, with reference to the

material issues, it was recognized that financial performance, greenhouse gas emissions, energy, water, health and safety in the workplace, employment, supplier assessment and local communities, are common and material issues. This procedure was followed in order to crosscheck and confirm the material issues identified by the internal procedures of MOTOR OIL.

**Step 2:** Identification and understanding of significant issues, as these arise from the corporate strategy of MOTOR OIL, through internal procedures. For issues which can be measured in quantitative terms, such as greenhouse gas emissions, there are recognized methods of determining their materiality. For issues of a qualitative nature, various methods were used to assess their materiality, with the involvement of stakeholders but also through the benchmarking process.

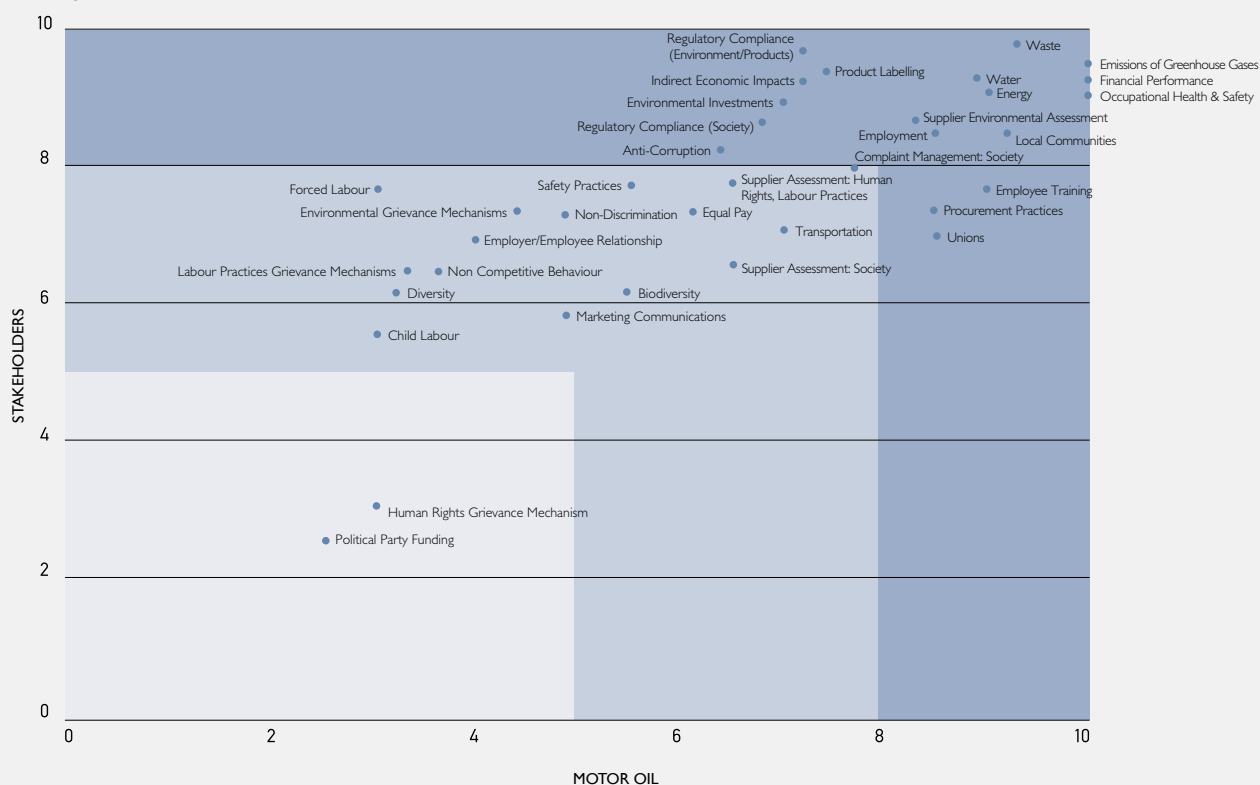
**Step 3:** Bringing together of the results into a matrix, and evaluation of each issue on the basis of its more general social, environmental and economic impact, based on a scale of 1-10. Each issue was evaluated and given a materiality ranking in accordance with its importance to stakeholders and the company. The issues located in the top right corner of the graph are regarded as the most material, as appears in the graph.

**Step 4:** Subsequently, the Report included all issues with the highest level of materiality. Issues of less materiality are mentioned only if they are affected by or dependent on issues of greater materiality.

On completion of the above steps, the following areas were referred to as material issues: **financial performance, indirect economic impacts, procurements practices, energy, water, waste, emissions of greenhouse gases, environmental investments, supplier environmental assessment, employment, health and safety in the workplace, employee training, trade unions, local communities, anti - corruption, compliance with legislation and products labelling.**

## 7. GRI Compliance Level

Graph of Material Issues



BOUNDARIES AND LIMITATIONS OF MATERIAL ISSUES

MATERIAL ISSUES	BOUNDARIES		LIMITATIONS	
	Within the Organization	Outside the Organization	Within the Organization	Outside the Organization
Financial performance	Concerns the parent company MOTOR OIL and its subsidiaries AVIN OIL, Coral, Coral Gas, LPC and OFC which are controlled by MOTOR OIL.	Shareholders, investors, analysts, partners, suppliers, customers.	-	-
Indirect economic impacts	Concerns the parent company MOTOR OIL and its subsidiaries AVIN OIL, Coral, Coral Gas, LPC and OFC which are controlled by MOTOR OIL.	Local communities, public authorities, suppliers.	-	-
Procurement practices	Concerns the parent company MOTOR OIL and its subsidiaries AVIN OIL, Coral, Coral Gas, LPC and OFC which are controlled by MOTOR OIL.	Suppliers	-	-
Energy	Concerns the parent company MOTOR OIL.	-	Data only for the refinery.	-
Water	Concerns the parent company MOTOR OIL.	Local Communities	Data only for the refinery.	-
Waste	Concerns the parent company MOTOR OIL.	Local communities and public authorities.	Data only for the refinery.	-
Emissions of greenhouse gases	Concerns the parent company MOTOR OIL.	Local communities and public authorities.	Data only for the refinery.	-
Environmental investments	Concerns the parent company MOTOR OIL and its subsidiaries AVIN OIL, Coral, Coral Gas, LPC and OFC which are controlled by MOTOR OIL.	Shareholders, investors, analysts, local communities, public authorities.	-	-

MATERIAL ISSUES	BOUNDARIES		LIMITATIONS	
	Within the Organization	Outside the Organization	Within the Organization	Outside the Organization
Supplier Environmental Assessment	Concerns the parent company MOTOR OIL and its subsidiaries AVIN OIL, Coral, Coral Gas, LPC and OFC which are controlled by MOTOR OIL.	Shareholders, investors, analysts, suppliers.	-	-
Employment	Concerns the parent company MOTOR OIL and its subsidiaries AVIN OIL, Coral, Coral Gas, LPC and OFC which are controlled by MOTOR OIL.	-	-	-
Health and Safety	Concerns the parent company MOTOR OIL and its subsidiaries AVIN OIL, Coral, Coral Gas, LPC and OFC which are controlled by MOTOR OIL.	Contractors' staff and tank lorry drivers of 3 <sup>rd</sup> party companies	-	-
Employee Training	Concerns the parent company MOTOR OIL and its subsidiaries AVIN OIL, Coral, Coral Gas, LPC and OFC which are controlled by MOTOR OIL.	Contractors' staff and tank lorry drivers of 3 <sup>rd</sup> party companies.	-	-
Unions	Concerns the parent company MOTOR OIL and its subsidiaries AVIN OIL, Coral, Coral Gas, LPC and OFC which are controlled by MOTOR OIL.	-	-	-
Local Communities	Concerns the parent company MOTOR OIL and its subsidiaries AVIN OIL, Coral, Coral Gas, LPC and OFC which are controlled by MOTOR OIL.	Local communities and public authorities.	-	-
Anti-Corruption	Concerns the parent company MOTOR OIL and its subsidiaries AVIN OIL, Coral, Coral Gas, LPC and OFC which are controlled by MOTOR OIL.	Shareholders, investors, analysts, partners, suppliers, customers, public authorities.	-	-
Compliance	Concerns the parent company MOTOR OIL and its subsidiaries AVIN OIL, Coral, Coral Gas, LPC and OFC which are controlled by MOTOR OIL.	Partners, suppliers, customers.	-	-
Products labelling	Concerns the parent company MOTOR OIL and its subsidiaries AVIN OIL, Coral, Coral Gas, LPC and OFC which are controlled by MOTOR OIL.	Partners, suppliers, customers.	-	-

Overall in the Sustainability Report, where numerical data or performance indicators are presented, the method of data collection and calculation of results is also stated. The Environmental and Health and Safety performance indicators are specifically calculated according to internationally accepted procedures. Also in chapter 4 "Responsibility for the Environment" the data relating to investments and recycling refer to the whole MOTOR OIL Group, whereas other indicators in this chapter refer solely to the MOTOR OIL refinery.

The following table records the GRI Indicators, and in the column headed "Reference" the source of information relating to each indicator is given.

The symbols used in the table are:

**p.:** indicates the page(s) of the Sustainability Report 2016 that include information on the indicator.

**ff**: indicates reference to the Annual Financial Report 2016.

**W**: indicates reference to the company's website.

TABLE OF GRI.G4 INDICATORS – GRI CONTENT INDEX FOR "IN ACCORDANCE" - CORE

GENERAL STANDARD DISCLOSURES		
Indicator	Description	Reference
<b>COMPANY PROFILE</b>		
G4-1	Management statement.	p. 5
G4-2	Description of key impacts, risks and opportunities.	p. 18-19, 52, <b>ff</b> p. 32-34
<b>ORGANIZATIONAL PROFILE</b>		
G4-3	Name of the reporting organization.	Back cover
G4-4	Primary brands, products, and/or services.	p. 11-14, <b>ff</b> p.11-13, 20-30, <b>W</b>

## 7. GRI Compliance Level










Indicator	Description	Reference
<b>ORGANIZATIONAL PROFILE</b>		
G4-5	Location of organisation's headquarters.	Back cover
G4-6	Countries where the organisation operates.	p. 14
G4-7	Ownership structure and legal form.	p. 12-13, 15-16, 22-23,  p. 31, 40-44, 
G4-8	Markets served.	p. 12-15,  p. 11-12
G4-9	Scale of the organization.	p. 10-15, 19-20, 27-31, 68-69  p. 9-20
G4-10	Workforce profile.	p. 27-29
G4-11	Percentage of employees covered by collective bargaining agreements.	p. 27
G4-12	Describe the organization's supply chain.	p. 19
G4-13	Significant organizational changes in the reporting period.	p. 2-3, 12-13, 19-20  p. 17-20
G4-14	Application of the precautionary principle.	p. 15-16, 21-22, 36-38, 50-52
G4-15	Voluntary support for external economic, environmental and social charters or initiatives.	p. 17
G4-16	Memberships in associations and advocacy organisations.	p. 17
<b>IDENTIFIED MATERIAL ISSUES AND BOUNDARIES</b>		
G4-17	List of entities included in the organization's consolidated financial statements.	p. 12-13,  p. 20-30
G4-18	Process for defining report content.	p. 9, 76-79
G4-19	Material Issues.	p. 76-78
G4-20	Issues boundaries and limitations within the organization.	p. 78-79
G4-21	Issues boundaries and limitations outside the organization.	p. 78-79
G4-22	Explanation of the reasons for re-stating information provided in earlier reports.	p. 77
G4-23	Changes from previous reports.	p. 9, 77
<b>STAKEHOLDER ENGAGEMENT</b>		
G4-24	Stakeholder groups engaged by the organisation.	p. 22-23
G4-25	Stakeholder identification.	p. 22-23
G4-26	Approaches to stakeholder engagement.	p. 22-23
G4-27	Topics raised by stakeholders.	p. 18-19, 22-23
G4-28	Reporting period.	I/I/2016-31/12/2016
G4-29	Most recent previous report.	p. 84
G4-30	Reporting cycle.	p. 9
G4-31	Contact point for questions.	p. 9
G4-32	Location of the Standard GRI Disclosures.	p. 77-82
G4-33	External Assurance.	p. 77
<b>GOVERNANCE</b>		
G4-34	Corporate governance structure.	p. 15-16,  p. 40-44, 
<b>ETHICS AND INTEGRITY</b>		
G4-56	Corporate policies, mission and value statements related to sustainability.	p. 5, 18-19, inside cover page

TABLE OF GRI.G4 INDICATORS – GRI CONTENT INDEX FOR "IN ACCORDANCE" - CORE

SPECIFIC STANDARD DISCLOSURES			
Material Aspects	Indicators	Description	Reference
<b>CATEGORY: ECONOMIC</b>			
Economic Performance	G4-EC1	Directly generated and distributed economic value.	p. 14-15, 68-69,  p. 9-10
	G4-EC2	Climate change financial implications, risks or opportunities.	Climate change impacts regarding the possible financial implications, risks or opportunities, constitute parameters thoroughly taken into account in the process of analysing, evaluating, approving and planning for investments or other initiatives.
	G4-EC4	Significant state financial assistance.	MOTOR OIL has not received any significant financial assistance from the state.
Indirect Economic Impacts	G4-EC7	Development and impact of infrastructure investments and services supported.	p.68-69
	G4-EC8	Significant indirect economic impacts, including the extent of impacts.	p. 68-69
Procurements Practices	G4-EC9	Proportion of spending on local suppliers at significant locations of operation.	p. 69
<b>CATEGORY: ENVIRONMENT</b>			
Energy	G4-EN3	Direct energy consumption by primary energy source.	p. 56-58
	G4-EN4	Indirect energy consumption by primary source.	9,851 MWh from the Electricity Market.
	G4-EN5	Energy intensity.	p. 56-58
	G4-EN6	Reduction of energy consumption.	p. 56-58
Water	G4-EN8	Total water withdrawal by source.	p. 64-65
	G4-EN9	Effects of water withdrawal.	p. 64-65
	G4-EN10	Percentage and total volume of water recycled and reused.	p. 64-65
Emissions	G4-EN15	Direct greenhouse gas emissions.	p. 58
	G4-EN16	Indirect greenhouse gas emissions.	p. 58-62
	G4-EN18	Greenhouse gas emissions Intensity.	p. 58
	G4- EN19	Reduction of greenhouse gas emissions.	p. 58
	G4-EN20	Emissions of ozone-depleting substances.	Non-existent.
	G4-EN21	NOx, SOx and other significant air emissions.	p. 61-62
Effluents and Waste	G4-EN22	Total water discharge.	p. 62-63
	G4-EN23	Solid waste.	p. 63-64
	G4-EN24	Significant spills.	There were no significant spills.
	G4-EN25	Quantity of hazardous solid waste.	p. 63-64
	G4-EN26	Areas impacted by the organisation's discharge of water and runoff.	Non-existent.

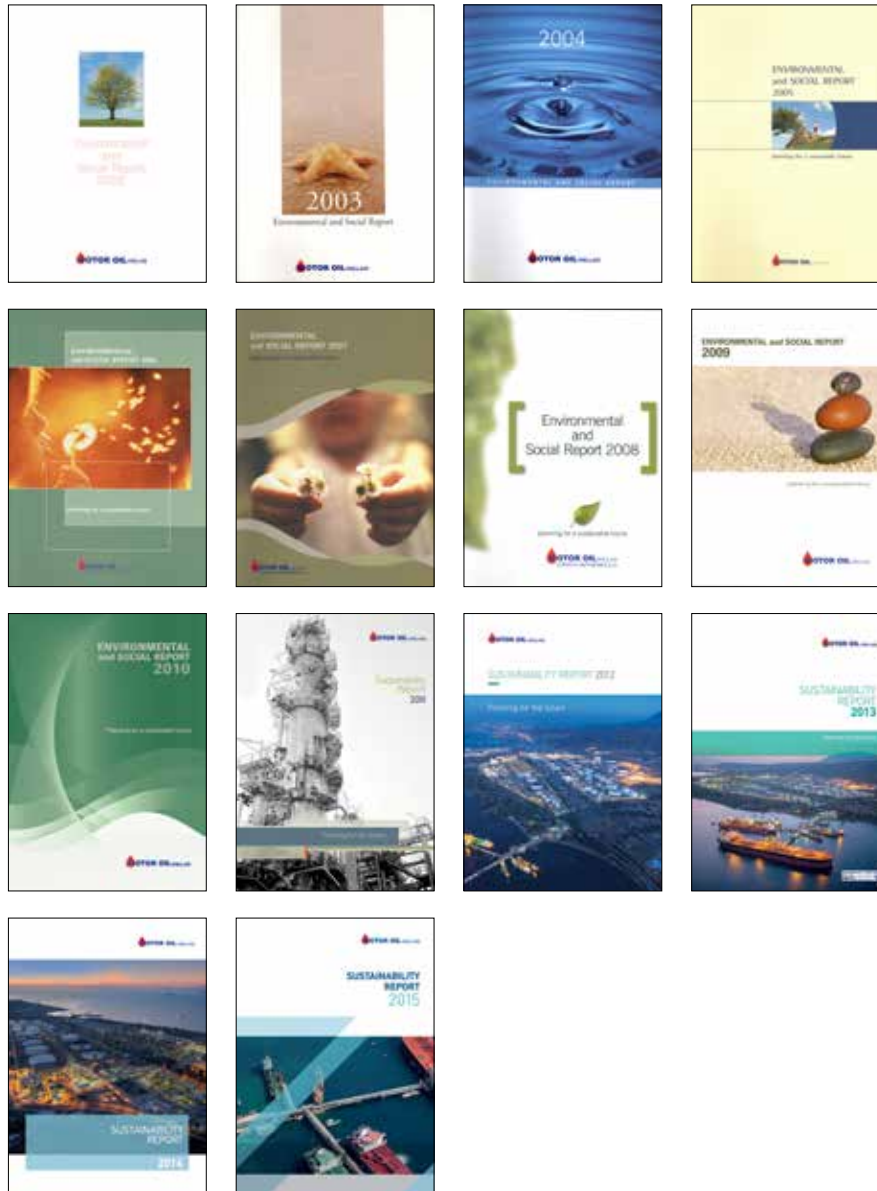


## 7. GRI Compliance Level

Material Aspects	Indicators	Description	Reference
<b>CATEGORY: ENVIRONMENT</b>			
Compliance	G4-EN29	Significant fines and sanctions for non-compliance with environmental laws.	There have not been any relevant fines or sanctions established by final court
Investments	G4-EN31	Environmental protection investments and expenses.	p. 53
Supplier Environmental Assessment	G4-EN32	Percentage of new suppliers that were screened using environmental criteria	All important suppliers are evaluated using questionnaires which also include criteria on environmental performance.
	G4-EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken.	No significant impact.
<b>CATEGORY: SOCIAL</b>			
Employment	G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender and region.	p. 27-29
	G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation.	p. 30-33
Occupational Health & Safety	G4-LA5	Workforce representation in occupational health and safety committees.	The Health and Safety Committee of the refinery employees represents all staff.
	G4-LA6	Occupational injuries and lost day rates.	p. 38-39
	G4-LA7	Occupational diseases.	p. 38-39
	G4-LA8	Health and safety topics covered in formal agreements with trade unions.	p. 27, 37-38, 45-47
Training and Education	G4-LA9	Average hours of training per year per employee.	p. 31-33
	G4-LA10	Programs for skills development and lifelong learning.	p. 31-33
Freedom of Association and Collective Bargaining	G4-HR4	Operations that limit freedom of association and collective bargaining.	No such operations, p. 27
Local Communities	G4-SO1	Impacts on local communities.	p. 66-75
Anti-corruption	G4-SO5	Confirmed incidents of corruption and actions taken.	No such incidents.
Compliance	G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	No such fines.
Product and service labeling	G4-PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.	No incidents of non-compliance.
Compliance	G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	No such fines.



## Sustainability Reports of Previous Years



ALL THE MATERIALS USED FOR PRINTING THE MOTOR OIL SUSTAINABILITY REPORT  
ARE FRIENDLY TO THE ENVIRONMENT

## Key Group Data for 2016

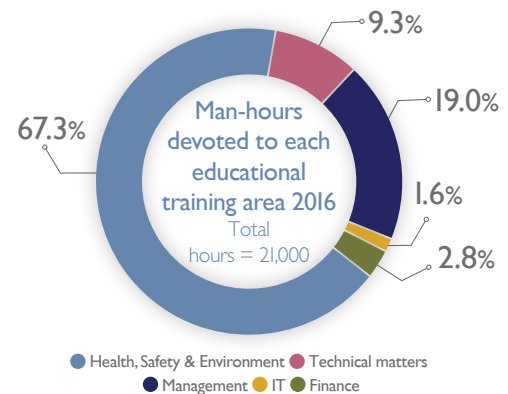
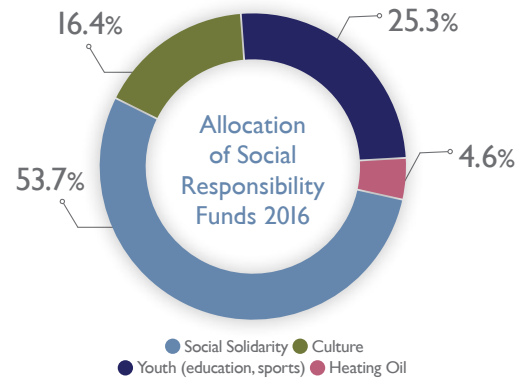
Turnover	<b>6,357</b> million euros
Earnings after tax	<b>298</b> million euros
Dividends paid <sup>1</sup>	<b>0.90</b> euros/share
Total assets	<b>2,863</b> million euros
Refinery production	<b>11.5</b> million tons
MOTOR OIL sales	<b>13.0</b> million tons
- domestic sales	<b>3.9</b> million tons
- export sales	<b>9.1</b> million tons
Crude oil refining capacity	<b>185,000</b> barrels/day
Refinery storage tanks capacity	<b>2.5</b> million cubicmeters
Petrol stations	<b>1,430</b>
Employees (annual average) <sup>2</sup>	<b>1,925</b> people
Training man hours	<b>21,000</b> hours
Total investments 2000-2016	<b>1,563.4</b> million euros
Environmental investments and expenses 2000-2016	<b>791.5</b> million euros
Recycling - Solid Waste Disposal	<b>5,653</b> tons
Health and Safety investments 2000 - 2016	<b>162.2</b> million euros
Social contribution 2007 - 2016 <sup>3</sup>	<b>37.0</b> million euros
Social product <sup>4</sup>	<b>662.4</b> million euros
Refinery certifications	<b>ISO 9001:2008</b> <b>ISO 14001:2004</b> <b>ISO 17025:2005</b> <b>OHSAS 18001:2007</b> <b>EMAS III ERI221/2009</b> <b>EN 12591:2009</b> (for asphalt)

1. An interim dividend amount of 0.20/share was paid in December of 2016 while the dividend remainder amount of 0.70/share will be paid in July of 2017.

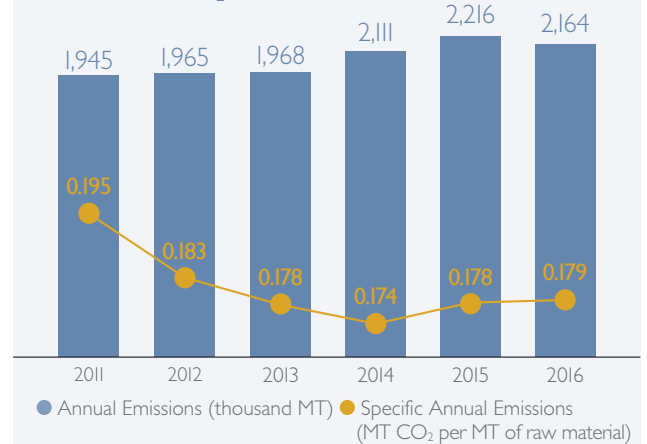
2. Includes the employees of MOTOR OIL, AVIN OIL, CORAL, CORAL GAS, OFC and LPC.

3. Refers to donations and sponsorships.

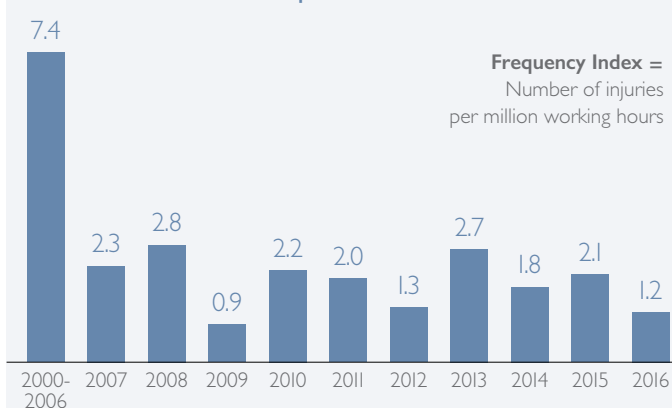
4. Refers to the portion of revenues distributed to stakeholders.



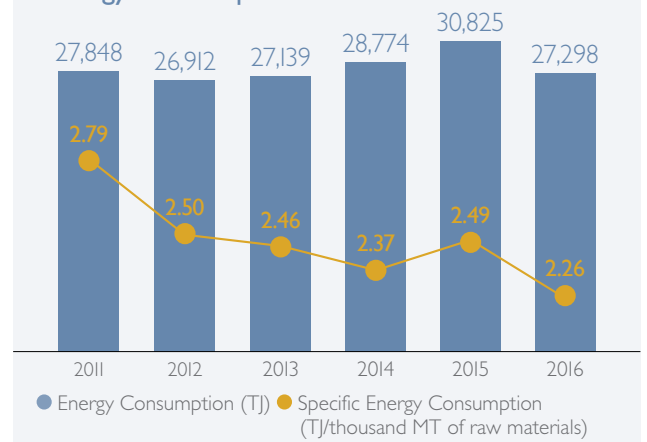
### Emissions CO<sub>2</sub>



### Lost Time Injuries Frequency Index (LTIF) for MOTOR OIL Group



### Energy Consumption





**Headquarters**  
Irodou Attikou 12A  
151 24 Maroussi, GREECE

Tel: +30 210 8094000  
Fax: +30 210 8094444

**Refinery**  
P.O.Box 23  
20 100 Korinthos, GREECE

Tel: +30 27410 48602, 48702  
Fax: +30 27410 49001, 49101, 48255