### BUSINESS ACTIVITIES

#### **Petroleum products**

#### **Refining, Supply and Trading**

The Group owns and operates three refineries in Aspropyrgos, Elefsina and Thessaloniki, which account for approximately 65% of the country's total refining capacity and combine a storage capacity for crude oil and petroleum products of 6.65 million m<sup>3</sup>.

The three refineries and their individual technical characteristics are described below:

Refinery	Daily Refining Capacity in Kbpd	Annual Refining Capacity (ml.MT)	Refining configuration	Complexity Index Nelson
Aspropyrgos	148	7.5	Cracking (FCC)	9.7
Elefsina	106	5.3	Hydrocracking	12
Thessaloniki	90	4.5	Hydroskimming	5.8

The Group's refineries operate as a single, unified system. Crude oil purchases, production scheduling and sales forecasting are conducted for the Group's refining system on a centralised basis, with the objective of optimizing profitability, while taking into account prevailing (Eastern Mediterranean/South Eastern Europe) crude oil and product prices as well as domestic demand. Increased refining complexity enables the high conversion of intermediate products (SRAR, VGO) and flexibility in crude slate and processing levels, which represents a key competitive advantage for the Group.

In 2019, benchmark margins for Mediterranean refineries fell to their lowest levels since 2013 due to various tensions in international markets (geopolitical developments, problems with crude oil supply). More specifically, FCC benchmark margins fell to \$3.3/ bbl (2018: \$5.0/bbl), hydrocracking margins fell to \$4.1/bbl (2018: \$5.5/bbl), while hydroskimming margins settled at - \$0.2/bbl (2018: \$1.6/bbl).



Production (MT'000)



In 2019, refining production was lower vs. 2018 (14.2 million tons vs. 15.5 million tons in 2018), mainly due to the planned shutdown of the Elefsina refinery for maintenance purposes.

HELLENIC PETROLEUM's sales in duty and duty-free product markets were slightly higher than in 2018 (7.2 million tons vs. 7.1 million tons) while overall, exports fell by 1.4 million tons, accounting for 52% of total sales, thereby enabling the Group to maintain its position as one of the most export oriented in the Eastern Mediterranean region.



Mediterranean Benchmark Refining (FCC кан Hydrocracking) Margins (\$/bbl)



#### HELPE refining system overview\*



High value product yields (gasoline, jet fuel and diesel) at the Aspropyrgos and Elefsina refineries' remained at 2018 high levels, standing at very competitive levels in comparison with the European refining industry, with the white products yield exceeding 84%.

Energy efficiency is a main pillar of the Refining strategy, with sustained efforts to improve the relevant indicators. In 2019, energy consumption and costs at Aspropyrgos and Elefsina remained at the low levels seen in 2018 despite the scheduled shutdowns of the two refineries.

Moreover, the use of natural gas substituting LPG, naphtha and fuel oil for hydrogen production and own-consumption at the Elefsina and Thessaloniki refineries increased, resulting in a significant financial contribution.

The percentage of intra-refinery flows of intermediate products and raw materials exchanged between the three refineries exceeded 14%, contributing to the operational optimization in production, logistics and trading.

Bunkering fuel specifications globally changed in 1.1.2020 (IMO/MARPOL Directive). The Aspropyrgos refinery began implementing the new IMO production standards in November 2019, in order to respond to changes in the market. In particular, the refinery further diversified its crude slate through processing very low sulfur crude oils ("IMO crude oil"), with the objective of producing 0.5% sulfur fuel oil and marine gasoil.

As both the Elefsina and Thessaloniki refineries do not produce high sulphur fuel oil, no adjustments are required in their operation.

In December, with the completion of the conversion of the gasoline blending components MTBE and TAME production units into ETBE and TAEE production units respectively, the Aspropyrgos refinery began producing bio-ethers. The modifications were put in place so that HELLENIC PETROLEUM can meet the obligation to supply E5 gasoline in the domestic market, without any bioethanol addition, so as to improve the quality of the final product and substitute imports.

#### Financial Data and key operational indicators

Financial Results (€ million)	2019	2018
Sales	7,754	8,682
Adjusted EBITDA	354	548
Performance Indicators		
Complex refinery margin (FCC)	\$3.3/bbl	\$5.0/bbl
Sales Volumes (MT'000)	15,223	16,490

#### Crude oil supply

Crude oil supplies are centrally coordinated through term contracts and spot transactions. In 2019, turmoil in the Eastern Mediterranean and European crude oil markets, on the one hand, arose from problems in smooth supply (resumption of US sanctions on producer countries, the Druzba pipeline contamination and attacks on Saudi-owned oil pipelines) and on the other hand, due to low sulfur crudes (IMO) for the purposes of producing 0.5% sulfur fuel oil.

HELLENIC PETROLEUM accordingly adjusted its crude slate to prevailing market conditions, resulting in an increase in the crude oil supply, compared to 2018, from countries such as Iraq (36%), Kazakhstan (22%) and Russia (13%). Saudi Arabia, Egypt and Libya ranged between 6 and 8%, while feedstock from countries that produce IMO low sulphur crude oils (Azerbaijan, Algeria and the US) was higher reaching c.3% each.

Both the Group's ability to access and its refineries' flexibility to process a wide range of crude oil types, proved to be particularly important in terms of profitability. The Group's ability to respond to sharp supply shortages in specific types of crude oil also ensured for uninterrupted supply into the markets where the Group operates.

#### 2018 2019 5% 2% 1% 6% 11% 13% 2% 7% 7% 12% 0% 6% 8% 33% 36% 22% 21% Egypt Russia Lybia Iraq 🔵 Iran USA 🔵 S. Arabia Other 👂 Kazakhstan

Diversified crude oil and feedstock supply sourcing

Access, as well as the flexibility of the Group's refineries to process a wide range of crude oil types are one of its key competitive advantages



of total refinery sales

#### Wholesale Trading (Refined product sales)

Oil products sales are carried out by the parent company HELLENIC PETROLEUM S.A. to the fuels marketing companies in Greece, including the subsidiary EKO ABEE, as well as to certain special customers, such as the country's armed forces, whilst approximately 50% of production is exported. All of the Group's refined products comply with the applicable European standards.

During 2019, domestic market sales remained at the same levels as in 2018, amounting to 4.4 million tons. The sales of all products, with the exception of diesel, increased.

Aviation sales amounted to 770 thousand tons, a slight increase compared to 2018. Marine fuels volumes increased by 7.7%, reaching 1.9 million tons while exports were affected by the lower production, amounting to 8.0 million tons.

As a result, in 2019 the total sales of products and goods produced by the Group's refineries decreased by 7.7%, amounting to 15.2 million tons.



Total sales



#### Sales per trade channel (MT'000)

#### **OKTA** facilities

The Group's international activities refer to the OKTA facilities in Skopje, connected to the Thessaloniki refinery through a pipeline transporting high value-added products (e.g. diesel). The refinery's location is one of its significant competitive advantages for the domestic distribution of products through marketing companies, as well as exports to neighbouring Balkan markets.

In 2019, OKTA's sales amounted to 789 thousand tons, increasing by 4.4% vs. 2018.

#### **Production and Trading of Petrochemicals**

#### Financial Data and key operational indicators

Financial Results (€ million)	2019	2018
Sales	299	315
Adjusted EBITDA	93	100
Performance Indicators		
Sales Volumes (MT ´000) – Total	283	279
International Polypropylene Margin (€/MT)	428	481

Petrochemical activities mainly focus on the propylene-polypropylene-BOPP value chain. The Aspropyrgos refinery, through its splitter unit, produces propylene, which covers about 80-85% of the raw material needs of the Thessaloniki polypropylene plant. The Group's petrochemical complex located at the Thessaloniki refinery also produces solvents and minerals, with its output being directed to the domestic and Mediterranean markets.

Based on its financial contribution, the propylene-polypropylene-BOPP value chain represents the main activity for petrochemicals. Export activity is particularly important, as in 2019, 68% of sales volumes were directed towards Turkey, Italy, the Balkans and Iberian Peninsula, where they are used as a raw material in a range of manufacturing applications.



In 2019, profitability in the petrochemical sector remained high, due to improved operational performance, recording an EBITDA of  $\in$ 93 million despite the weaker benchmark polypropylene margins. Polypropylene production, amounted to 246 kMt representing a historical high, combined with the record production of propylene from the Aspropyrgos refinery (201 kMt).



International market



#### Evolution of benchmark PP margins 2018-2019 (€/MT)



#### **Fuels Marketing**

HELLENIC PETROLEUM Group is active in the marketing and distribution of petroleum products, both in Greece, through its subsidiary EKO ABEE, as well as internationally through its subsidiaries in Cyprus, Bulgaria, Serbia, Montenegro and the Republic of North Macedonia.

The Group takes advantage of the significant synergies among its networks in Greece and SE Europe in the areas of marketing and commercial policy, through sharing best practices and successful products.

Financial Data and key operational indicators:

Financial Results (€ million)	2019	2018
Sales	3,258	3,329
Adjusted EBITDA	138	93
Performance Indicators		
Sales Volumes (MT ´000) – Total	4,928	4,955
Sales Volumes (MT´000) – Greek network	3,870	3,902
No. of petrol stations – Greece	1,722	1,739
No. of petrol stations – International (includes OKTA brand PSs)	311	306

#### **Domestic Marketing**

In Greece, the Group's business combines a network of petrol stations exceeding 1,700 under the EKO and BP brands, 15 bulk storage and supply terminals, 23 aircraft refueling stations located at the country's main airports, 2 LPG bottling plants and 1 lubricant production and packaging unit.

In Retail, motor fuels sales increased in 2019, with differentiated fuels growth at 11%, resulting in increased profitability, as well as an improvement in the Group's auto fuels' market share, which collectively exceeded 32% for both EKO and BP.







In Aviation and Bunkering sales, EKO maintaining its leading position, while sales of lubricants and LPG recorded an increase of 11%.

The emphasis on the development of a company-controlled network –which currently comprises over 230 service stations- and the improvement of services continued; cooperation with selected suppliers, supermarket chains, cafes and restaurants was enhanced, resulting in an 8% increase in sales of non-fuel retailing (NFR), with significant strategic benefits for the Group.

The Group has an agreement with BP plc for the exclusive use of BP's trademarks for ground fuels in Greece until the end of 2020, with the possibility of a further 5-year renewal.



#### **Domestic marketing sales** (MT'000)

Serbia 56 Stations EKO Serbia

Montenegro



Jugopetrol

27 Stations OKTA

RNM

Bulgaria 91

**EKO Bulgaria** 

**Stations** 

# Cyprus **95**

Stations HELPE Cyprus

#### **International Marketing**

The Group's international business operates through its subsidiaries in Cyprus, Bulgaria, Serbia, Montenegro and the Republic of North Macedonia, with a total network of over 300 petrol stations.

In Cyprus and Montenegro, the local subsidiaries hold leading positions in their markets.

In Bulgaria and Serbia, the Group's subsidiaries recorded rapid growth after 2005 and are currently among the top five companies in their sector.

In the Republic of North Macedonia, the network of 27 petrol stations bears the brand name of the OKTA Group subsidiary.

Strong products' demand, retail network growth and continuous marketing activities led to an increase in sales

in most of the Group's international companies, partly offsetting weaker margins and increased competition leading to lower profitability. The vertical integration of commercial subsidiaries with the Group's refineries remained at high levels, with a notable financial contribution.

In Cyprus, COMO retail network growth, combined with increased demand and new commercial partnerships in the wholesale segment resulted in improved profitability. During the year, construction activities for the new fuels terminal at Vasiliko began, with expected completion and operation during 1H20. Furthermore, works for the new LPG terminal will start during 2H20.

In Bulgaria, the strengthening of both retail and wholesale margins led to an

improvement in profitability, despite the marginal decrease in volumes driven by increased competition.

EKO Serbia's profitability improved due to higher volumes and increased NFR contribution.

In Montenegro, higher in retail and aviation sales led to a marginal increase in total volumes, while investments were targeted towards network expansion, as well as the refurbishment of existing petrol stations.



#### EBITDA contribution in international markets (€ million)



O Montenegro

🔵 Bulgaria

## 300+ stations



The Group's international business operates through its subsidiaries in Cyprus, Bulgaria, Serbia, Montenegro and the Republic of North Macedonia, with a total network of over 300 petrol stations. In 2019, the Group's main activities focused on Greece, as presented below:

The Group participates, with 25%, in a consortium with Calfrac Well Services Ltd (75%) in the Thracian Sea Concession area, in the North Aegean (1,600 sq km) where geological studies are currently being carried out.

In addition, HELLENIC PETROLEUM participates, as an operator, through its 100% owned subsidiary HELPE PATRAIKOS (50%) in an international consortium with EDISON International SpA (50%) in the Lease Agreement with the Greek State in an offshore area in the West Patraikos Gulf, with a total area of 1,419 sq. km. Following the confirmation and mapping of the primary geological objective, offshore works related to the assessment of possible geo-hazards and extensive environmental sampling have been completed. Currently, the environmental surveys and studies related to the 1<sup>st</sup> exploration well –which is planned to take place at the end of 2020- are ongoing. Preparatory work for the drilling is also underway.



### Development of exploration portfolio in Greece

As a result of various international tenders, HELLENIC PETROLEUM has been awarded hydrocarbons exploration and exploitation rights in two onshore areas, namely the "Arta -Preveza" area, where geological, geophysical and environmental studies, as well as permitting procedures are ongoing and the "Northwest Peloponnese" area, where geological, geophysical and environmental studies are expected to be carried out in 2020.

In addition, the consortium consisting of Total 50% (Operator), Edison (25%) and HELPE (25%) holds the exploration and exploitation rights for offshore Region 2, West of Corfu. In those areas, a geological and environmental studies program is being implemented in line with contractual obligations. In offshore Block 10 in the Ionian Sea (Kyparissiakos Gulf), in 2019, HELPE was awarded exclusive hydrocarbons exploration and production rights and geological and environmental studies are currently ongoing.

During 2019, the Greek Parliament ratified the lease agreements regarding the offshore blocks 'West Crete' and 'South West Crete' (TOTAL - 40%, Operator, ExxonMobil 40%, HELPE 20%) where the 1<sup>st</sup> exploration phase is in progress with geological and environmental studies, as well as Ionian Bolck (Repsol – Operator 50%, HELPE 50%), where geological and environmental studies are ongoing.

Finally, HELLENIC PETREOLUM has submitted an offer for the offshore Block 1, north of Corfu.

#### **Renewable Energy Sources (R.E.S.)**

HELLENIC PETROLEUM RENEWABLE ENERGY SOURCES S.A. (HELPE Renewables) was founded in 2006 and is a fully owned subsidiary. HELPE Renewables plans to develop significant wind, photovoltaic and biomass capacity in the next few years, leading to a diversification in the Group's energy portfolio and contributing to balancing its greenhouse gas emissions.



The following stations are in operation:

- 7 PV parks located on property owned by the Group with a total nominal capacity of 19 MW. These include 4 P/V projects with a total capacity of 17.6 MW from the first tender process organized by RAE (2016).
- A wind farm with a capacity of 7 MW in Pylos in Messinia.
- 11 PV with net-metering systems totaling approximately 135 KW, installed at EKO and BP fuel stations.

The following projects are in various stages of development:

- 2 PV projects with a capacity of 12 MW, on Group owned property.
- 2 biomass power and heat generation units

(using agricultural residues as a source of energy) with a total capacity of 9.7 MW.

- 94 MW PV portfolio, as well as wind and hybrid projects in cooperation with LARCO.
- In 2018, the Group submitted applications for production licensing for projects with a total capacity exceeding 265 MW, whose evaluation is expected.
- Applications for the issuance of production licenses for RES projects (PV and wind) with a total capacity of 599 MW, which were submitted in 2019.
- At the same time, HELPE Renewables continuously assesses investments in own production for own consumption at the Group facilities, which are connected to the LV and MV networks.

On February 17, 2020, HELPE signed an agreement for the acquisition of a portfolio of photovoltaic projects at final permitting stage, in the area of Kozani, N. Greece from the German RES developer and contractor JUWI.

The project, with total installed capacity of 204 MW, will be the largest RES plant in Greece and one of the five largest PV plants in Europe. It is expected to generate 300 GWh annually, sufficient to power 75,000 homes with zero-emission energy, with a  $CO_2$  emission avoidance of around 300,000 tons p.a..

The total investment will amount to  $\leq 130$ m, with a significant benefit for the economy, particularly in N. Greece, as over 300 jobs will be created during the construction phase, as well as dozens of direct and indirect jobs created during operation, most of which will be filled from the local community.

HELPE Renewables follows the Safety and Environment procedures adopted by the Group with regard to compliance, reporting, risk and accidents prevention and management, both during the construction phase as well as operation. An S&E engineer is appointed for each new project, entrusted with monitoring the relevant issues, supervising works and the S&E licensing stage, as well as the validity term and the renewal of licenses.

#### **Power Generation and Trading**

The Group is active in the production, trading and supply of power in Greece through its participation (50%) in the JV Elpedison B.V. (the remaining 50% is held by EDISON International).

In July 2019, Elpedison B.V. acquired a 24.22% stake in ELPEDISON S.A. from ELLAKTOR and ELVAL-HALCOR for a cash consideration of €20 million. Following the completion of the transaction, Elpedison B.V. owns 100% of the share capital of Elpedison S.A.. The acquisition strengthens the Group's position in ELPEDISON S.A. and enables the implementation of its strategy in the Power sector.

ELPEDISON S.A. is currently the second largest independent power producer in Greece with a total installed capacity of 810 MW (comprising a 390 MW plant in Thessaloniki, since 2005 and a 420 MW plant in Thisvi, since 2010).

In 2019, ELPEDISON S.A. was granted by RAE with a power generation permit for a new combined cycle station in Thessaloniki, with natural gas used as a fuel, with a nominal capacity of 826 MW.



The power generation sector contributed significantly to ELPEDISON S.A.'s results in 2019, as profit margins increased compared to 2018. The main drivers of the power generation market in 2019 included: increased gas-fired electricity generation, lower cost of natural gas due to cheaper LNG imports and a significant increase in  $CO_2$  emissions rights costs. Also the implementation of a new 'Transitional Flexibility Compensation Mechanism' in 1Q19 had a positive effect, following the previous mechanism, whose operation was completed in April 2017. The new mechanism was terminated in April 2019, as its operation is linked to the implementation of the Target Model, which according to schedule, is expected to be operational in 2020.

In the retail power market, intense competition in 2019 drove profit margins to lower levels than 2018. Despite the competitive environment, ELPEDISON S.A. continued the grow its customer base, making it one of the largest alternative electricity suppliers, with sales amounting to c.2,200 GWh and a 4.35% retail market share in 2019 (according to the Greek Energy Exchange), to high, medium and low voltage customers.



In 2019, Elpedison strengthened its position in the liberalized Natural Gas supply market, expanding its customer base, mainly in the Attica, Thessaloniki and Thessaly regions, while it is already importing significant quantities of Liquefied Natural Gas (LNG) through DESFA's terminal in Revithousa, part of which is channeled into the wholesale market.



#### Greek Energy Mix

#### **Natural Gas**

The Group is active in the natural gas sector through its participation in DEPA S.A. (35% HELLENIC PETROLEUM S.A., 65% HRDAF). The DEPA Group is active in:

- **1.** the supply of Natural Gas in Greece (through long-term contracts as well as spot cargoes of LNG,
- **2.** the supply of Natural Gas to large scale customers (power generation plants, industries and supply companies),
- 3. natural gas supply through EPA Attiki to small and medium scale consumers and,
- **4.** the distribution of medium and low-pressure gas through the Gas Distribution Companies (EDA), following the unbundling of distribution and supply activities.

DEPA also participates in international gas transportation projects.

During 2019, domestic Natural Gas consumption increased by 9% compared to the same period in 2018 (domestic consumption 2019 at 4.9 bcm), mainly due to higher demand from electricity producers and domestic consumers.

During the course of the year, the low cost of Liquefied Natural Gas (LNG), combined with the capacity upgrade at the Revithoussa LNG terminal, enabled alternative supply to large DEPA customers, such as electricity producers, leading to a reduction in DEPA's sales and market share. DEPA Group's contribution to HELLENIC PETROLEUM Group's Net Income came in at  $\in$ 21 million, lower on a comparable basis, following the sale of DESFA. A number of initiatives in managing the Supply / Trading portfolio, as well as consumption growth in the retail natural gas market had a positive impact, which in turn led to the increase of the profitability in DEPA's supply and distribution subsidiaries.



#### **DEPA Sales Volumes** (bcm)

#### **Corporate transformation of DEPA SA Group**

In the context of the implementation of Law 4643/2019, DEPA Group's corporate transformational process is currently under way. More specifically, DEPA proceeded in 30 April 2020 with the partial spinoff of the infrastructure sector, which was transferred to DEPA INFRASTRUCTURE S.A.. Respectively, the demerger of the international projects sector is expected, which will be transferred to DEPA INTERNATIONAL PROJECTS S.A.. After the completion of both the above, DEPA S.A. will be renamed DEPA COMMERCIAL S.A. and will maintain all commercial sector activities, directly or through its subsidiaries.

Afterwards, the Hellenic Republic Asset Development (HRADF) is planning to hold international tenders concerning the sale a) of its participation in DEPA INFRASTUCTURE (up to 65%) and b) its participation in DEPA COMMERCIAL (up to 65%). Meanwhile, the HRADF's participation in DEPA International Projects S.A. will continue to be State owned.

In December 2019, HRADF S.A. invited interested parties to submit Expressions of Interest ('EoI') for their participation in the international tendering process for the acquisition of 100% of the share capital of the company DEPA INFRASTRUCTURE S.A.. On 21 February 2020, 9 parties submitted expressions of interest in the sale process.

At the same time, HELLENIC PETROLEUM S.A. concluded a Memorandum of Understanding with HRADF S.A. for the joint sale of 100% of DEPA COMMERCIAL S.A.. On 23.03 2020, 9 investment groups (including the consortium between HELLENIC PETROLEUM S.A. and EDISON INTERNATIONAL HOLDINGS N.V.), expressed interest by sending non-binding proposals for the acquisition of DEPA COMMERCIAL S.A.. While companies were required to send the necessary legal documents by 24.04.2020, due to the special conditions and measures taken worldwide to address the COVID 19 coronavirus pandemic, procedures and evaluations of the proposals for the two tenders are expected to be postponed for later on this year.



#### Memorandum of Understanding with HRADF for the joint sale of DEPA Infrastructure and participation in DEPA Commercial sale

#### Engineering

ASPROFOS, a Group subsidiary, is the largest Greek engineering firm and energy consulting services provider in South-Eastern Europe. It operates in accordance with internationally accepted standards and practices, certified by ISO 9001, ELOT 1429, ISO 14001 and OHSAS 18001. ASPROFOS supports the Group's investments particularly in the fields of refining and natural gas, through the provision of a broad range of technical, project management and other related advisory services, while seeking to continuously expand the range of its services and broaden its client portfolio to include mainly international clients.

In this context, in 2019 ASPROFOS submitted more than 40 offers to customers outside the Group, including those related to the studies of the onshore and offshore section of the EastMed pipeline as well as its substations.



In 2019, it employed 217 qualified professionals and its turnover amounted to €11.5 million.

In 2019, ASPROFOS provided services to 50 new projects, both to customers within and outside the Group, including the three refineries as well as subsidiaries in Greece and abroad, the most important of which are outlined below:

- Revision of the TransAdriatic Pipeline (TAP) Safety Study/QRA and review of TAP stations' passive fire protection
- Basic Design Study and related studies for the installation of a compression station in Ampelia
- Basic Design for the implementation of HAZOP findings in the Hydrogen Unit (U 33) and HAZOP study for the Hydrocracker Unit (U-34) at the Elefsina refinery
- Detailed design for the new sulphur recovery unit (SRU) at the Thessaloniki refinery
- Supervision of an oil docking complex construction in the Vassilikos industrial area, Cyprus
- Detailed study and construction supervision of a new Cast Film line, auxiliary equipment and building facilities for the DIAXON plant in Komotini
- Detailed design study for aviation fuel storage at the OKTA facilities in the Republic of North Macedonia
- Environmental Base Study for the hydrocarbon exploration and production program for the onshore area northwest Peloponnese
- Upgrading of the fuel supply facilities of Aspropyrgos Spata Airport pipeline
- Restoration of the special education complex in Rafina in the context of the Group's Corporate Social Responsibility. It is noted that the works were completed in record time during the summer holidays in 2019, so that the school complex would be ready for operation on time for the new school year.

Refinery projects in Kuwait and Serbia also represented significant successes during 2019.

Another important event was, in July 2019, was the Ministry of Environment and Energy approving the Environmental Impact Study for the onshore section of the IGI Poseidon gas pipeline, prepared by ASPROFOS in the context of a Partnership.