

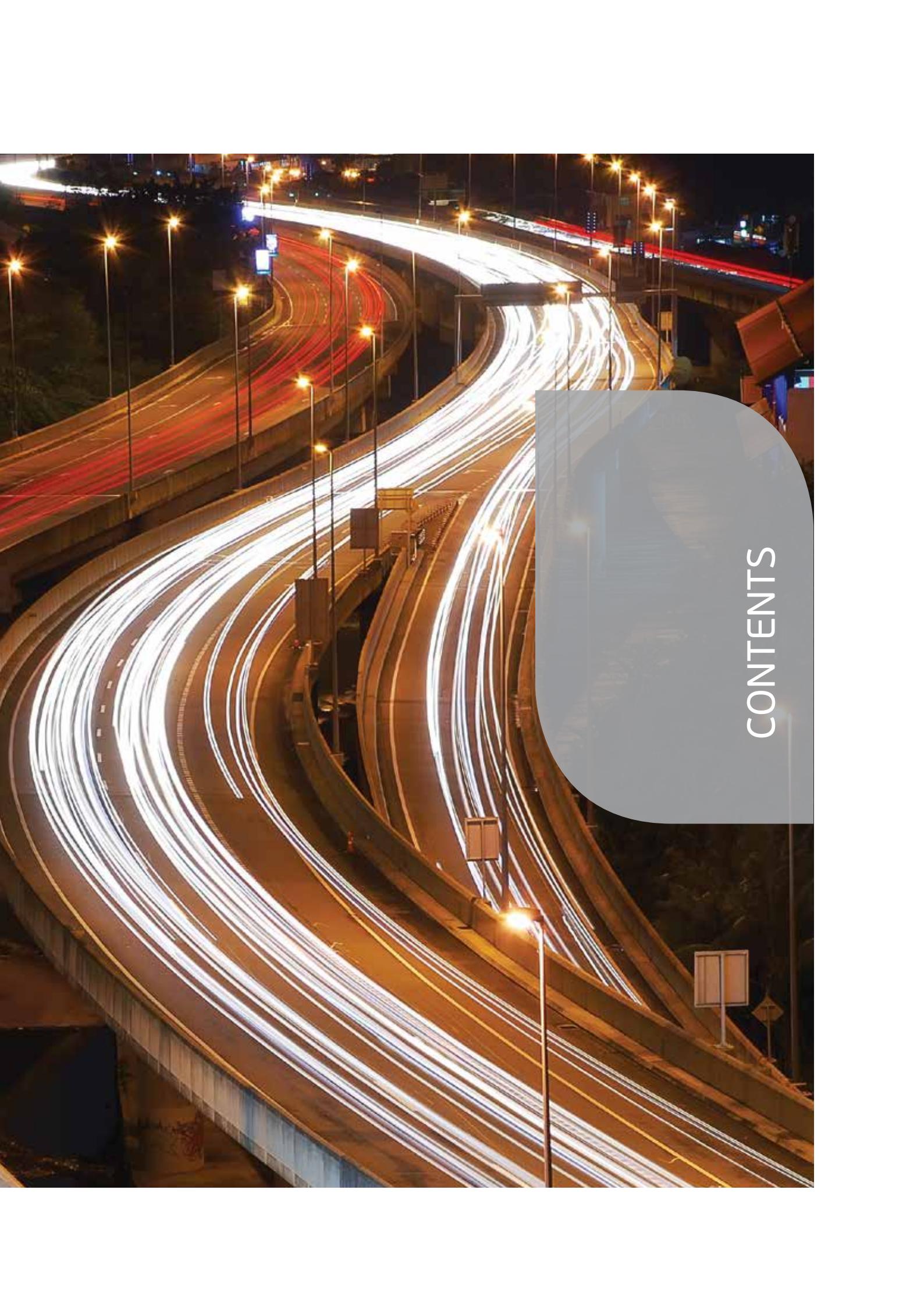
CORPORATE SOCIAL RESPONSIBILITY  
AND SUSTAINABILITY  
REPORT 2016



Public Power Corporation S.A.-Hellas



[Public Power Corporation S.A.-Hellas](#)

A nighttime photograph of a complex highway interchange. Multiple lanes of traffic move along curved ramps, their headlights and尾灯 creating long, streaky light trails against the dark night sky. Streetlights line the ramps, and various signs and barriers are visible. A large, semi-transparent circular graphic is positioned in the upper right quadrant of the image, containing the word "CONTENTS".

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## 1. MESSAGE FROM THE CHAIRMAN AND CEO



Three fundamental values guide PPC in everything it does: the Environment, Society and the Economy. We remain firmly focused on growing and developing Greece's largest corporation, and as we successfully adjust to the new environment, the focus of what we do remains unchanged: to serve society as a whole. Because we can and must do our very best for society. We need to be passionate about even the smallest tasks, as if overcoming the crisis and Greece's development depended on it. We are fully aware that the work each of us does will help create new jobs, thereby combating the scourge of unemployment.

We refuse to rest on our laurels or pat ourselves on the back; we declare that over the past year we are proud to have exemplified PPC's guiding values, yet at the same time we want it to be clearly understood that we still have much to do ...

### *...when it comes to the Environment:*

- We withdrew old, polluting plants from service, building new thermal and hydroelectric plants which integrate cutting-edge, environmentally-friendly technologies in line with Best Available Techniques.
- We have continued our expansion

into the renewable energy sources sector at a rapid pace. In December 2016 PPC Renewables S.A. announced it was partnering with the European Investment Bank (EIB) in a project worth € 85 million covering the fields of wind and hydroelectric power.

- We rehabilitated 4,000 ha of land at the Western Macedonia Lignite Centre and 700 ha at the Megalopolis Lignite Centre.
- We met the needs of large corporations which are our customers engaged in environmental activities, having provided 1.2 million Guarantees of Origin for RES up to 2017.



#### **... when it comes to Society:**

- We've offered more than € 850 thousand in sponsorship and donations, supporting local communities organise cultural and sporting events.
- We offered free electricity to 85,000 customers under Law 4320/2015.
- We continue to run the district heating schemes in Kozani, Ptolemaida, Amynteo and Megalopolis. 2.1 million GJ of power were used as part of those schemes. District heating schemes offer a model for sustainable development. They help reduce air pollution because hydrocarbons and wood are not burned to generate heat, and also drastically reduce heating costs for local communities.
- At the same time, given that Greek society continues to endure financial constraints, we have listened to what our customers need, and have adopted measures to assist them. These include:
  - around 620,000 repayment plans
  - inclusion of 660,000 new customers in the Social Residential Tariff
  - innovative loyalty schemes by Greek standards, rewarding household and business customers who pay regularly by offering them major financial savings.

We also listened when it came to better services provided via modern customer service channels. For example:

- We handled 2,993,000 calls via the 11770 call centre.
- We collaborate with 6,000 partners who offer bill payment services.

## 1. MESSAGE FROM THE CHAIRMAN AND CEO

- 730,000 bills are now paid by card.
- 730,000 customers are now registered for the e-bill service.
- 93,300 customers use our mobile app.

### **... when it comes to the Economy:**

We've invested close on € 870 million across all sectors we operate in. In strategic terms, to meet the challenges we face we have successfully implemented a series of actions:

- We arranged and carried through the sale of 24% of Independent Power Transmission operator S.A. (IPTO) to a strategic investor in record time, making a decisive contribution to ensuring that control remained with the state.
- Despite the liquidity squeeze faced by Greek banks, we secured € 65 million from the National Bank of Greece and € 80 million from the European Investment Bank.
- We set up an office in Brussels as part of our partnership with major Chinese firms and also founded a branch in Tirana; both proof positive of the Corporation's outward focus and its expansion into new markets.
- Given that none of this is possible without an ever expanding staff base, we have also developed a new staff evaluation system to improve our administrative operations, and, above all, to change our corporate culture as we become a competitive, outward looking, customer-centred business.

Since the transformation of the company will be completed during 2017, our priorities are to:

- Prepare and start implementing a comprehensive Strategic Plan. Work on the plan is currently under way.
- Improve our administrative operations in all sectors.
- Improve HRM to allow our staff to grow and develop, and us to utilise them to their full potential.

- Improve customer relations through targeted actions, business initiatives and products based on a comprehensive marketing plan.
- Add to our staff through targeted recruitment drives so that all current needs are met, to ensure PPC is synonymous with modern skills and technology, and to create the conditions for existing precious know-how and skills to be transferred by company staff to a new generation of employees.
- Undertake major projects and business initiatives abroad in partnership with companies from Greece and abroad.

In taking these steps our goal is a Corporation with a smaller market share but a continuing dominant role in Greece's electricity market, but also a larger, more robust company with a diverse range of operations and products, as it expands into new markets. We continue to strive for this by promoting our three core Corporate Social Responsibility goals of Environment - Society - Economy which have been central to the corporation for many years now. This is an endeavour we will continue and intensify in 2017.

Our focus  
remains  
unchanged:  
to serve society  
as a whole

## 2. ABOUT THE REPORT



MEGALOPOLIS STEAM ELECTRIC PLANT - UNIT V

The Corporate Social Responsibility and Sustainability Report 2016 covers the period 1.1.2016 to 31.12.2016 and is PPC's seventh sustainability report.

### Scope and Boundary

The Report refers to the activities of the parent Corporation, namely the Public Power Corporation S.A. (hereinafter «PPC» or the «Corporation») in Greece. Data relating to subsidiaries, possible joint ventures, suppliers or third parties have not been included in the Report.

Where data have been revised, the reasons for such revisions are indicated.

### Defining Content

The Report seeks to present PPC's performance on Corporate Social Responsibility (CSR) and sustainable development issues, by examining the three core issues of Economy, Environment and Society. It is aimed at all the Corporation's stakeholder groups, such as customers, shareholders and investors, associates, employees, institutional and public bodies, and local communities.

The Report has been prepared in accordance with the Global Reporting Initiative guidelines (GRI - version G4).

The process for defining the report's content was based on the GRI G4 guidelines, as well as the principles of inclusiveness, materiality, sustainability and completeness, and the related GRI Technical Protocols for Indicators are included. Moreover, the GRI -

Electric Utilities Sector Supplement, the principles of the Accountability AA1000 standard on inclusiveness, materiality and responsiveness, the criteria in the Hellenic Sustainability Code, stakeholders' expectations and the characteristics of Greek society were also taken into consideration.

The material aspects included were ranked based on their impact on the Corporation and stakeholders, based on the PPC sustainability materiality analysis and contact with stakeholders (as outlined in sections 4.3 and 4.4. of the Report).

Finally, the completeness of the aspects was assessed and the content of the Report was determined.

#### Drafting this Report

The Corporate Social Responsibility Section is responsible for collecting the data needed for this Report. The Report Steering Committee may also participate in the process. The role of this Committee, comprised of Management executives, is to facilitate workflows where the Corporate Social Responsibility Section fails to resolve issues.

The Corporate Social Responsibility Section follows the steps of the Sustainability Report Data Collection process that have been adopted,



ALIVERI STEAM ELECTRIC PLANT - UNITS III & IV

## 2. ABOUT THE REPORT



using electronic data collection forms and a quantitative data calculation and integration tool. The CSR team, comprised of employees from the Divisions and Independent Sections, plays an active role in collecting data.

To collect the data required for this Report, updated data collection forms were used in order to improve the Report preparation process and to increase the quantity of information disclosed.

The Corporate Social Responsibility Section then groups the necessary data by information source and coordinates the Corporate Social Responsibility Team members as they gather the relevant information. The data collected are approved by the relevant Directors and sent to the Corporate Social Responsibility Section. The Section evaluates the data and may request clarifications, modifications or additional information where necessary. After the quantitative indicators are calculated, the data are consolidated (where required), and then the Report is drafted. The final draft of the Report is checked and approved by the Corporation's senior management.

The method of processing raw numerical data to cover composite indicators is described in the respective sections of the Report. Note that there have not been any major changes to data measurement and processing methods used compared to those employed in the previous report. Where differences do exist, this is clearly stated in the relevant section.

### Data Sources

The data and the information presented in this Report have been collected and processed from the databases held at PPC headquarters and by its individual Departments, with the support of different computer systems, applications, archives and established processes.

In cases where it was impossible to collect homogeneous data from all PPC activities to allow general, comprehensive results to be produced, the Report presents selected data with clear reference to the operational unit involved.

### External Assurance

The Report was submitted for external assurance by an independent assurance provider in accordance with the International Standard on Assurance Engagements 3000 (ISAE 3000).

### Your opinion counts

Your opinion as a reader of this Report is very important to us. We welcome your comments, questions, and any queries, clarifications or proposals for improvement that you may have.

Please forward your comments to:  
Corporate Social Responsibility Section  
Strategy Department  
Public Power Corporation S.A.  
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Tel.: 210 5292379, Fax: 210 5292389  
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[www.dei.gr](http://www.dei.gr)

### 3. PPC CORPORATE PROFILE



ALIVERI STEAM ELECTRIC PLANT NATURAL GAS UNIT V

#### 3.1 ACTIVITIES

The Public Power Corporation S.A. (PPC or the Corporation), trading as PPC S.A., is Greece's largest electricity producer and supplier. PPC has its own lignite mines, and power generation and distribution facilities. It is one of Greece's largest industrial companies in terms of fixed assets, and is a leading public utility offering electricity in Greece.

The Corporation's registered offices are at 30 Halkokondyli St., Athens, Greece GR-10432.

PPC's main objective is to engage in commercial and industrial activity in the energy sector in both Greece and abroad. Just some of its main activities include designing, supervising, constructing, operating as well as maintaining and running power plants. In addition, the Corporation also supplies and sells electricity, operates mines, produces and procures fuels to generate energy, and outsources such activities to third parties. The Corporation's objectives also include setting up other companies, participating in joint ventures, and acquiring shares in other companies, whether Greek or foreign, and participating in businesses in general that have objectives related to those outlined above, or activities which are directly or indirectly associated with the PPC's objectives, or which seek to utilise the PPC's moveable or immoveable assets and to capitalise on its resources.

In 2011, the Transmission business moved to Independent Power Transmission Operator S.A. (IPTO) and in 2012 the Distribution business was transferred to Hellenic Electricity Distribution Network

Operator S.A. (HEDNO). After the spin-off, PPC retained ownership of the property and the assets of the Distribution Network and the Network of Non-Interconnected Islands.

Law 4001/2011 states that HEDNO is responsible for suitably running, maintaining and developing the Distribution Network in light of private economy considerations, and therefore is responsible for ensuring that electricity reaches homes and businesses nationwide without interruption. Under that same law, an operator has been established for all networks nationwide (HEDNO), apart from certain small networks which may have their own operator. All network fixed assets remain the property of PPC, apart from the internal network at Athens Airport (which is owned and operated by the Airport itself).

As the owner of the network, PPC must ensure that the resources needed to develop the network in line with the plans prepared by HEDNO are available. The Law also safeguards PPC's financial rights as owner of the Network, including PPC's right to set general limits of the extent of its own borrowing, and the right to approve HEDNO's annual budget.

Today the Corporation is organised and operates in sectors as follows:

### Mines

PPC's mining activities are managed by the Mines Division. The mission of the Mines Division is to explore, extract, manage and market lignite and of other solid energy raw materials and to use the proceeds of its activities, to contribute to the energy security and economic development of the country, while respecting the environment and man.

The low cost of lignite mining, its stable and readily controllable price and the fact that there is stability and security in fuel supply, make lignite a fuel of strategic importance for the Corporation. Moreover, the lignite extraction process creates thousands of jobs for the residents of the Greek regions, especially in areas where the Corporation operates.

### Production

The PPC Generation Division is responsible for power generation. Its main task is to develop the generating capacity of thermal power plants and large hydroelectric power plants (HPP) belonging to PPC and to ensure the optimal running of those facilities, while complying with environmental requirements.

On mainland Greece most of the corporation's production capacity is concentrated in the north of the country close to large lignite mines which are the main source of fuel. On the Aegean islands, which are not connected to the National Transmission Network, our autonomous power stations are fuelled by oil. RES (renewable energy source) plants are also in operation on both the Interconnected System and the Non-Interconnected Islands.

### **PPC (the parent company) in figures**

Revenues: **€ 5,155.2 mill.**  
 No. of employees **10,607\***  
 Installed capacity: **11,976 MW**  
 Net energy output: **29,982 GWh**  
 Investments: **€ 738.8 mill.**  
 No. of mines: **9** (5 administrative units)  
 No. of steam electric plants: **13**  
 No. of hydroelectric plants: **16**  
 Autonomous and local power plants: **32**  
 No. of connections: **7,327,064**  
 No. of branches: **112**

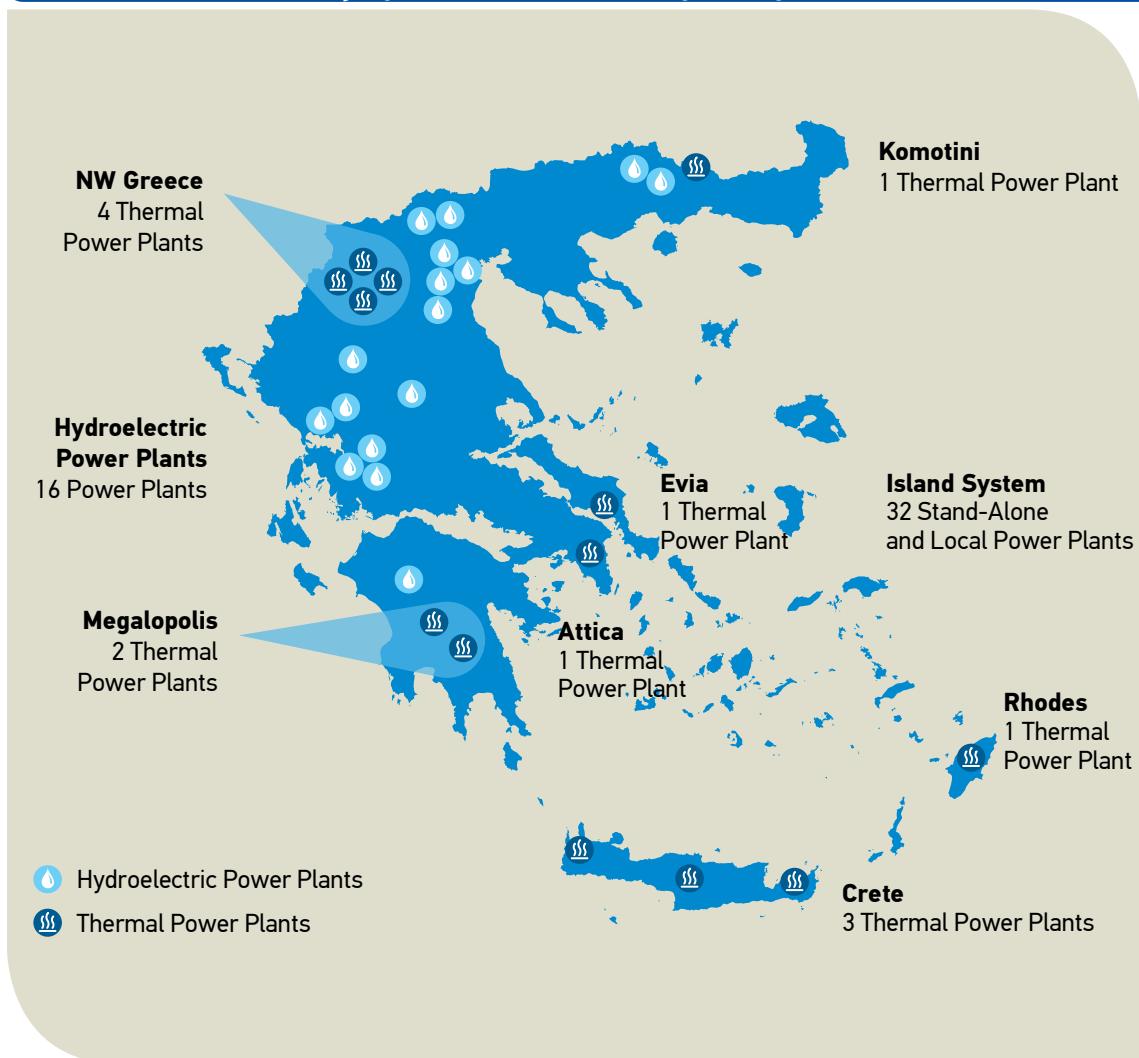
\* This includes the employees at PPC Renewables S.A.

### 3. PPC CORPORATE PROFILE

To maintain its position in the deregulated energy market, PPC's Generation Division has made certain strategically important decisions. These include:

- Construction of new power plants that incorporate cutting-edge technologies and optimal techniques.
- The phasing out of old, inefficient power plants.
- Speeding up completion of hydroelectric projects.
- Upgrading autonomous and local power plants on the Non-Interconnected Islands.
- Reducing CO<sub>2</sub> emissions.

**Geographical distribution of power plants**



In 2016, PPC permanently decommissioned the Agios Georgios Steam Electric Plant.

**The distribution of power plants with a total installed capacity of 11,976 MW by primary energy source as of 31.12.2016 (RES excluded) is shown in the table below.**

Primary energy source	Installed capacity in 2014 (in MW)	Installed capacity in 2015 (in MW)	Installed capacity in 2016 (in MW)
Lignite	4,762 (38%)	4,337 (34%)	4,337 (36%)
Natural Gas	2,017 (16%)	2,849 (22%)	2,689 (22%)
Oil	2,495 (20%)	2,514 (19%)	1,779 (15%)
Hydroelectric	3,171 (25%)	3,171 (25%)	3,171 (27%)
<b>Total</b>	<b>12,445</b>	<b>12,871</b>	<b>11,976</b>

The 160 MW drop in the natural gas plants' installed capacity between 2015 and 2016 was due to the decommissioning of Unit 8 at the Agios Georgios Steam Electric Plant. The 735 MW drop in the oil plants' installed capacity between 2015 and 2016 was due to decommissioning of oil plants whose capacity was 730 MW (Lavrio - Keratea and Aliveri Steam Electric Plants) on the Interconnected System and a 5 MW drop in the installed capacity at the autonomous power plants or local power plants operated by the Island Production Department.

**The distribution of power plants in terms of net power output (29,982 GWh) per category of energy source is shown in the table below:**

Primary energy source	Net power output in 2014 (in GWh)	Net power output in 2015 (in GWh)	Net power output in 2016 (in GWh)
Lignite	22,709 (65%)	19,418 (57%)	14,898 (50%)
Natural Gas	3,940 (11%)	4,424 (13%)	5,603 (19%)
Oil	4,521 (13%)	4,573 (14%)	4,638 (15%)
Hydroelectric	3,906 (11%)	5,391 (16%)	4,843 (16%)
<b>Total</b>	<b>35,076</b>	<b>33,806</b>	<b>29,982</b>

In 2016 the total net output of all plants operated by PPC's Generation Division was 29.98 TWh, down some 11.3% compared to 2015 (33.8 TWH). The drop in output has to do with the increase in third party output and the consequent reduction in PPC's share of generation from 71.9% in 2015 to 62.7% in 2016.

However, the most important change for PPC compared to 2015 involved the major drop in lignite plant output, despite increased availability at those plants. Output was down 4.5 TWh (or 23.3%) due to low dispatching (at just 44.7%) given how the market operated. This was also coupled with comparatively lower natural gas prices which resulted in increased usage of natural gas plants (up 27% in the case of PPC's own natural gas plants). It was not possible to further offset the drop in lignite production against hydroelectric production, which was around 4.8 TWh (down 10.2% compared to 2015).

### 3. PPC CORPORATE PROFILE

The availability rates and average performance rates of PPC facilities are shown in the table below: The efficiency rate is affected by the dispatching of the plants and by the exploitation rate.

Facilities	2014		2015		2016	
	Availability (%)*	Average Efficiency (%)**	Availability (%)*	Average Efficiency (%)**	Availability (%)*	Average Efficiency (%)**
<b>Interconnected System</b>						
Lignite plants	71.80	31.08	74.78	31.22	77.39	31.13
Oil plants	100.00	-	-	-	-	-
Natural gas plants	77.59	49.79	69.53	51.50	66.71	49.60
Total	73.74	32.91	73.20	33.29	73.30	34.67
<b>Crete</b>						
Oil plants (LFO)	88.33	33.92	87.39	33.96	83.36	34.37
Oil plants (diesel)	73.52	33.01	84.92	32.95	87.69	33.08
Total	79.95	33.71	86.01	33.72	85.77	34.04
<b>Rhodes</b>						
Oil plants (fuel oil)	87.44	35.92	87.01	35.72	86.09	36.30
Oil plants (diesel)	92.68	27.58	97.08	28.49	96.74	28.71
Total	90.17	37.19	92.24	34.24	91.65	34.90
<b>Other non-interconnected islands</b>						
Oil plants	88.98	40.40	89.20	39.91	88.56	39.99

\* Average availability is cited. The calculation in each instance refers to the weighted average availability of all plants using a specific type of fuel. Likewise, 'total' relates to the weighted average availability of all PPC thermal plants.

\*\* Net efficiency is cited, in other words average efficiency is calculated based on the efficiency rate of the energy output. The calculation relates to the weighted average annual efficiencies for all plants using a specific fuel. Likewise, 'total' relates to the weighted average efficiency of all PPC thermal plants.

#### Supply

In the supply sector, the Supply Division presents PPC's modern face as a supplier and the distinct role it plays in the deregulated electricity market compared to its role as Network Operator, whose duties are related to supplying electricity to all properties (including the fitting of meters, taking meter readings, restoring power in blackouts, increasing/decreasing power, etc.).

Thanks to a robust, competitively sustainable development plan the Division is:

- utilising the Corporation's name, and building on its values in a reliable, consistent manner.
- modernising the Corporation's procedures to reflect international trends and the regulatory framework in Greece's new liberalised electricity market.
- developing attractive products after listening to customer needs.
- offering energy products and services to customers.

■ building PPC's relations with customers on a new basis, by offering direct, impeccable customer service both in terms of timing and quality, via the phone or internet, and through a network of modern stores:

- with a highly trained sales-focused team
- using improved, cutting-edge procedures
- in a comfortable, secure environment for all
- focused on creating an enlarged multi-channel, diverse sales network

The deregulated market means the Corporation must operate in a changed environment. Coupled with competition from other players in the market, this has resulted in new conditions and placed new demands on PPC. The Supply Division has responded positively to this deregulation of the electricity market where fair, undistorted competition is the norm, and has given practical support to all measures required. In this context, the role of the Supply Division is two-fold:

- to ensure sufficient energy to meet the needs of PPC's customers in the best possible way through participation in the wholesale market as a supplier
- to provide top quality services to customers at the most competitive prices possible as a supplier and to actively ensure fair competition in terms of energy supply and sales.

The table below shows the various categories of medium and high voltage connections available from the Corporation and the corresponding number. Out of a total of 7,326,984 connections, 78% are household connections and 16% are commercial.

<b>Medium and low voltage connections</b>	<b>No. of connections in 2014</b>	<b>No. of connections in 2015</b>	<b>No. of connections in 2016</b>
Residential	5,731,416	5,756,719	5,711,928
Agricultural	205,430	206,223	206,213
Commercial	1,240,891	1,232,277	1,202,546
Industrial	58,892	56,366	52,350
Public lighting (roads & squares)	99,650	106,663	107,214
Public authorities	52,160	46,333	46,635
Traction	98	98	98
<b>Total</b>	<b>7,388,537</b>	<b>7,404,679</b>	<b>7,326,984</b>

In addition to low and medium voltage customers, in 2016, PPC also served 80 high voltage connections.

At the end of 2016 PPC had 112 stores, 19 of which were located in Attica, 26 in Macedonia-Thrace, 30 in the Peloponnese-Epirus regions, 19 in Central Greece and 18 on the islands. To ensure large customers receive excellent service, PPC has established 3 regional Large Customer Medium Voltage Sales and Service Centres with 7 regional departments and 1 Key Account Management section. The Key Account Management section handles customers who are highly attractive or important for the

### 3. PPC CORPORATE PROFILE

Corporation, irrespective of the type of voltage they use. Cutting-edge customer management techniques are employed which go far beyond maintaining ordinary commercial relations with customers, by promoting synergies between supplier and customer.

By refining customer management techniques for large and other customers (focusing on key accounts and on account management) PPC's priority of retaining existing, strategically important customers and increasing their number is aided. The Corporation's goal is to generate a comparative competitive advantage and to increase customer loyalty levels by making value-added suggestions (by offering more attractive commercial terms combined with new products/services) where the focus is on mutual trust.

#### 3.2 SHAREHOLDER STRUCTURE

PPC's share capital on 31.12.2016 stood at € 1,067,200,000 divided into 232 million ordinary shares with a nominal value of € 4.60 each.

Shareholder structure (31.12.2016)	Percentage
Greek State*	34.12%
Hellenic Republic Asset Development Fund (HRADF)	17.00%
IKA-ETAM / TAP – PPC Fund and TAYTEKO/TEAPAP-PPC Fund (ex OAP / PPC Pension Fund)	3.81%
General public & institutional investors**	45.07%
<b>Total</b>	<b>100.00%</b>

\* Through the Hellenic Republic Asset Development Fund (HRADF), which is wholly owned by the Greek State, the Greek State directly or indirectly controls 51.12% of the ordinary shares in PPC S.A. On 8.4.2014 the Interministerial Committee for Restructuring and Privatisation decided to transfer 39,440,000 ordinary shares with voting rights in PPC (accounting for 17% of the company's share capital at that time) from the Greek State to HRADF free of consideration, in accordance with the provisions of Law 3986/2011. The transfer took place after an over-the-counter (OTC) transaction which had taken place on 9.4.2014.

\*\* This includes the "Silchester International Investors LLP" holding of 32,024,558 shares (13.8% of PPC voting rights) as of 8.12.2011, in its role as manager of investments of its following clients: Silchester International Investors International Value Equity Trust, Silchester International Investors International Value Equity Taxable Trust, Silchester International Investors International Value Equity Group Trust, Silchester International Investors Tobacco Free International Value Equity Trust and The Calleva Trust

On 31.12.2016 PPC was not aware of any shareholders other than the "Greek State", "Silchester International Investors LLP" and the "IKA-ETAM/TAP- PPC Fund" and "TAYTEKO / TEAPAP-PPC Fund" taken collectively, who directly hold 3% or more of its share capital.

More information is available in the 2016 Annual Report.

#### 3.3 HOLDINGS IN SUBSIDIARIES

The following table presents the companies that were wholly owned by PPC on 31.12.2016.

Subsidiary	Business
PPC Renewables S.A.	Renewable energy sources (RES)
HEDNO S.A.	Management, development, operation and maintenance of the Hellenic Electricity Distribution Network (HEDN)
IPTO S.A.	Management, development, operation and maintenance of the Hellenic Independent Power Transmission System (HIPTS) and its interconnections
PPC FINANCE PLC	Financial services
PPC ELEKTRİK TEDARİK VE TİCARET ANONİM ŞİRKETİ	Electricity supply

## 3.4 CORPORATE GOVERNANCE FRAMEWORK

### Material aspect: Corporate governance, ethics and values

Corporate governance, ethics and values have been recognised as material aspects by Management and the corporation's very own employees, customers, associates and suppliers, non-Governmental/Non-Profit Organisations, by the State, regulatory authorities and by public agencies. With the Board of Directors' approval PPC implements a Code of Corporate Governance which sets out the corporate Governance framework and guidelines

For PPC S.A., complying with corporate governance principles is a key commitment and priority. Since the Corporation aims to ensure that it is optimally organised, managed and run, that there are increased levels of transparency in its relations with shareholders and generally that the Corporation's interests are safeguarded, it has adopted and implements a Code of Corporate Governance. This Code provides a framework of principles and procedures which the Corporate Governance System of the Corporation follows as regards management, shareholders, internal audits and risk management.

The Code of Corporate Governance is available on the PPC website ([www.dei.gr](http://www.dei.gr)).

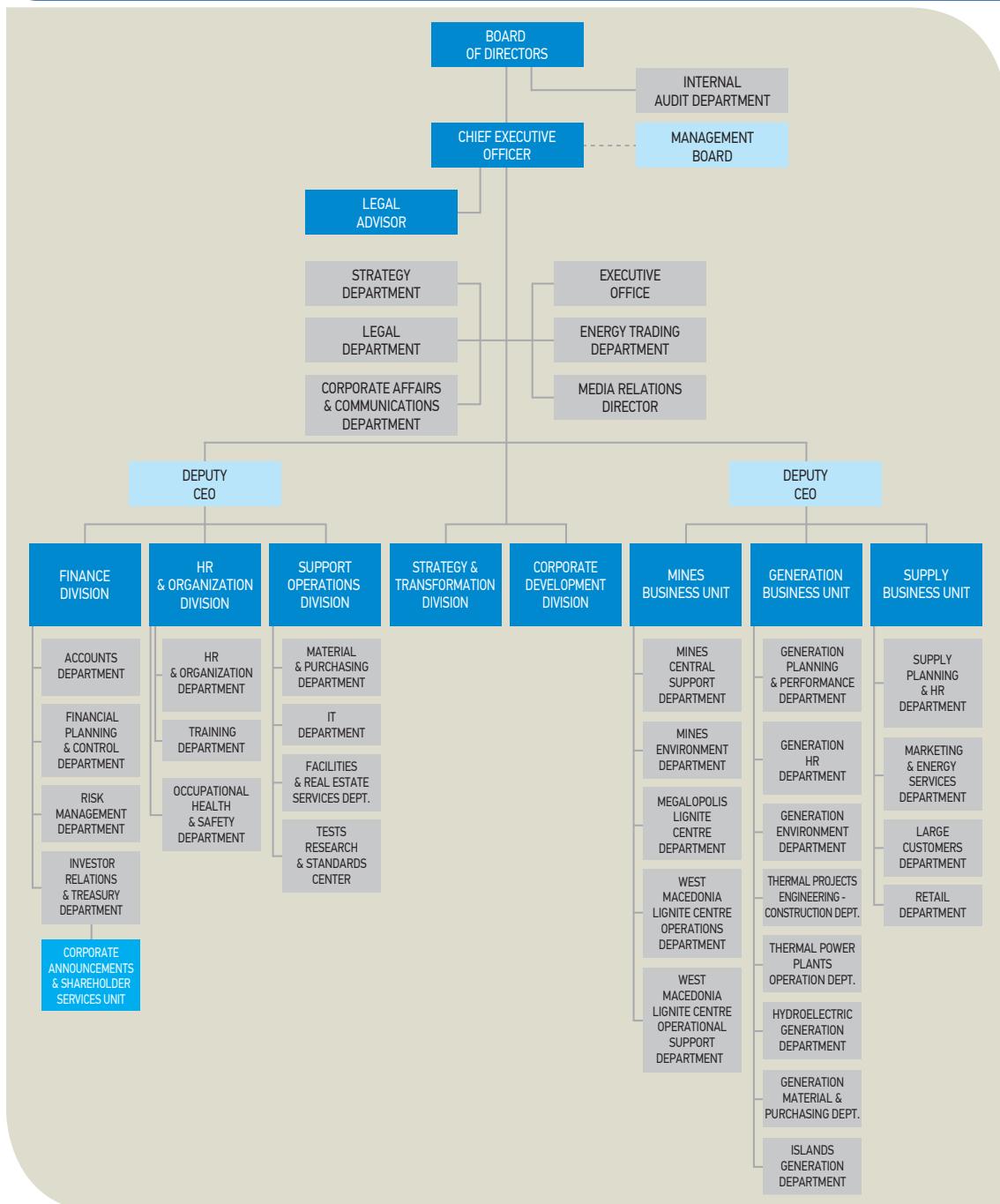
## 3.5 ADMINISTRATIVE ORGANISATION

In 2016 a Strategy and Transformation Division was set up, responsible for strategic planning and coordination of PPC and its Group's business plan, for centrally managing regulatory issues and for the Corporation's environmental policy, for developing the communication strategy with the EU and other competent bodies and agencies in Greece and abroad and for coordinating all steps required to transform the Corporation.

### 3. PPC CORPORATE PROFILE

A Corporate Development Division was also set up, responsible for managing market developments globally, for examining and making recommendations about new business ventures and how to optimise existing ones, and for planning and coordinating the implementation of such measures, as well as for the governance of subsidiaries and affiliated companies.

**PPC Organisational chart**



## 3.6 GOVERNANCE STRUCTURE

PPC's General Meeting of Shareholders is the supreme management body and has the right to take decisions on any issue affecting the Corporation.

Apart from the General Meeting of Shareholders, the Corporation's governance bodies include:

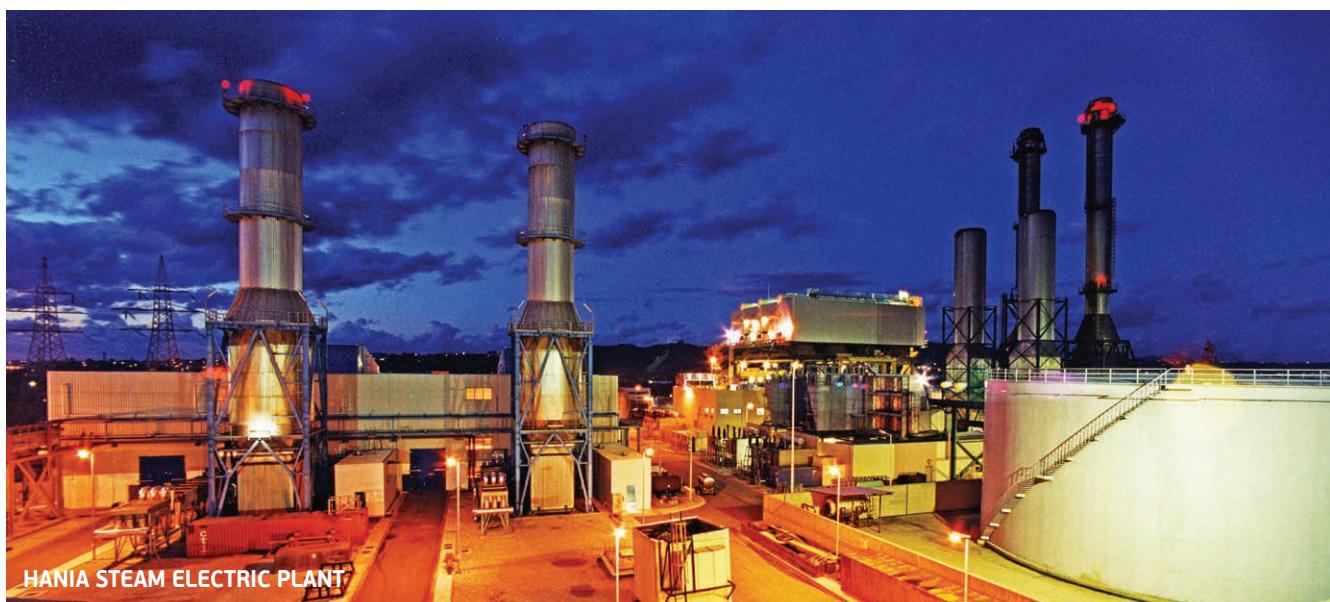
- The Board of Directors
- The CEO
- The Management Board

Summary information is provided below about the governance bodies and the procedures that applied on 31.12.2016. Detailed information about the governance bodies is available in the 2016 Annual Report.

### **Board of Directors**

The Board of Directors (BoD) is PPC's highest-ranking management body. The BoD lays down the Corporation's strategy and its development policy, while also overseeing and reviewing management of its assets. On a proposal from the CEO, the BoD approves:

- The Strategic Plan that outlines the strategic goals for achieving the Corporation's objectives.
- The Corporation's Business Plan for the next 3 to 5 years, that provides further details about the objectives set in the Strategic Plan for each year.
- The methods for implementing the Strategic Plan and the Business Plan for each year.
- The Corporation's annual budget.



### 3. PPC CORPORATE PROFILE

The Board of Directors consists of 11 members who are elected as follows:

- 8 members, including the CEO, are elected by the Corporation's General Meeting of Shareholders. Of those members, the Board elects a Chairman and Vice Chairman.
- 2 members representing the PPC employees are elected by direct, universal ballot after PPC's most representative employee trade union is notified.
- 1 member who comes from organisations in sectors related to PPC's activities is appointed by the Economic and Social Committee of Greece.

On 31.12.2016, the BoD consisted of 9 men, all aged over 50.

Name	Post	Executive member	Non-executive member	Independent	Audit Committee	Remuneration Committee	Corporate Social Responsibility Supervision
Emmanuel Panagiotakis	Chairman & CEO	√	-	-	-	-	-
Georgios Andriotis	Vice Chairman	-	√	√	√	√	-
Panagiotis Alexakis	Member	-	√	√	√	-	√
Aris Vatalis	Member	-	√	-	-	-	√
Pantelis Karaleftheris	Member Employee representative	-	√	-	-	-	-
Kyriakos Mangos	Member	-	√	-	-	√	-
Christos Papageorgiou	Member	-	√	√	√	-	-
Lazaros Stathakis	Member	√	-	-	-	-	-
Nikolaos Fotopoulos	Member Employee representative	-	√	-	-	-	-

Note that on 31.12.2016, 2 posts for independent Board members remained unfilled. Those vacancies were filled when Mr. Dimitrios Vassilakis was elected as an independent non-executive member of the Board and Mr. Georgios Bitzas was elected as the non-executive member of the Board nominated by the ESC on 9.1.2017. On 9.1.2017 Mr. Panagiotis Alexakis became a member of the Audit Committee.

#### CEO

The PPC's CEO is elected by the General Meeting of the Shareholders and has a 3-year term in office.

- He is the PPC's Chief Executive Officer.
- He supervises all divisions and departments and manages their operations.
- He decides on how the Corporation is to be organised, within the context laid down by the Articles of Association and the relevant decisions of the Board of Directors.
- He takes the necessary decisions in light of the provisions governing how the PPC operates, the approved programmes and budgets, as well as the Strategic Plan and the Business Plan.
- He represents the Corporation within the limits of his powers as specified by the Articles of Association and the relevant decisions of the Board of Directors.

## Management Board

The Management Board is composed of the CEO, who chairs it, the Deputy CEOs, if any, and the General Managers. The Management Board meetings may also be attended by the Corporation Legal Advisor, at the CEO's discretion.

The Management Board operates in accordance with the decisions of the Board of Directors, the Articles of Association and the Corporation's by-laws, ensuring the necessary degree of collective responsibility when handling PPC administrative and operational issues, and consistency in its own operations.

## Board of Directors Committees

The Board of Directors has set up the Audit Committee and the Remuneration Committee, in implementation of the current legislation on corporate governance and in order to ensure the best corporate governance practices.

The Audit Committee consists of at least 2 non-executive members and 1 independent, non-executive member of the Board of Directors. The members of the Audit Committee are appointed by the General Meeting and their powers and duties are as follows:

- To monitor the financial reporting process.
- To monitor effective operation of the internal audit and the risk management systems and to also monitor proper running of the Internal Audit Department.
- To monitor mandatory audits of the separate and consolidated financial statements.
- To review and follow up issues relating to the selection and continued objectiveness and independence of the certified auditors, especially in relation to other services provided by them to PPC and its subsidiaries.
- To monitor how the Corporation's budget is being implemented.

### **3. PPC CORPORATE PROFILE**

The Corporation's Remuneration Committee consists of 3 non-executive members of the Board of Directors, and at least 2 are independent. The Remuneration Committee is responsible for examining and submitting proposals to the BoD to set any remuneration and pay for Board members, as well as for the Corporation's senior executives, in this case with the involvement of the CEO.

#### **3.7 CONFLICT OF INTEREST**

In order to avoid conflict of interest, PPC implements a series of procedures which ensure that conflict between the interests of members of the Board of Directors, of executives and other employees and the Corporation are avoided.

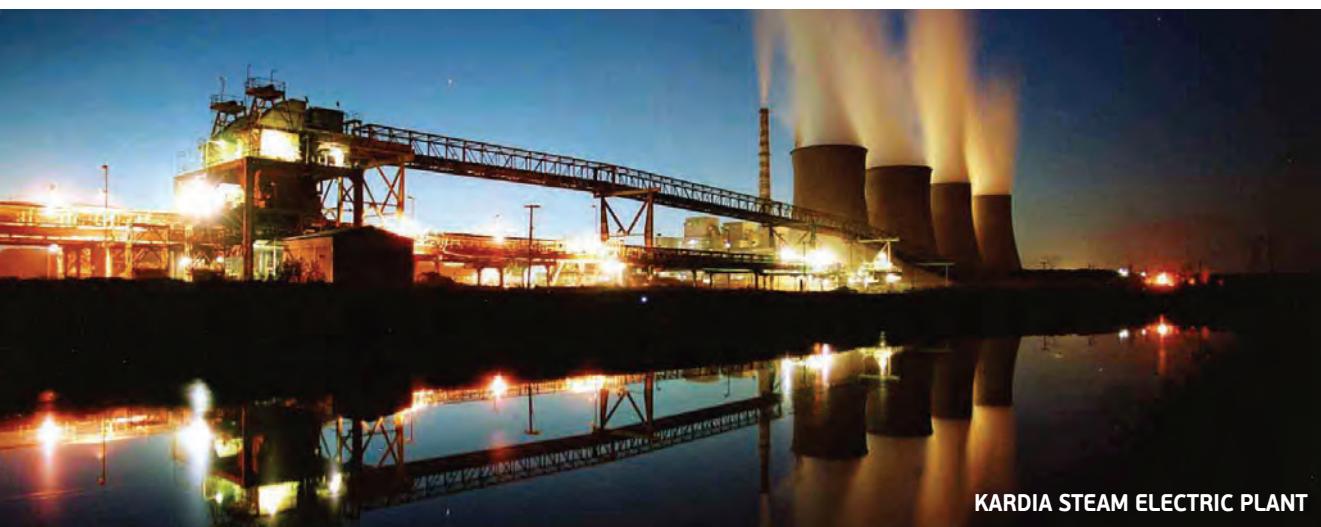
More information on how conflict of interest are avoided is included in the 2016 Annual Report.

#### **3.8 AUDITS**

PPC has an Internal Audit Department that reports directly to the Board of Directors and is supervised by the Audit Committee. The Internal Audit Department's mission is to ensure that all PPC business risks are audited in the same way.

In 2016, in exercising its powers to monitor the correct running of the Internal Audit Department, the Audit Committee held 8 meetings with staff of the Internal Audit Department. The agenda for those meetings focused on briefing the Audit Committee about the findings and results of audits the Internal Audit Department had carried out, and issues relevant to how the Department operates.

The Internal Audit Department's annual audit schedule is drawn up by identifying, updating and assessing PPC's operational risks and taking



into account the Corporation's strategic goals, as well as all developments relevant to the environment in which it operates. The Audit Committee then submits the audit schedule to the Board of Directors for approval.

In 2016, 25 fresh audits were carried out on various departments of the PPC, involving compliance checks, as well as administrative, financial and special forms of audits, while 19 audited which had been launched in 2015 continued. Currently 22 new audits launched in 2016 are under way.

### **3.9 RISK AND CRISIS MANAGEMENT**

#### **Material aspect: Risk/crisis management**

Risk/crisis management was primarily selected as a material aspect by company Management, employees, customers, associates and suppliers, the State, regulatory authorities and public agencies, and by non-governmental/non-profit organisations. PPC's Management has made concerted efforts to recognise, prevent and manage risks and crises in good time. PPC's Board of Directors then examines the key risks PPC faces and refers to them in detail in the Board of Directors' Annual Financial Report.

The Corporation has defined 'risk' as a group of uncertain and unpredictable situations that could affect its overall operations, its business transactions, its financial performance or operating results, as well as implementation of its strategy and achievement of its objectives. The 2016 Annual reports sets out the key risks identified, including risks associated with macroeconomic conditions in Greece (the imposition of capital controls), risks associated with providing public utility services, with potential strikes, and with the acquisition and renewals of permits, the availability of lignite reserves, information system hacking, and laws and regulations pertaining to employee health and safety, among others. The 2016 Annual Report also lists risks which have been identified related to climate change and to CO<sub>2</sub> trading rights, hydrological conditions, laws and regulations concerning the environment, and natural disasters.

Although the Corporation's organisational chart states that there should be a Risk Management Department, it has not yet been staffed because of the lack of suitable personnel, which is coupled with restrictions on the Corporation's ability to hire new recruits. So far management executives have been involved on a case-by-case basis in the process of risk identification and initial assessment. This has allowed them to make recommendations to the BoD, and has resulted in specific risk management procedures and policies being developed and approved.

The Energy Management Department has drawn up procedures to manage the wide range of risks associated with the performance of its mission. Those procedures seek to address:

- Operational risks related to faithful observance of procedures, how to avoid mistakes, inspection and verification of steps taken, data security and business continuity.

### 3. PPC CORPORATE PROFILE



WESTERN MACEDONIA LIGNITE CENTRE - SOUTH FIELD MINE - PTOLEMAIDA

- Business risks associated with taking clear-cut, transparent, optimal business decisions at the right time.
- Cash flow risks, in cooperation with the Corporation's Financial Division, to ensure that financial obligations arising from day-to-day dealings can be met.
- Exchange rate risks arising from the international nature of the transactions the Energy Management Department engages in.
- Regulatory risks arising from the ever-changing nature of the energy market which is constantly developing.
- Counterparty Risks associated with the insolvency of counterparties the PPC does business with.

PPC has purchased a cutting-edge Energy Trading and Risk Management (ETRM) system. A significant part of that system has already been installed. This new system is not only expected to support the Corporation's business operations but also to help manage the risks referred to.

PPC has also developed and implemented a process to help it identify Sustainable Development Materiality Aspects, to allow it to identify and prioritise its business impacts/risks based on the triptych of principles fundamental to Corporate Social Responsibility (economy, society and environment). This process is analysed in more detail in section 4.3.

#### Business Continuity

In that general context, to ensure that PPC can continue to offer customers top quality services without interruption, the Corporation developed a system to identify and respond in time to situations which affect or could affect the business continuity of critical functions, like the Mines at the Megalopolis Lignite Centre.

The Business Continuity Management System run by the Megalopolis Lignite Centre Department received ISO 22301:2012 certification from an

independent certification body in 2016. By rolling out this system to the mines, it will be able to provide a direct, effective response to emergencies and unexpected developments, to take the right steps in each case to enable the Steam Electric Plants in the area to be supplied with fuel without interruption.

The Megalopolis Lignite Centre Department's Business Continuity Plan includes continuous, systematic identification of risks and threats, and assessment of their impact, thereby enabling it to plan and test in advance how to best react and recover from them.

The following tools are used in this regard:

- Business impact analyses,
- Risk Assessment, and
- Business continuity plans,

which cover all critical operations at the Megalopolis Lignite Centre Department. These are reviewed and updated at regular intervals to ensure that they accurately reflect the current situation.

Business Continuity Plans are regularly tested through drills to ensure that they can be successfully used in emergencies and that the Lignite Centre Department and employees understand how they are to be implemented, and that they also fully comprehend their roles and responsibilities.

### **3.10 ENERGY MARKET OPERATIONS AND PUBLIC POLICY**

#### **Material aspects: Regulatory issues, managing new energy market issues and involvement in public policy in Greece on energy issues**

Management and company competitors have recognised PPC's involvement in managing regulatory issues as a material aspect of its operations. Further market deregulation has created uncertainties and challenges for PPC, and the Corporation considers that the need to generate results when it comes to regulatory issues will intensify.

Management and employees at PPC identify managing new energy market conditions as a material aspect. This is a new addition to the existing list of material aspects in 2016. Rapid developments in the energy market in Greece, coupled with the country's commitments under the MoUs which are bringing about changes in Greece's energy landscape, have made Management and employees more interested in the role the Corporation will play in the emerging energy and economic environment. PPC's goal continues to be to ensure a competitive environment, where the key concern is benefit for customers.

PPC's involvement in Greece's public policy on energy issues is recognised as a material aspect by the Corporation's Management team and employees, and by the State, regulatory authorities and public agencies. PPC is actively involved in shaping public policy, expressing its views on a range of issues relating to its operation, and more generally the modernisation of the domestic electricity market.

### 3. PPC CORPORATE PROFILE

Greece's electricity sector is regulated in accordance with the European regulatory framework which has been transposed into Greek law and consists of various laws, Presidential Decrees, Ministerial Decisions and decisions of the Regulatory Authority for Energy that have the force of law.

The regulatory framework affects PPC's operations and its dealings with competitors and customers, and the decisions it takes about planned investments in technology, services and infrastructure. PPC responds to all regulatory issues that arise, and to achieve this it:

- collaborates with the Regulatory Authority for Energy and the State (Ministry of the Environment and Energy) to shape an investment-friendly policy that bolsters fair competition. PPC is also actively involved in nationwide consultations on these matters.
- puts forward its views in debates on how the new European regulatory framework should be transposed into national law, and about competition law.
- strives to ensure that the RAE treats it impartially, to remove regulatory obligations for those services where adequate competition has developed.
- presents its views to national and European regulatory authorities, agencies and judicial authorities about legal and competition issues.
- ensures that regulatory obligations are adjusted appropriately, bearing the Corporation's interests in mind.
- complies with regulatory obligations and participates in shaping the national and European regulatory framework by advancing views on regulatory issues in both national and European consultation processes.

Although from an organisational perspective PPC lacks a Regulatory Affairs Department, the relevant departments within the Corporation do work in close partnership via working groups that bring together suitable individuals to disseminate information and promote the topic, while all the





time avoiding risks that could arise from critical issues not being spotted and dealt with in time.

As Greece's main electricity supplier, PPC is involved in shaping and promoting the country's public policy on energy, publishing position papers setting out Management speeches and announcements, press releases, sending top executives to international and national conferences, engaging in discussions with agencies, attending events and participating in public consultations. In 2016 executives from PPC took part in more than 25 public consultations on issues which had a direct or indirect impact on the Corporation.

Over recent years PPC has repeatedly reiterated its arguments about the need to rationalise the electricity market, to ensure it operates competitively in a truly deregulated environment that benefits consumers.

PPC has argued for the need to set up a modern electricity market that:

- operates in a transparent, predictable manner to attract new investments when they are needed.
- bolsters competitiveness for the benefit of consumers and the national economy and
- effectively contributes to secure energy supplies for Greece over the long term.

Taking into account Greece's special features, the Greek electricity market needs to be transformed into a target model, i.e. the common European model, by making structural reforms. In any event, statutory changes that promote the creation of an internal electricity market are a requirement deriving from EU law.

### 3. PPC CORPORATE PROFILE

To more effectively manage new market conditions, PPC took these and other steps in 2016:

- It reminded the Ministry of the Environment and Energy of outstanding regulatory issues: adjustment in the unit prices for public utility services and the fact that the recovery rate for money owed to PPC was below target for the years 2012 to 2015.
- It assisted the Ministry of the Environment and Energy prepare a ministerial decision on virtual net metering.
- It performed its obligations under Regulation (EU) No 1227/2011 on wholesale energy market integrity and transparency (the REMIT regulation).
- In partnership with the Aristotle University of Thessaloniki, it approved the Electricity Purchasing Section's involvement in the European programme entitled 'Research - Create - Innovative' which seeks to improve load forecasting software.

#### 3.11 NEW MARKETS AND INVESTMENTS

##### Material aspect: New markets and investments

Both PPC and stakeholders have identified and agreed that key material aspects for the Corporation's sustainable development are the investments made and expansion into new markets. Generally speaking, PPC's strategic goal (which it is working intensively on) is to offset domestic losses due to the market liberalisation measures imposed on it, by expanding into fresh markets and capitalising on business partnerships.

In 2016 the PPC Group invested € 868 million in upgrading and modernising its infrastructure, to achieve its key priority of improving its environmental footprint. In the renewables sector, the subsidiary PPC Renewables has opened stations with a 153 MW capacity in total (accounting for around 2.9% of all RES in Greece) and in 2016 it generated around 273 GWH (around 2.7% of the country's total production). A major investment plan is also currently under way to significantly bolster PPC's position in the market for all types of renewable energy sources. More information can be found in section 6.4.

To assist it in expanding its operations, PPC has set up a wholly owned electricity supply company in Turkey, which since 2014 has been involved in the Turkish wholesale market and in cross-border trade. Another subsidiary has been set up in Bulgaria (in which it has an 85% stake) in partnership with the Swiss firm ALPIQ (which holds the remaining stake). The subsidiary has been operating on Bulgaria's wholesale market and in

cross-border trade since the end of 2015. These companies will be used as valuable building blocks towards further expansion into additional markets. With that in mind, in September 2016 PPC's Board of Directors set up a subsidiary in Albania (PPC Albania) to trade electricity and provide energy services while also making energy investments in Albania and the Western Balkans in general.

Greece's geographical location, its good relations with neighbouring countries -save for few exceptions- and the technical and construction capabilities of Greek businesses are major advantages that simply need to be utilised as much as possible. PPC seeks to play a key role; to become a vehicle for expansion into neighbouring markets.

For those very reasons, continuous efforts are being made to identify potential new business activities in Greece and abroad, including fields which have traditionally been outside PPC's core operations. Any and all opportunities for the company to expand and grow its operations, whether by expressing interesting in and participating in projects expected to be built in the wider SE European region, or by engaging in regular discussions with other interest businesses, are examined diligently.

## **3.12 KEY FINANCIAL INFORMATION**

### **Material aspect: Financial position / performance**

PPC's financial performance was indicated as a material aspect primarily by Management, shareholders and investors, employees and competitors. It is a key priority for Management. The Corporation's financial data is available in the 2016 Annual Report. In addition to the value generated, it is also important to identify the value allocated to society and stakeholders.

In 2016, revenues stood at € 5,155.2 million down from € 5,675.4 million in 2015 by some € 520.2 million (representing a -9.2% drop). EBITDA stood at € 866.8 million in 2016 compared to € 591.7 million in 2015, up 46.5%, while net profits stood at € 166.4 million compared to losses of € 152.5 million in 2015. The carried balance of grants on 31.12.2016 was € 263.9 million.

Total PPC investments stood at € 738.8 million and were allocated as follows: € 225.7 million to the Mines Division, € 324.1 million on Generation, € 2.8 million on Supply, € 3.6 million in support operations, € 0.6 million on Management Divisions and € 182 million on the Distribution Network.

All PPC's published financial data is available in the 2016 Annual Report.

### 3. ΠΑΡΟΥΣΙΑΣΗ ΔΕΗ

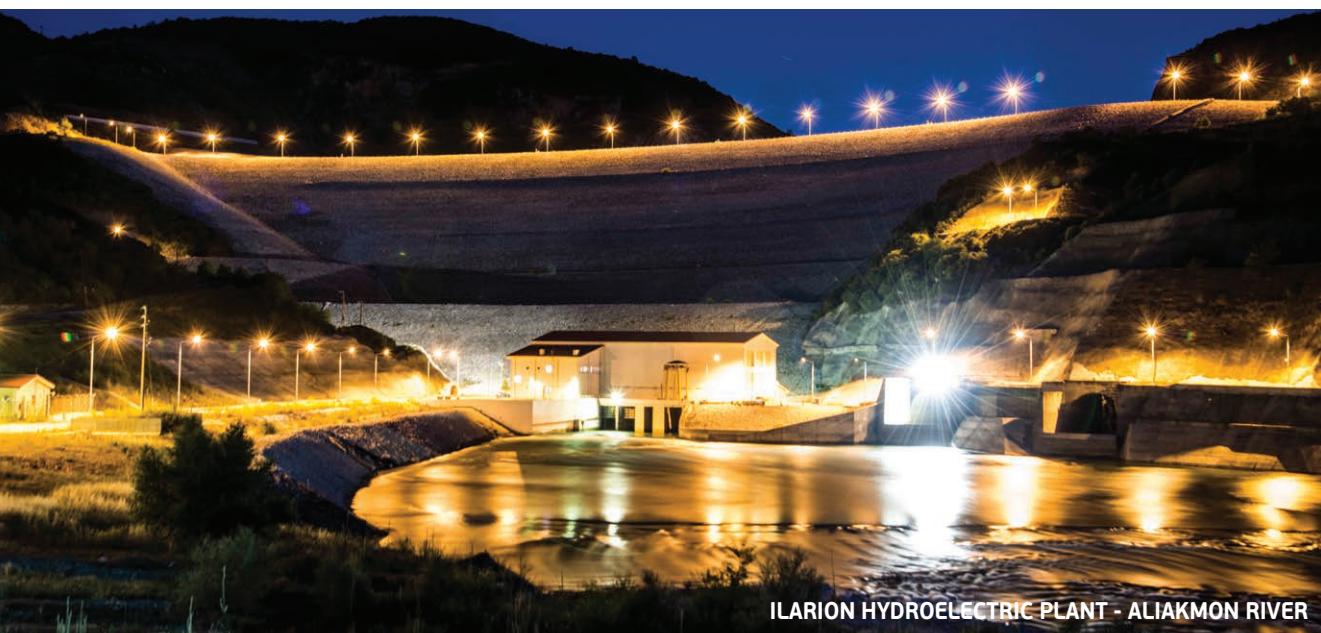
Financial value and social product (in € '000)	2014	2015	2016
Revenues	5,796,750	5,675,402	5,155,250
Financial income	89,952	107,699	215,055
Direct financial value generated	5,886,702	5,783,101	5,370,305
Salaries and employee benefits including employer social security contributions *	589,467	565,940	557,936
Financial expenses	251,434	240,992	220,704
Income tax, other taxes, duties and provision for surtaxes	51,462	55,469	42,970
Donations and sponsorship	1,249	928	853
Operating cost balance	4,942,318	5,127,496	4,342,495
Financial value allocated	5,835,930	5,990,825	5,164,958

\* Payrolling costs incorporated in tangible assets are not included.

#### Steps taken to increase liquidity

In 2016 PPC implemented a comprehensive set of scalable, mutually complementary actions to improve debt collection rates. The main steps it took in this regard were as follows:

- Instructions were issued to HEDNO to cut off connections and re-check those previously cut off, and disconnect orders effective immediately were issued to debtors who owed large sums.
- Flexible debt repayment plans were put in place offering customers very favourable terms, so that they could start to repay their bills in instalments.
- Targeted legal measures taken against debtors who owed large amounts or had been in debt for a long time.





ALIVERI STEAM ELECTRIC PLANT NATURAL GAS UNIT V

- Soft calls were also made to debtors if at least one bill was overdue.
- Steps were also taken to get public agencies to settle their debts.
- An extensive array of incentives was offered to household and business customers, including 15% off for household customers, professionals and businesses from 1.7.2016 onwards if they were consistent in paying their bills or any instalment-based repayment plans.
- Preliminary contacts were made and legal steps taken by law firms; the initial pilot scheme related to customers in the Prefecture of Attica who owed more than € 3,000.
- Advertising campaigns were run to publicise the debt repayment plans and the reward (loyalty) scheme.

## 4. SUSTAINABLE DEVELOPMENT



The purpose of this section is to concisely present the PPC's approach to sustainable development. Sustainable development is bound up with how the Corporation operates, its activities, its financial performance, as well as its interaction with the environment and society. All sections of the Report cover the different aspects of sustainable development at PPC, and provide more information on each individual topic.

### 4.1 MANAGEMENT APPROACH

Although PPC no longer enjoys the monopoly it used to as the only fully vertically-integrated electricity generation company in Greece, it continues to monitor the needs of the entire country as well as key issues, such as electricity demand, across its entire range of operations to ensure a secure energy supply for the mainland and the Greek islands. PPC is the Supplier of Last Resort and the Universal Service Supplier, and for that reason is poised to deal with System and Network problems that arise, and in how the electricity market overall operates.

The Corporation ensures that:

- Its staff are regularly briefed and trained in how to use all technological equipment that will help them perform their task better.
- Consumers receive advice and information about best practices and market trends about how to make energy savings.
- It provides considerable input to Greece's legislature, regulatory

authorities and executive to ensure that the statutory framework here complies with the EU's targets so that Greece can become an attractive destination for the growth of economic activities in the wider SE Europe region.

- Synergies and partnerships are forged to enable PPC to expand its operations beyond Greece's borders.
- Bilateral agreements are signed on a monthly or annual basis with Europe's top energy companies to import electricity to Greece, to safeguard adequate power supply for the domestic system.
- The PPC's available thermal and hydroelectric units are continuously monitored to ensure that they operate reliably, without interruption, and to ensure their optimal performance every day.
- Installed capacity has been increased by building new cutting-edge power plants (Megalopolis V, Ptolemaida V, Meliti II) which will meet modern society's needs.
- The existing power transmission system is being improved on the mainland, and interconnections between islands are currently under way; all this will ensure that the entire territory of Greece can enjoy the uninterrupted supply of electricity.

Working with the Strategy Department, the Energy Management Department monitors the energy market and emerging trends, and both are responsible for preparing Corporation strategy and policy to manage electricity and optimise PPC's overall portfolio within the context of the wholesale electricity market. This approach allows the Corporation to monitor short-term and medium to long-term energy demand, schedule production, energy imports and the purchase of fuel, to respond to market needs in good time. Moreover PPC offers a night tariff as a tool for managing demand.

### Sustainable Development Policy

Management is interested in strengthening its commitment to sustainability and in April 2014 released PPC's Sustainable Development Policy which was also sent to all the Corporation's employees. The policy is available to all PPC stakeholders on the Corporation's website ([www.dei.gr](http://www.dei.gr)).

### Business Model

PPC's business model seeks to generate value for its stakeholders. PPC invests in its employees and infrastructure, as well as in developing new technologies and services. Stakeholder engagement using the means available to the Corporation at both national and local level enables PPC to understand the impact of our business activities and improve

## 4. SUSTAINABLE DEVELOPMENT

our performance by taking into account the advice, concerns, needs and recommendations of all parties affected by and affecting PPC. PPC ensures that it offers suitable conditions within which its employees can grow, specialise, be healthy and safe; after all it is they who contribute to a growth in its operations. The Corporation supplies electricity nationwide, contributes to the growth of RES and to reaching national targets, and actively supports society.



## Challenges and strategic priorities

PPC's strategic guidelines, which are the basis of everything it does, can be summarised in the following 3 pillars:

- Flexibility - adaptability
- Expansion - Diversification of activities
- Business partnerships

PPC's objective for the years to come is to become a bigger, stronger company, despite the restrictions imposed on it, and the smaller share of the electricity market it now holds.

PPC's policies which reflect trends at EU level seek to:

- Implement the Paris Climate Change Accord, and above all to promote decarbonisation of the economy.
- Promote European Energy Integration via a Single European Market in Energy as well as regional markets, which enjoy full deregulation.
- Reduce energy dependence, promote the security of supply and energy savings.
- Bolster the role of consumers, transforming them from mere recipients of electricity products into active market participants, so-called "prosumers" through smart networks and distributed generation.

To meet the challenges posed, in 2016 PPC implemented a series of measures. These related to:

- planning and rapidly implementing all measures needed to sell off a 24% stake in IPTO S.A. To ensure the sale of the 24% stake was a success, much effort entailing major risks was needed; the aim was to prevent the entire stake in IPTO S.A. being sold off and the state losing all control over it, which is what the agreement with the creditors originally specified.
- Debt repayment plans for monies owed to the Corporation over 36 instalments, plus a 15% discount on bills offered to regular payers. This combination of measures improved the collection rate of current bills and helped recover a significant portion of overdue debts, which is shown in the results for the year where a large drop in bad debt can be seen.
- 2-year agreements for the sale of electricity to almost all industrial enterprises which use high voltage power, providing the very best in support to Greek industries in their current difficult conditions.
- Systematic endeavours to recoup monies owed by the State. Particularly positive results were achieved in relation to central government agencies, and noteworthy progress was also made in relation to other agencies.

## 4. SUSTAINABLE DEVELOPMENT

- Total payments of € 8.1 billion were made as part of the Corporation's operations and development programme, ensuring the best possible cash management to enable the market, in which PPC is the main source of financing, to operate smoothly. Despite the liquidity squeeze faced by Greek banks, PPC secured € 65 million from the National Bank of Greece and € 80 million from the European Investment Bank.
- Uninterrupted, continuous supply of electricity to the non-interconnected islands, plus a major contribution to addressing the energy crisis in the December - January period, with the mines responding satisfactorily to increased, unscheduled demand.
- Development of a new bill paying service available via PPC's website and POS devices installed at all branches, coupled with intensification of checks in partnership with the relevant Ministry to ensure that the agricultural tariff was being properly assigned to customers.
- Establishment and staffing of a PPC branch office in Brussels to promote the Corporation to the EU, thereby ensuring that PPC can play a clearer role in relation to Union institutions and agencies. 2016 also saw a major success in the European Parliament, where thanks to the persistent efforts of Greek MEPs support for Greece's views on lignite production was secured by 374 votes to 299. Another noteworthy achievement was an alliance with the delegates from other countries like Poland.
- Relations were forged and a framework of collaboration put in place with cutting-edge Chinese companies to implement specific investment plans and business partnerships across the entire electricity sector in both Greece and abroad.
- A subsidiary was set up in Tirana to operate in the Western Balkans. PPC Albania has already drawn up its business plan, and will pursue a leadership role in the Balkan regional market, through specific investments and its business activities.
- A new staff assessment system has been devised to replace the previous one which dates back to 1966. The aim is to improve how PPC utilises its staff and enables them to grow, to change our corporate culture into that of a competitive, outward looking, customer-focused enterprise, and to also improve our administrative operations.
- Highlighting issues relating to electricity supplies to non-interconnected islands over the medium to long term in the context of EU policies, for various agencies and committees such as the Hellenic Parliament's committee responsible for these matters.

To enable PPC to complete its corporate transformation in 2017 so that it more accurately reflects the new situation in the Greek energy market, our key priorities are to:

- Prepare and start implementing a comprehensive Strategic Plan. A respected, world class consultant is assisting with this.

- Improve administrative operations across the board. The key step here is to reorganise the Corporation to ensure it has a flexible, efficient structure.
- Improve HRM to allow our staff to grow and develop, and us to utilise them to their full potential.
- Improve customer relations through targeted actions, business initiatives and products based on a comprehensive marketing plan.
- Add to our staff through targeted recruitment drives so that all current needs are met, to ensure PPC is synonymous with modern skills and technology, and to create the conditions for existing precious know-how and skills to be transferred by company staff to a new generation of employees.

## 4.2 GOVERNANCE FOR SUSTAINABLE DEVELOPMENT ISSUES

The PPC Board of Directors has appointed 2 of its members to be in charge of managing sustainable development issues. In addition, it has set up the Corporate Social Responsibility Section which is part of the Strategy Department. Its mission is to establish, develop and implement a Corporate Social Responsibility strategy that aims to meet the needs of stakeholders in a balanced manner, while highlighting the actions and practices that show the Corporation's social face.

The fact that the Corporate Social Responsibility Section was placed under the Strategy Department and that BoD members have been assigned



## 4. SUSTAINABLE DEVELOPMENT

the task of supervising the Corporate Social Responsibility Section and submitting the annual Sustainability Report to the BoD, demonstrate that the Corporation takes Corporate Social Responsibility seriously.

### 4.3 MATERIALITY ANALYSIS

PPC monitors international trends on how sustainable development is being managed and strives to improve its own performance, to ensure greater transparency in procedures and to ensure accountability. With that in mind, given that the heart of revisions to the GRI Guidelines is that each company must identify and evaluate its material aspects, in December 2016 the Corporation's divisions, Legal Services and the Strategy Department carried out a sustainability materiality analysis for the third time.

During the meetings held, the sustainability issues which had been graded in 2011 and 2013 were re-scored and new issues proposed at various meetings were added, making the existing list of materiality aspects longer.

The objective of this exercise was to engage in real dialogue and identify the important aspects that affect PPC and its stakeholders and also to increase the degree of transparency and accountability by publishing the results of this process.

#### Material aspects identified by Management

PPC has developed a sustainability materiality analysis process as part of its risk identification and assessment process. However, here it does not identify operational or financial risks, but sustainability risks / impacts.

The process was run for the third time in 2016. The first was in 2011 and the second in 2013. All Divisions, the heads of independent departments, the Strategy Department and CSR officer were all involved. All participants were asked to assess sustainable development issues arising from PPC operations, their impact and the likelihood of occurrence, taking into account existing practices (strategy, policies, procedures, measures and actions) to prevent, control and suppress them. The time period used for the purpose of identifying, quantifying and evaluating the sustainability risks / impacts was the next 18 to 24 month period.

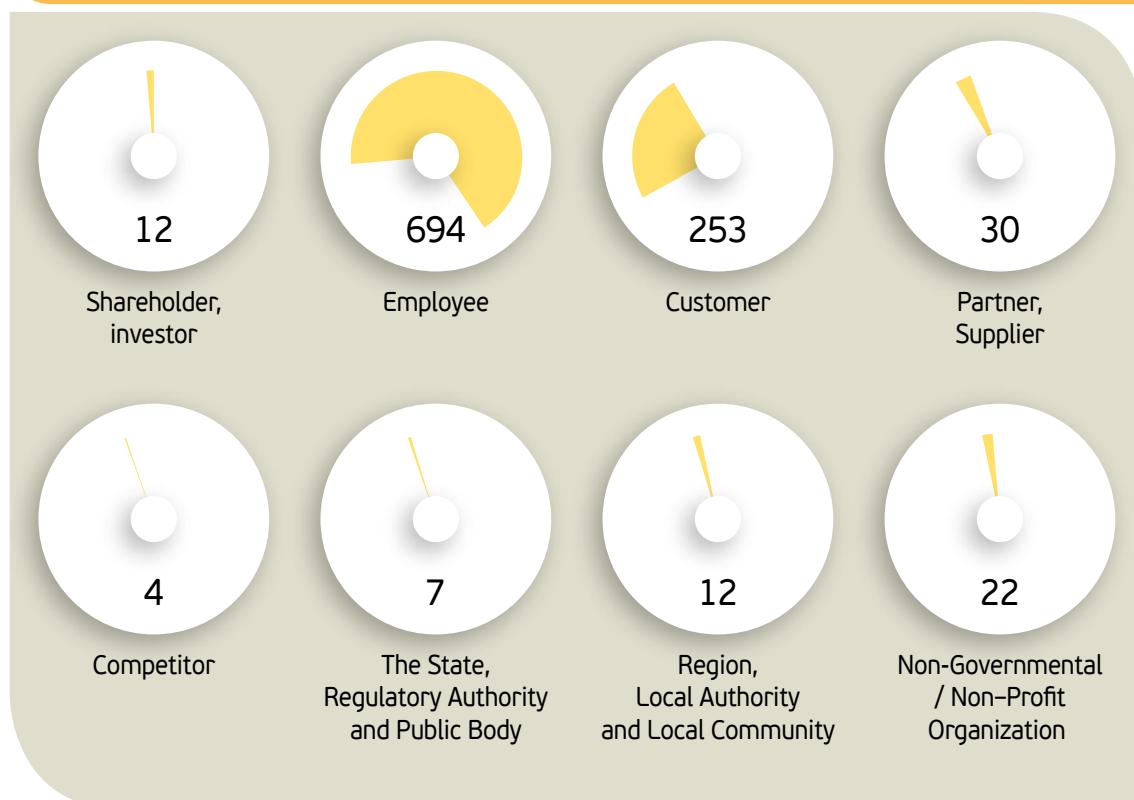
These were then grouped together to allow them to be more effectively presented and managed. The grouped issues are presented in materiality heatmaps which show the estimated impacts/risks together with the likelihood of them occurring.

The heatmaps, the findings and conclusions derived from them and the dynamic tool used to formulate and process the results of this process were then evaluated by the Corporation's Management team to devise policies and take decisions.

#### Material aspects identified by stakeholders

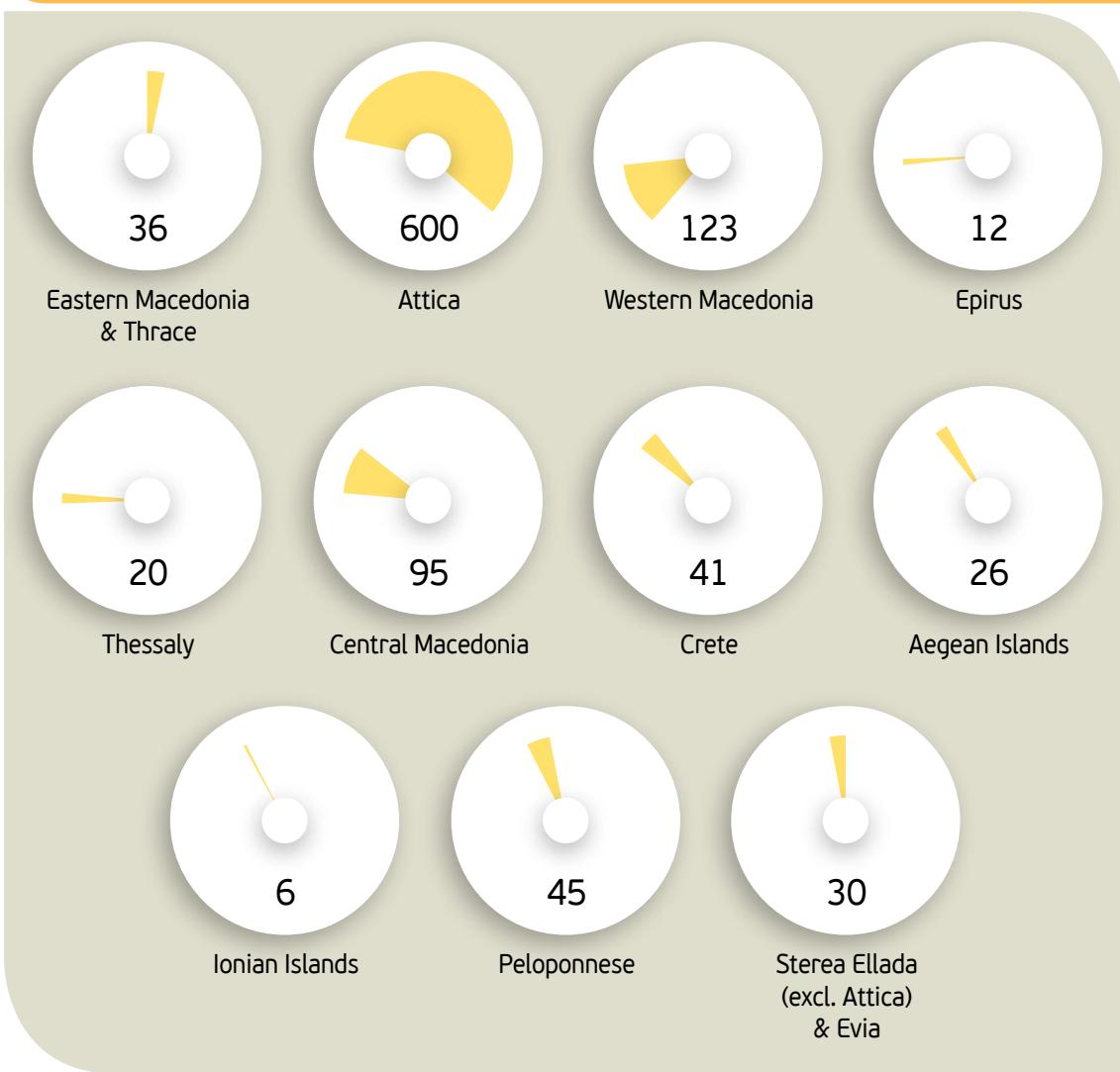
PPC acknowledges that its business operations and decision affect and are affected by different groups of stakeholders. The CSR Section contacted the PPC's stakeholders using an online questionnaire, asking them to evaluate / score what were in their opinion the PPC's sustainability material aspects. After a period of around 1 month when the questionnaire was open, PPC had collected 1,034 responses from all stakeholder groups from all regions of Greece.

**PPC stakeholders by group who responded to the materiality questionnaire**



## 4. SUSTAINABLE DEVELOPMENT

### Geographical origins of the PPC stakeholders who responded to the materiality questionnaire



### The material aspects heatmap

The results of the PPC in-house process and the results generated by processing stakeholder questionnaires were then presented in a single material aspects heatmap. The horizontal axis of this heatmap shows PPC Management's views (impact of each aspect x the corresponding likelihood of it occurring) while the vertical axis shows the views of stakeholders.

The conclusions generated by this analysis of the material aspects for PPC's sustainable development are summarised below:

- A common point of interest was PPC's financial position and performance, which was flagged up by both Management and stakeholders; this is an issue that is considered to be vital for the Corporation's financial -and therefore operational- viability.

- Employee health and safety, staff training, customer satisfaction and the Corporation's energy efficiency were key issues for stakeholders. Likewise, the sustainable management of raw materials, waste, climate change and GHGs, the promotion of renewable energy sources and the rehabilitation of contaminated land are highly material aspects for stakeholders, revealing their interest in the environmental footprint of PPC's actions and operations.
- One new addition to the materiality list relates to management of the new conditions in the energy market, reflecting the Corporation's efforts to play an active role in developments in the national and international energy market.

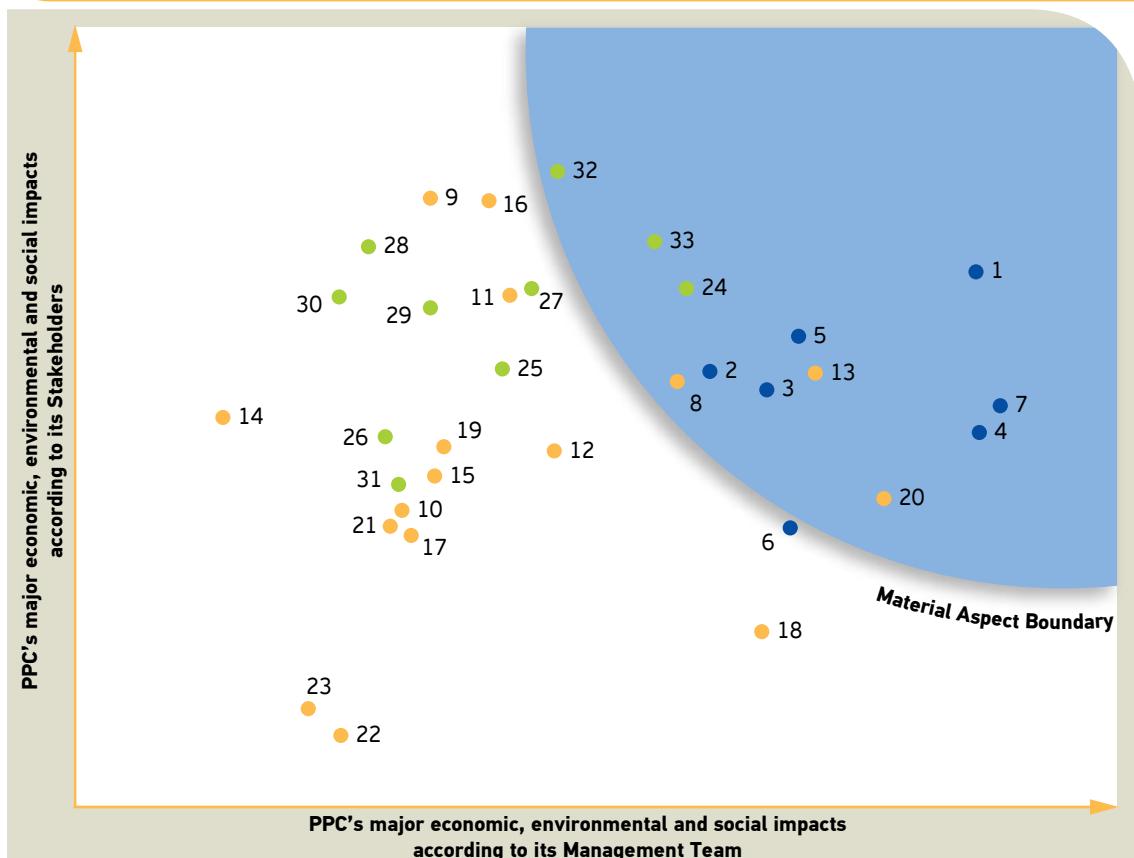
PPC is making concerted efforts to continuously improve how it organises and monitors sustainable development issues. The results of this materiality analysis are expected to be used to take important decisions about PPC's future and about the general outline of its Corporate Social Responsibility strategy.



AGIOS DIMITRIOS STEAM ELECTRIC PLANT

## 4. SUSTAINABLE DEVELOPMENT

### Material aspects relevant to PPC's sustainable development



#### Economy

1. Corporation's financial position / performance
2. Procurement and logistics management
3. New markets and investments
4. Regulatory issues
5. Risk/crisis management
6. Managing relationships with subsidiaries
7. Managing new energy market conditions

#### Society

8. Corporate governance, ethics and values
9. Employee and third party health and safety
10. Job security
11. Staff Training
12. Work advancement / job satisfaction
13. Recruitment
14. Equality in the workplace
15. Employee / management relations
16. Customer Satisfaction / products and service assurance
17. Shaping the public's consumer behaviour
18. Extroversion / PR
19. Relationship / dialogue with local communities
20. Engagement in public policy in Greece on energy issues
21. Contractor / supplier management
22. Sponsorship
23. Volunteerism among PPC staff

#### Environment

24. Climate change and greenhouse gas / particle emissions
25. Dust
26. Noise
27. Waste
28. Raw materials / fuel / water
29. Ecosystems / biodiversity
30. Rehabilitation of degraded land
31. Visual / aesthetic nuisance
32. Energy efficiency / new technologies
33. Promotion of renewable energy sources

<b>Key material aspects for Management and stakeholders</b>	<b>Related GRI G4 issue</b>	<b>Demarcation (inside/outside corporation)</b>
1. Corporation's financial position / performance	Economic performance	This is primarily an internal issue impacting on the Corporation's operations, but could affect shareholders, employees, suppliers and customers.
2. Procurement and logistics management	Supplier work practices evaluation	This is primarily an external issue, with direct impacts on the Corporation's suppliers and contractors.
3. New markets and investments	-	This is primarily an internal issue impacting on the Corporation's operations, but could affect shareholders and employees.
4. Regulatory issues	-	This is an internal issue, but depends on how the Corporation manages regulatory issues, but is also directly affected by decisions of the State, the regulatory authorities and public agencies.
5. Risk/crisis management	-	This is primarily an internal issue impacting on the Corporation's operations, but could affect shareholders, employees, suppliers, customers and local communities.
7. Managing new energy market conditions	-	This is primarily an internal issue impacting on the Corporation's operations, but could affect shareholders, employees and other stakeholders.
8. Corporate governance, ethics and values		This is primarily an internal issue impacting on the Corporation's operations, employees and associates (contractors and subcontractors).
13. Recruitment	Employment	This is primarily an internal issue impacting on employees, and consequently on the Corporation's operations.
20. Engagement in public policy in Greece on energy issues	Public policy	This is an internal issue, since it depends on the involvement of the Corporation's executives with public policy, but is directly affected by the degree to which the State, the regulatory authorities and public agencies want the Corporation to engage in shaping Greece's public policy.
24. Climate change and greenhouse gas/ particle emissions	Emissions	This is an internal issue to the extent that major expenditure is required to meet the targets set for air pollution, to change the energy mix required to generate electricity and to procure the necessary quantity of emission trading rights. But it is also an external issue since the impacts of air pollution and climate change affect all the Corporation's stakeholders.
32. Energy efficiency / new technologies	System efficiency	This is primarily an internal issue since it directly impacts on the Corporation's financials (through the purchase of fuels, procurement of emission trading rights, etc.), but is also external since improving energy efficiency helps reduce air pollution and curtail GHG emissions that lead to climate change.
33. Promotion of renewable energy sources	-	This is an internal issue since it affects the Corporation's operations but is also an external issue since promoting RES helps combat climate change and, by extension, affects all the Corporation's stakeholders.

## 4. SUSTAINABLE DEVELOPMENT

### 4.4 STAKEHOLDERS

It is particularly important for PPC to communicate and cooperate with its stakeholders. PPC has identified its stakeholder groups via a series of internal consultations, debates and working meetings between the PPC Management team and its executives. The main stakeholder groups PPC recognises are its employees, its customers, the State, the Regulatory Authorities and Public Bodies, shareholders and investors, non-governmental / non-profit organisations, regions, local authorities, local communities, as well as our partners, suppliers and competitors.

Just as it does every year, the Corporation continued to communicate at both national and local level with all stakeholders using means available to it. Stakeholder engagement is an integral part of PPC's daily work enabling it to understand the impact of our business activities and improve our performance by taking into account the advice, concerns, needs and recommendations of all parties affected by and affecting PPC. The fact that stakeholders were involved for the first time in a truly organised manner in the Corporation's materiality analysis process demonstrates in practical terms PPC's commitment to real stakeholder engagement. PPC recognises the major benefits for all sides that arise from the real communication and cooperation with various stakeholder groups.

#### Employees

##### 5 top material aspects for employees

1. Customer Satisfaction / products and service assurance
2. Financial position / performance
3. Employee and third party health and safety
4. Staff Training
5. Energy efficiency / new technologies

*Source: PPC Materiality Analysis, 2016-2017..*

PPC Management maintains direct contact with its employees. Employees are represented through their trade unions, through their representatives on the Board of Directors and at General Meetings of Shareholders, and they also participate in level one and two boards and committees PPC has set up. Responding to the need for keep employees properly briefed, Management is in direct contact with their trade unions to keep them briefed about changes in PPC's structure. Just some of the issues Management addresses through a series of actions and procedures are labour, health and safety at work, training and benefits. More details are provided in Section 5 of this Report.

## Customers

### 5 top material aspects for customers

1. Customer Satisfaction / products and service assurance
2. Energy efficiency / new technologies
3. Waste
4. Promotion of renewable energy sources
5. Raw materials / fuel / water

*Source: PPC Materiality Analysis, 2016-2017.*

The Supply Division is in constant contact with our customers through our branches, telephone lines, our website, customer satisfaction surveys, information material, direct mailing campaigns involving selected customers, and so on. More information can be found in Section 7 of this Report.

## The State, Regulatory Authorities and Public Bodies

### 5 top material aspects for the State, Regulatory Authorities and Public Bodies

1. Energy efficiency / new technologies
2. Promotion of renewable energy sources
3. Waste
4. Raw materials / fuel / water
5. Employee and third party health and safety

*Source: PPC Materiality Analysis, 2016-2017.*

PPC is in contact with the State, Regulatory Authorities and Public Bodies on a number of energy-related issues. Regulatory Affairs, which is part of the Corporation's Strategy Department, as well as the Power Transactions Department from the Supply Division are the sections primarily responsible for preparing position papers and representing PPC on regulatory framework issues of concern to the Corporation.

PPC participates in committees and engages in consultations at both national and European level on environmental and market deregulation issues and about how the energy market operates. The main PPC positions and activities on public policy issues are described in Section 3.10 of this Report.

## 4. SUSTAINABLE DEVELOPMENT

### Shareholders and Investors

#### 5 top material aspects for shareholders and Investors

1. Energy efficiency / new technologies
2. Financial position / performance
3. Waste
4. Raw materials / fuel / water
5. Rehabilitation of degraded land

*Source: PPC Materiality Analysis, 2016-2017.*

The PPC Investor Relations and Financing Department coordinates communication with shareholders and investors. The official PPC website contains information about "Investor Relations" and all announcements and the information required by the applicable legislation, as well as information frequently requested by a particular group of stakeholders. In addition, meetings are held with existing shareholders and potential investors to brief them about the change in the Corporation's financial results or simply present the results (Q1, Q2, Q3 and annual financial results), conference calls are held with analysts, and there are also roadshows within Greece and abroad. Shareholder and investor interest is focused on PPC performance, which is presented in more detail in the 2016 Annual Report and in this Report, on the Corporation's prospects, on developments in the regulatory framework applicable to the electricity market, and on any issue which affects or could affect PPC's operations and financial results in the future.



### Non-Governmental / Non-Profit Organisations

#### **5 top material aspects for Non-Governmental / Non-Profit Organisations**

1. Employee and third party health and safety
2. Climate change and greenhouse gas/ particle emissions
3. Waste
4. Ecosystems / biodiversity
5. Rehabilitation of degraded land

*Source: PPC Materiality Analysis, 2016-2017.*

Non-governmental/non-profit organisations mainly make inquiries to the Corporation about our environmental performance and request support for their activities. The steps we take to manage our environmental footprint are discussed in Section 6 of this Report. Requests for sponsorship are evaluated and approved at the local or central level. Just some of the sponsorship PPC provided in 2016 is presented in Section 8 of this Report.

### Regions, Local Authorities and Local Communities

#### **5 top material aspects for Regions, Local Authorities and Local Communities**

1. Customer Satisfaction / products and service assurance
2. Promotion of renewable energy sources
3. Energy efficiency / new technologies
4. Employee and third party health and safety
5. Staff Training

*Source: PPC Materiality Analysis, 2016-2017.*

PPC executives continuously communicate with the Regions, local authorities and the local communities, either formally when specific requests are submitted or through consultations, or informally, via daily contact between our staff and representatives of the local communities and authorities. Responding to the concerns of the local communities, wherever possible we select employees and suppliers from the local communities we do business in, thereby bolstering the local economy.

Section 8 of this Report presents compensatory projects resulting from the consultation procedure before the environmental terms and conditions for PPC projects are adopted, as well other actions to support local communities.

## 4. SUSTAINABLE DEVELOPMENT

### Partners and Suppliers

#### 5 top material aspects for partners and suppliers

1. Customer Satisfaction / products and service assurance
2. Employee and third party health and safety
3. Energy efficiency / new technologies
4. Raw materials / fuel / water
5. Promotion of renewable energy sources

*Source: PPC Materiality Analysis, 2016-2017.*

The Corporation collaborates with its suppliers and partners at local, national and international level to effectively carry out projects, promote “clean” energy and improve our products and services. Section 7.5 of this Report summarises our communication channels with our suppliers and our approach to transparent procurement procedures and contract awards.

### Competitors

#### 5 top material aspects for competitors

1. Employee and third party health and safety
2. Energy efficiency / new technologies
3. Customer Satisfaction / products and service assurance
4. Raw materials / fuel / water
5. Promotion of renewable energy sources

*Source: PPC Materiality Analysis, 2016-2017.*

PPC strives to promote competition in the energy sector. Its participation in shaping public policy on this issue is proof of this. Attempting to promote sectoral issues and to strengthen cooperation on energy issues, PPC works with international energy companies and participates in consultations with relevant bodies, as well as with industry organisations and associations, such as the Hellenic Electricity Association-HELAS and EURELECTRIC.

## 4.5

### MEMBERSHIP OF ASSOCIATIONS AND ORGANISATIONS

PPC actively participates in more than 40 national and international networks, associations, organisations and agencies to engage in constructive partnerships in the energy, industrial and business sectors and to promote corporate responsibility. Just some of these organisations are:

	Hellenic Network for Corporate Social Responsibility		Council for Sustainable Development at the Hellenic Federation of Industry (SEV)
	The Hellenic Institute of Entrepreneurialism and Sustainable Development		Global Sustain
	Hellenic Electricity Association (HELAS)		The Southeastern Europe Energy Institute)
	International Council on Large Electric Systems (CIGRÉ)		Electric Power Research Institute (EPRI)
	The Union of the Electricity Industry - EURELECTRIC		European Federation of Energy Traders (EFET)
	Hellenic Adult Education Association (HAEA)		Junior Achievement Greece (SEN/JA)

## 4.6

### AWARDS - DISTINCTIONS

For the 7th consecutive year, PPC was included in the Platts Top 250 Global Energy Company Rankings for 2016, in recognition of its economic and business performance in the energy sector.

PPC received a prize in the 'Best public company 2016' category at the CHRIMA 2016 Business Awards. Winners were chosen for prizes after assessing them against a series of criteria such as growth in financials, stability, increased market share, flexible response to changes in the external environment, stock market performance and relations with investors, and level of customer service, to name a few.

## 4. SUSTAINABLE DEVELOPMENT

PPC's Mines Division, Generation Division and Occupational Health and Safety Department took part in the Health and Safety Awards in Athens in November 2016, supported by the Hellenic Institute for Occupational Health and Safety. PPC won the following prizes:

- Gold prize in the Emergency Readiness category.
- Silver prize in the Health & Safety Culture category.
- Bronze prize in the Campaigns category for the awareness raising week run at its Lignite Centres in October 2015.

For the first time ever PPC won third prize at the 2016 SAP Quality Awards in the Innovation category for the Greece, Cyprus and Malta regions. The SAP Quality Awards are a European-wide institution that promotes the use of technology to bolster a business' effectiveness, in terms of internal operations and its credibility in the eyes of the market. PPC's prize was for successfully implementing the SAP - ISU (Billing - Customer Care) module, for its new customer service IT system. The prize was awarded because PPC managed to successful roll over the data of 7.4 million customers, train hundreds of staff within a short time, manage problems that arose and generate direct benefits for the Corporation from the moment the new system became operational. Installation of the new SAP system is yet another important step towards modernising PPC so that its customers can enjoy better quality, faster customer service.

### 4.7 KEY CORPORATE SOCIAL RESPONSIBILITY PERFORMANCE DATA

PPC's key financial, environmental and social performance data for 2014-2016 are presented in the table below. More information can be found in the relevant sections of this Report.



## CORPORATE SOCIAL RESPONSIBILITY AND SUSTAINABILITY REPORT 2016

<b>Economy</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Revenues (in € '000)	5,796,750	5,675,402	5,155,250
Total Liabilities and Equity (in € '000)	16,138,480	15,935,291	15,695,580
Total liabilities (in € '000)	10,170,032	10,212,096	9,824,015
Total Equity (in € '000)	5,968,448	5,723,195	5,871,565
Domestic sales (GWh)	49,434	49,177	46,307
Financial income (in € '000)	89,952	107,699	215,055
Salaries and employee benefits including employer social security contributions (in € '000) <sup>1</sup>	589,467	565,940	557,936
Dividend payments (in € '000)	7	11,598	86
Earnings (losses) before tax (in € '000)	47,910	(206,857)	200,042
Long-term borrowings (in € '000)	4,763,477	4,365,184	3,950,912
Short-term borrowings (in € '000)	312,493	476,652	661,102
<b>Employees</b>			
Total No. of employees	10,531	10,431	10,607 <sup>2</sup>
Female employees	20%	20%	21%
No. of employees with a collective labour agreement	10,517	10,419	10,589
Total No. of accidents	64	56	60
Total No. of fatal accidents	3	0	1
Fatal accident frequency rate	2.33	0	0.81
Accident frequency rate	2.64	2.95	2.77
Total No. of days of absence due to accidents	19,970	1,934	7,576
Accident severity rate	0.82	0.10	0.35
Total No. of days of absence from work	55,464	63,930	64,692
Absence rate	2.14%	2.48%	2.47%
<b>Environment</b>			
Number of Power Plants (lignite centres, thermal power generation units, hydroelectric units, etc.) with certified Environmental Management Systems	18	18	20
CO <sub>2</sub> emissions from electricity generation (in thousands of tons)	39,290	34,352	28,468
Greenhouse gas (CO <sub>2</sub> ) trading rights (€ '000)	216,946	251,128	178,172
Surface area of PPC's facilities (hydroelectric facilities) in protected areas (km <sup>2</sup> )	65.30	65.30	77.54 <sup>3</sup>
<b>Market and customers</b>			
Installed capacity (MW)	12,445	12,862	11,976
Net energy output (in GWh)	35,076	33,806	29,982
No. of connections (low and medium voltage)	7,388,537	7,404,679	7,326,984
Market share in the domestic energy market <sup>4</sup>	97.9%	96.4%	91.9%
<b>Society</b>			
Donations and sponsorship (€ '000) <sup>5</sup>	1,249	928	853
Total amount of lignite levy payable to local communities (in € '000)	28,984	28,377	25,776

1 Payrolling costs incorporated in tangible assets are not included.

2 This includes the employees at PPC Renewables S.A.

3 In 2016 a reassessment of the area of the PPC protected areas was performed, subject to possible fluctuations in real estate register  
4 Estimate of annual average (average annual market share) taking into account sales by other suppliers.

5 The figure for donations/sponsorship relates to amounts recorded in the accounts from 1 January to 31 December.

## 4. SUSTAINABLE DEVELOPMENT



### 4.8 COMMITMENTS - GOALS

The following tables show the goals set for 2016 and the degree to which they were accomplished, as well as our goals for 2017. The tables follow the structure of the Report.

Sustainable Development	2016 Goals	Implementation
	2017 Goals	
	<ul style="list-style-type: none"><li>■ Publish the Corporate Social Responsibility and Sustainability Report in line with GRI G4.</li></ul>	<p>Completed This Report has been prepared in accordance with the core option in the GRI G4 Guidelines. (see section 10.1)</p>
	<ul style="list-style-type: none"><li>■ Materiality analysis performed by PPC's Management and stakeholders.</li></ul>	<p>Completed (see section 4.3)</p>

	<b>2016 Goals</b>	<b>Implementation</b>
<b>Employees</b>	■ Issue temporary staff payroll centrally, aiming to achieving a common approach to temporary staff earnings and a more accurate calculation of the cost.	Completed Implemented in the period April - May 2017
	■ Announce Board Decision regarding professional off-site travel.	Completed Included in Board Decision No. 112/2017.
	■ Complete Written Occupational Risk Assessments at Amynteo and Kardia Mines at West Macedonia Lignite Centre. A total of 8 studies were to be prepared.	Completed (see section 5.5)
	■ Comment on the features of accidents affecting staff at the Mines and Production Division in 2015.	Completed (see section 5.5)
	■ Continue to work in partnership with the Fire Service to have the heads of fire safety teams trained by experienced fire-fighters.	Under way
	■ Produce short film on health and safety at work to be shown to visitors to the steam electric Plants.	Completed (see section 5.5)
	■ Continue training of Employee Health and Safety Committees within the PPC Group.	Completed (see section 5.5)
	■ Reopen the 'quit smoking' surgery	Completed This role has been taken up by the local occupational physician offices.
	■ Obtain OHSAS 18001 certification for the Main Field Mines Sector at the Western Macedonia Lignite Centre.	Completed (see section 5.5)
	<b>2017 Goals</b>	
	■ New evaluation system for staff and executives.	
	■ Voluntary retirement scheme for company employees.	
	■ To support efficiency and develop a more professional approach, in 2017 a new round of Business English classes for around 100 executives of PPC will be launched.	
	■ Prepare and complete at least 10 Written Occupational Risk Assessment (WORA).	
	■ Comment on the features of accidents affecting staff at the Mines and Production Division in 2016.	
	■ Publish a safe working practices manual for electrical works at the Mines.	
	■ Continue to work in partnership with the Fire Service to have the heads of fire safety teams trained by experienced fire-fighters.	
	■ Provide nursing staff with occupational first aid re-training.	
	■ At least 6 social worker visits to the regions.	

## 4. SUSTAINABLE DEVELOPMENT

Environment	<b>2016 Goals</b>	<b>Implementation</b>
	<ul style="list-style-type: none"> <li>■ Obtain ISO 14001 certification for the Environmental Management System at the Rhodes Steam Electric Plant, Linoperama Steam Electric Plant, and Skyros local power plant.</li> </ul>	Completed (see section 6.1)
	<ul style="list-style-type: none"> <li>■ Launch procedures to put in place an Environmental Management System in line with the ISO 14001:2015 standard at the Lesbos, Hios, Limnos, Samos, Milos, Santorini and Karpathos autonomous power plants, the Symi and Megisti local power plants and the N. Plastira Hydroelectric Power Plant.</li> </ul>	Completed (see section 6.1)
	<ul style="list-style-type: none"> <li>■ 4 training courses on 'Aspects of Environmental Management Systems under the ISO 14001:2015 standard' attended by around 167 PPC staff. The training courses are designed to train and certify the Corporation's staff involved in or who will be involved with the ISO 14001:2015-compliant Environmental Management System in any manner.</li> </ul>	Completed (see section 6.1)
<b>2017 Goals</b>		
<ul style="list-style-type: none"> <li>■ Transition to the requirements of the new version of the ISO 14001:2015 standard and adjust the Environmental Management Systems at power plants which already have certification.</li> </ul>		
<ul style="list-style-type: none"> <li>■ Continue steps to put in place an Environmental Management System in line with the ISO 14001:2015 standard at the Lesbos, Hios, Limnos, Samos, Milos, Santorini and Karpathos autonomous power plants, the Symi and Megisti local power plants and the N. Plastira Hydroelectric Power Plant.</li> </ul>		
<ul style="list-style-type: none"> <li>■ Run training seminars for new recruits at the power plants covering core environmental requirements and the key principles of the ISO 14001 standard.</li> </ul>		

Market and customers	<b>2016 Goals</b>	<b>Implementation</b>
	<ul style="list-style-type: none"> <li>■ Develop online services tailored to customer needs, reflecting modern market trends, and allowing bills to be sent electronically only.</li> </ul>	Under way (see section 7.1)
	<ul style="list-style-type: none"> <li>■ Draw up a new commercial and billing policy based on customer profiling and provide incentives to categories of customers (household - business customers) to reward regular payers and those who keep up with repayment instalments.</li> </ul>	Completed (see section 7.1)
	<ul style="list-style-type: none"> <li>■ Develop another alternative collection channel to allow card payments on the PPC website (e-POS) and using special POS devices in branch, to modernise PPC's image and improve customer service.</li> </ul>	Completed (see section 7.1)
	<ul style="list-style-type: none"> <li>■ Develop a separate energy-related website to provide advice about energy savings tailored to the consumer's profile and his/her energy needs.</li> </ul>	Completed (see section 7.3)
	<ul style="list-style-type: none"> <li>■ Consider revising the debt repayment scheme to make it more flexible, ensure sustainable repayment plans are put in place for customers so they can keep up with payments, while also improving the Corporation's liquidity.</li> </ul>	Completed (see section 7.1)
<b>2017 Goals</b>		
<ul style="list-style-type: none"> <li>■ 6% discount on bill charges for all low or medium voltage customers who pay an entire year's bill up front.</li> </ul>		
<ul style="list-style-type: none"> <li>■ Complete the e-bill service allowing bills to be issued in electronic format only, offering a customer-friendly picture of the connections each customer has, and making electronic payments easier.</li> </ul>		
<ul style="list-style-type: none"> <li>■ Improve customer management, with an emphasis on overdue debts, by entering into partnership with an external associate who will offer specialist support.</li> </ul>		

Contribution to Society	2016 Goals	Implementation
	<ul style="list-style-type: none"> <li>■ Continue programmes designed to develop and strengthen local communities.</li> </ul>	Completed (see sections 8.1. and 8.2)
	<b>2017 Goals</b> <ul style="list-style-type: none"> <li>■ Implement at least 3 social solidarity actions.</li> <li>■ Continue programmes designed to develop and strengthen local communities.</li> <li>■ Provide career guidance to at least 150 high school students in the Municipalities of Kozani, Amynteo and Megalopolis.</li> </ul>	



## 5. EMPLOYEES



An ageing staff, coupled with restrictions on new recruitments, has a direct impact on the Corporation's operations

WESTERN MACEDONIA LIGNITE CENTER - SOUTH FIELD MINE

### 5.1 HUMAN RESOURCES DATA

#### Material aspect: Staffing the Corporation

Staffing the Corporation was indicated as a material aspect primarily by Management, shareholders and investors, employees and competitors. An ageing staff coupled with restrictions on new recruitments because of legal provisions applicable to companies in the Greek public sector, are aspects of this topic which directly impact on the Corporation's operations.

At the end of 2016 (31.12.2016) PPC had 10,607 full-time employees. Only 24% of the PPC employees work in the Attica region, given that the vast majority of them work in other Greek regions, mainly in the mining and generation sectors (in mines and power plants). Special rules apply to PPC about recruiting local staff. During the short-listing process the permanent residents of local municipalities and communities where the Corporation has power plants and mines receive preference. These 'locality' rules do not apply to Corporation executives.

37 PPC employees have been seconded to posts outside the Corporation. In compliance with applicable legislation and with well-established PPC practice, the Corporation has seconded employees to the political offices of members of the government, parliamentary deputies, political parties, ministries,

and so on. Of the 37 employees who have been seconded, 33 are still being paid by PPC and remain on its full-time staff, while 4 are being paid by the bodies they have been seconded to.

### Geographical allocation of employees by gender

Region	No. of employees (31.12.2014)	No. of employees (31.12.2015)	No. of employees (31.12.2016)		
			Men	Women	Total
Eastern Macedonia & Thrace	161	160	117	44	161
Attica	2,563	2,526	1,354	1,164	2,518
Northern Aegean	160	158	153	17	170
Western Macedonia	4,489	4,449	4,095	412	4,507
Epirus	156	154	124	29	153
Thessaly	117	119	85	38	123
Ionian Islands	17	16	6	13	19
Central Macedonia	211	205	142	74	216
Crete	428	429	405	83	488
Southern Aegean	435	431	411	43	454
Peloponnese	1,384	1,376	1,206	197	1,403
Mainland Greece (Sterea Ellada) and Evia	410	408	323	72	395
<b>Total</b>	<b>10,531</b>	<b>10,431</b>	<b>8,421</b>	<b>2,186</b>	<b>10,607</b>

### Allocation of employees by Employee Category, Gender and Age

Employee category	No. of employees on 31.12.2014	No. of employees on 31.12.2015	No. of employees on 31.12.2016							
			Men				Women			
			<30 yrs old	31-50 yrs old	>50 yrs old	<30 yrs old	31-50 yrs old	>50 yrs old		
Executives	136	133	0	5	108	0	4	20	137	
Admin. / Finance employees	2,170	2,139	4	294	423	6	909	533	2,169	
Technical-Technological employees	1,350	1,375	9	547	659	3	148	66	1,432	
Technical support employees	6,127	6,051	46	3,146	2,719	3	160	65	6,139	
Workers	618	599	2	170	250	1	99	59	581	
Expert staff	128	133	0	13	19	1	81	28	142	
Consultants	2	1	0	0	7	0	0	0	7	
<b>Total</b>	<b>10,531</b>	<b>10,431</b>	<b>61</b>	<b>4,175</b>	<b>4,185</b>	<b>14</b>	<b>1,401</b>	<b>771</b>	<b>10,607</b>	

## 5. EMPLOYEES

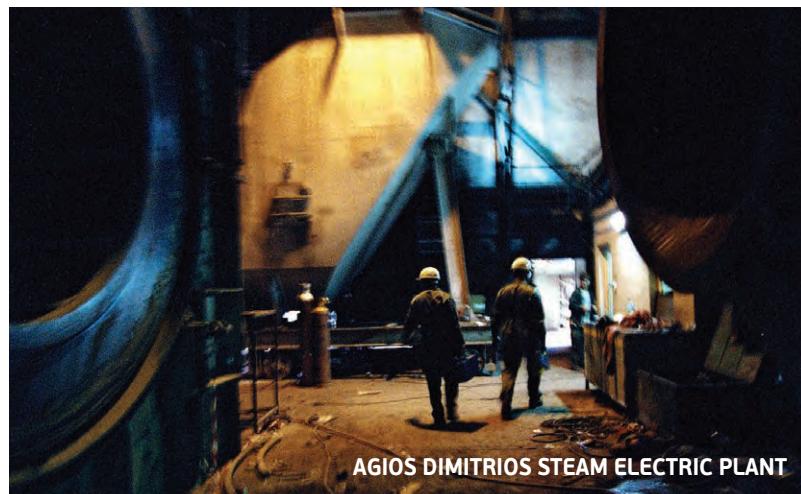
### Allocation of employees by employee category with a pension entitlement over the next five years

Employee category	Estimated number of employees with pension entitlement over the next 5 years	Estimated % of employees with pension entitlement over the next 5 years
Executives	28	20%
Admin. / Finance employees	69	3%
Technical-Technological employees	59	4%
Technical support employees	582	9%
Workers	21	4%
Expert staff	10	7%
Consultants	1	14%
<b>Total</b>	<b>770</b>	<b>7%</b>

The majority of workers (53%) are between 31 and 50 years old. It is estimated that 7% of them could become entitled to a pension over the next 5 years. Any forecast for the next 10 years would be very risky because of the general fluidity and uncertainty about the Corporation's future ownership regime and structure. Over the last 3 years (2014-2016) a decline in the number of people retiring has been noted. This is primarily because at present the potential pension pay is significantly lower than the salary of active members of staff, which is a financial disincentive towards leaving active service.

In 2017 PPC's Board adopted a decision allowing salaried staff to voluntarily resign if they had become eligible for their main pension and reached a specific age. It is likely that this practice will continue in the years to come.

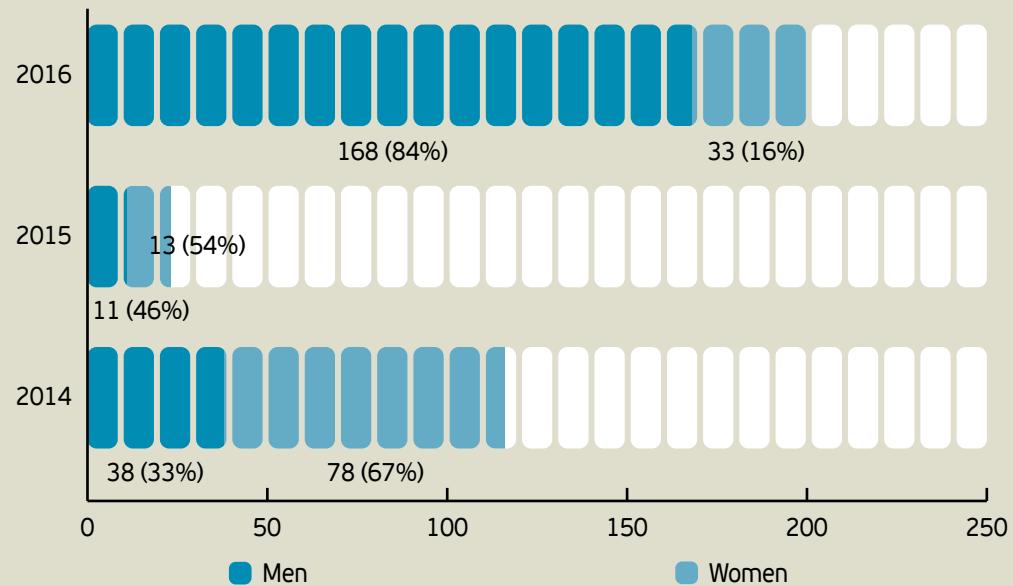
PPC is subject to rules and provisions applicable to corporations in the Greek public sector which affect specific procedures like recruiting new staff.



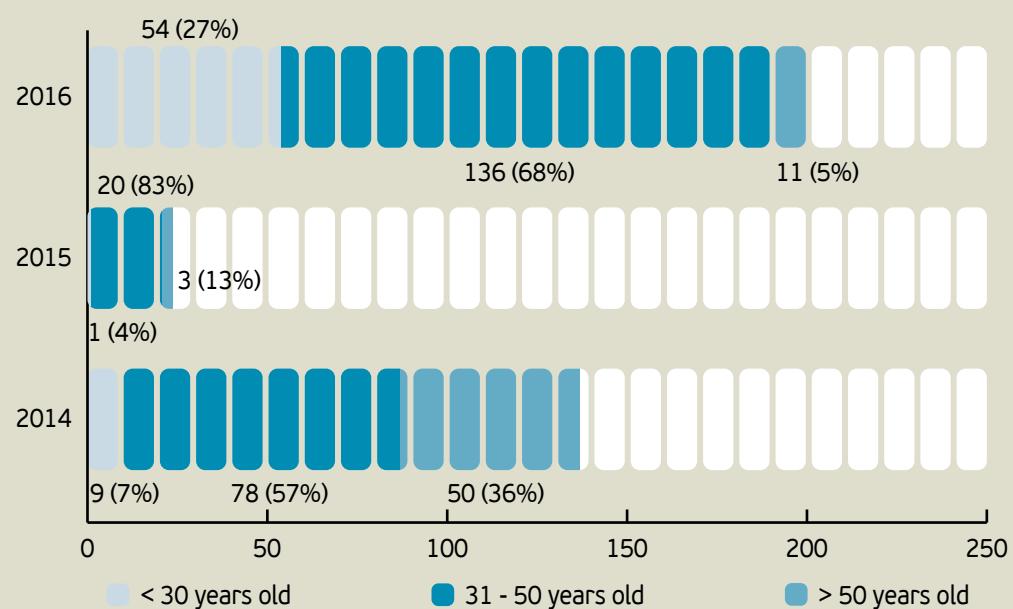
Management is aware that the high average age of staff and the limitations on recruitments are factors that could negatively impact on the Corporation's ability to carry on its business activities.

In 2016 PPC recruited 201 new members of staff. To meet operational needs, it also recruited 1,769 full-time seasonal staff in 2016 (1,665 of whom were on 8-month contracts and 104 on 2-month contracts).

### Recruitment figures for 2016



### Recruitment figures for 2016



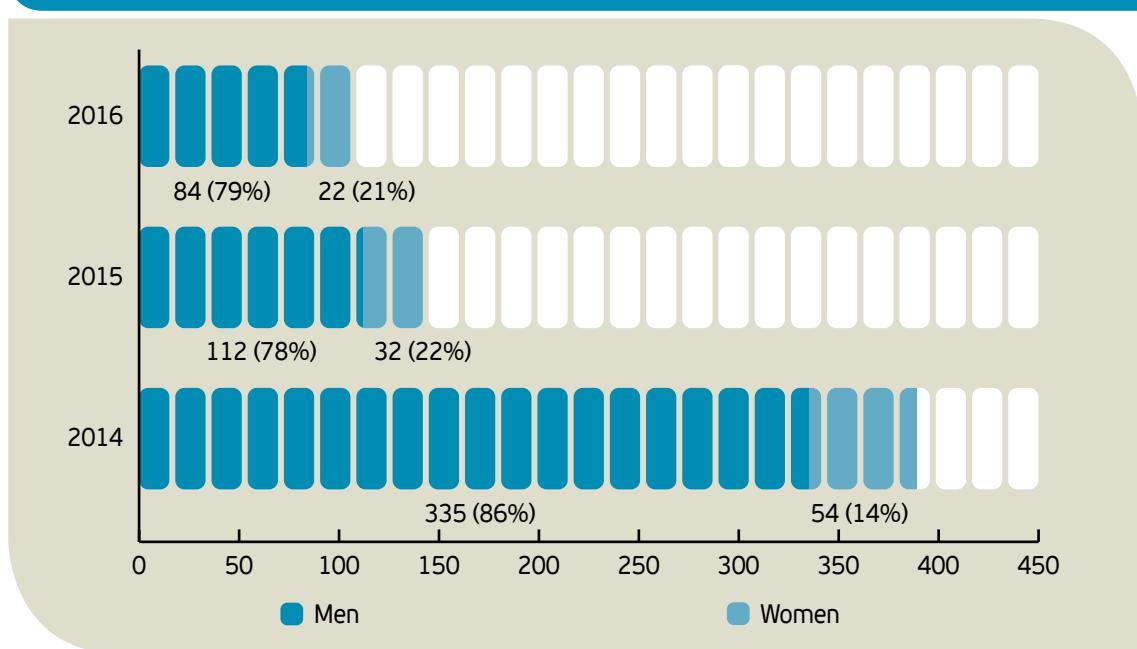
## 5. EMPLOYEES

Region	No. of recruitments in 2014	No. of recruitments in 2015	No. of recruitments in 2016
Eastern Macedonia & Thrace	4	0	0
Attica	15	5	57
Northern Aegean	0	0	11
Western Macedonia	57	16	33
Epirus	2	0	0
Thessaly	7	0	0
Ionian Islands	1	0	1
Central Macedonia	2	0	6
Crete	3	0	52
Southern Aegean	3	0	33
Peloponnese	18	3	8
Mainland Greece (Sterea Ellada) and Evia	4	0	0
<b>Total</b>	<b>116</b>	<b>24</b>	<b>201</b>

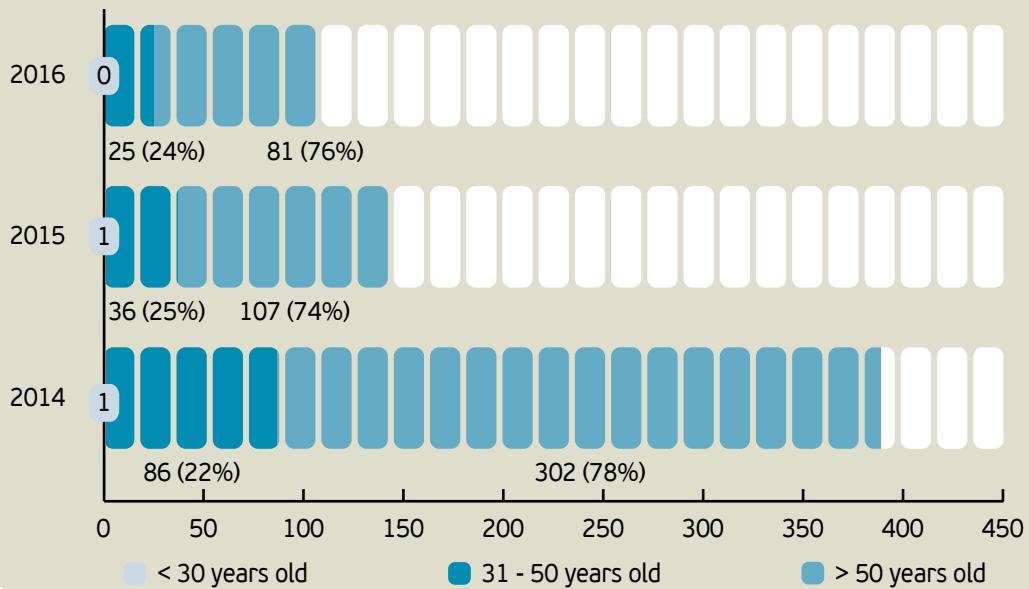
PPC's staff are employed full-time. Of a total of 10,607 employees, 10,589 are employed on the basis of open-ended employment contracts and are included in the Enterprise-Specific Collective Labour Agreement signed in 2015 which is valid for 3 years, while 18 employees have fixed-term employment contracts.

106 employees left service in 2016. The attrition rate, as a percentage of all full-time employees, has been calculated at 1%.

### Attrition in 2016

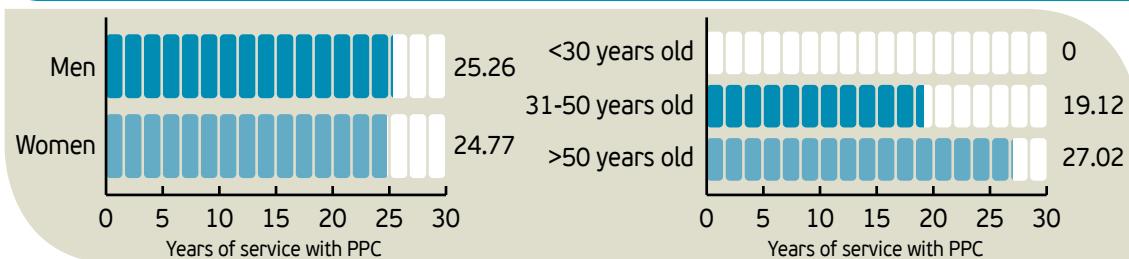


### Attrition in 2016



Region	No. of employees who left in 2014	No. of employees who left in 2015	No. of employees who left in 2016
Eastern Macedonia & Thrace	7	2	2
Attica	58	52	34
Northern Aegean	7	-	2
Western Macedonia	213	46	32
Epirus	5	9	3
Thessaly	5	1	2
Ionian Islands	2	1	0
Central Macedonia	8	7	2
Crete	12	6	4
Southern Aegean	13	6	7
Peloponnese	45	11	16
Mainland Greece (Sterea Ellada) and Evia	14	3	2
<b>Total</b>	<b>389</b>	<b>144</b>	<b>106</b>

### Average length of service of employees who left in 2016



## 5. EMPLOYEES

### Parental leave

Female employees may choose to take cumulative paid leave instead of the reduced daily working hours after the end of maternity leave as follows:

- Female employees who have one child may take 10 months off,
- Female employees who have twins, triplets, etc. may take 14 months off,
- Female employees who have large families (four or more children) may take 17 months off,

by solemnly declaring that:

- They are irrevocably committed to not voluntarily leaving the Corporation until the child becomes 5 or 6 years old, whichever is appropriate.
- If they do become entitled to retire and/or wish to leave PPC before the child becomes 5 or 6 –and provided the said obligation has not been discharged- they must pay the Corporation an amount corresponding to the remuneration received during their cumulative leave, which was paid instead of them opting for the reduced working hours plan. It should be borne in mind that cumulative leave does not count towards the pension.
- Male employees may also take parental leave as follows: If their spouse is not alive, they have the same, full rights as mothers do: They can either benefit from reduced daily working hours, or take the corresponding cumulative leave, under the same conditions as stated above for female employees.
- If their spouse is also employed by PPC, they can take the reduced daily working hours (two hours per day until the child becomes 2 and one hour per day until the child becomes 5) instead of her.
- If their spouse works at another company, provided that she does not use the same parental leave, the father can enjoy the relevant benefits instead of her.

In 2016, 38 men and 93 women applied for and were granted parental leave. During the year, 5 men and 32 women returned to work after their leave ended. The Corporation has never so far terminated the employment contract of employees who return to work after cumulative maternity leave. If they wish, employees can leave PPC under the conditions set out in solemn declaration above. In 2016 no employee left service within 12 months of returning from parental leave.

### Trade Unions

PPC supports freedom of association for its employees and gives trade union representatives time to perform their trade union duties. The PPC trade unions represent employees from different areas of specialisation and regions. The General Federation of PPC Electricity Sector Personnel (GENOP / PPC-CCDs), which includes 24 unions with 8,683 registered

PPC employees in 2016, the Electricity Industry Workers' Federation that consists of three unions and has 333 registered employees and five more independent unions with which 358 employees are registered, all operate within the Corporation.

The fact that there is an Employment Trade Union Relations Sector within the HR & Operations Department, responsible for handling trade union-related issues, demonstrates Management's participative attitude towards employees.

Where major organisational changes are about to be made, the most representative trade union (GENOP/PPC) is notified and given a specific deadline within which to inform the other trade unions below it, so that they can make proposals or submit views. Employees and trade unions are also briefed in sufficient time by the relevant HR Department.

Given that electricity is an essential good, PPC ensures that energy continues to be supplied even during strikes by using backup staff.

## **5.2**

### **TRAINING AND DEVELOPMENT**

The PPC Training Department monitors, manages and evaluates the training needs of PPC employees, to develop the Corporation's human capital and to achieve its strategic objectives. The systems used in the training field include analysing and identifying training needs, designing training courses, selecting trainees and instructors, running training courses, and evaluating training activities (the training cycle).

PPC has training facilities which are fully equipped and accessible to all employees or visitors. They are also disabled-friendly. These include the Athens Intensive Studies Academy and classrooms at head offices in the Attica region, the Megalopolis Intensive Studies Academy in the Peloponnese, the Kardia Intensive Studies Academy and the Mines Staff Intensive Studies Academy in Macedonia.

PPC employees attend training on diverse matters: technical and general issues, postgraduate courses, foreign language courses, lectures, conferences and seminars.

The Corporation's operating environment is affected by the current crisis as well as by changes in its corporate structure, which have given rise to new needs to develop staff skills. To support efficiency and develop a more professional approach, 74 PPC executives are currently enjoying a Business English training course.

Moreover, to meet the Supply Division's needs and requirements, a 2-year training course was devised. As part of that course:

- 28 executives attended a 6-month long postgraduate advanced marketing course at Athens University which ran from February to July 2016.

## 5. EMPLOYEES

- Approval was given for 3 executives to do postgraduate or undergraduate courses (2 postgraduate and 1 undergraduate course).
- Seminars were run about SAP/ISU. 556 employees attended these, which translates into 22,103 hours of training offered.
- All employees in the Electricity Purchase Section of the Marketing & Energy Services Department attended a Market Design Options seminar to prepare for the forthcoming changes in the electricity market which will soon follow the target model.
- 4 executives attended the 2-day “Electricity Derivative Market” seminar.

In 2016, a total of 79,053 man-hours of training were recorded, and the average training hours per participant was 12 hours. Of 6,808 participants, 5,681 were men and 1,127 women and the average training hours per participant were 10.4 hours and 17.5 hours respectively. Of all employees, the average length of training per employee was 7.5 hours, and 7 hours for men and 9 hours for women.

Employee category	2014			2015			2016		
	Number of participants in training programmes	Total training man-hours	Average training man-hours per participant	Number of participants in training programmes	Total training man-hours	Average training man-hours per participant	Number of participants in training programmes	Total training man-hours	Average training man-hours per participant
Executives	30	390	13.00	36	391	10.86	29	316	10.90
Admin. / Finance employees	1,837	50,759	27.63	1,488	31,062	20.88	830	13,027	15.70
Technical-Technological employees	969	15,996	16.51	628	9,383	14.94	894	14,351	16.05
Technical support employees	3,573	40,056	11.21	3,656	40,562	11.09	4,175	39,929	9.56
Workers	241	3,034	12.59	267	2,813	10.54	280	3,464	12.37
Expert staff	17	190	11.18	27	234	8.67	18	140	7.78
Consultants	-	-	-	-	-	-	-	-	-
Unspecified category*	210	1,948	9.28	405	7,384	18.23	582	7,826	13.45
<b>Total</b>	<b>6,877</b>	<b>112,373</b>	<b>16.34</b>	<b>6,507</b>	<b>91,829</b>	<b>14.11</b>	<b>6,808</b>	<b>79,053</b>	<b>11.61</b>

\* The category the participant belongs to is unrecorded.

## 5.3

### EMPLOYEE EVALUATION AND BENEFITS

Employee evaluation programmes tend to have a positive impact on the operation of a company generally speaking, as employee good performance is rewarded and it encourages efforts to further improve performance. Right from the outset, PPC has had an employee evaluation system in place. Every year PPC runs an employee evaluation based on the Special Evaluation Regulations which are in force. All full-time staff on open-ended contracts underwent evaluation in 2016. A new evaluation system is in the pipeline at present.

In order to ensure that its employees enjoy a good professional life and decent personal life, the Corporation offers a wide range of additional benefits to employees, on top of their basic salary. Just some of these benefits are:

- Reduced electricity tariffs.
- Low interest loans to purchase or repair main residences, for children studying in another town.
- Assistance when employees face serious health problems.
- Special leave for employees in addition to normal leave (study leave, family leave, extra 5-day leave for employees working on alternating shifts at power plants and mines, leave for customer service staff at branches run by the Supply Division).
- Training (seminars, foreign language courses, post-high school training, postgraduate courses, etc.).
- Free private crèches for children of employees, or coverage of part of the cost of private crèches or coverage of the cost of private campsites, up to the amount set by the competent Ministry.
- Mobile phones for staff, with free calls to other company staff members.
- Shuttle buses for employees when their place of work is located at a considerable distance from urban centres or towns.
- Residences for executives and staff transferred to problematic areas (such as inaccessible areas) for work.
- Food vouchers worth up to € 6 for each day worked.
- Commendations awarded to children of PPC employees who excelled in their secondary and tertiary education studies. Events were organised in Athens, Ptolemaida and Megalopolis in 2016 to award commendations to 376 children of PPC employees and pensions who achieved top grades during the 2014-2015 school year. A total of 486 commendations were conferred.

## 5. EMPLOYEES

- Career guidance services are offered to the children of Corporation employees and retirees. In 2016 the Training Department provided free advice to 100 children of PPC employees and retirees. The sort of advice offered by the Department has garnered particularly positive responses nationwide from both parents and children alike.

### 5.4 EQUAL OPPORTUNITIES AND RESPECT FOR HUMAN RIGHTS

The Corporation is constantly striving to develop an equal opportunities workplace where employees respect each other and where there is no discrimination. To date, no cases of discrimination have been recorded or reported.

Respect for human rights is an inviolable principle for PPC. We are against all types of forced or child labour. PPC fully complies with Greek legislation on child labour and implements procedures which preclude cases of child labour occurring. As in previous years, no cases of forced or child labour were reported in 2016. In addition, no cases of the human rights or the rights of indigenous populations being violated have been recorded. PPC fully respects human rights and implements the relevant national legislation. PPC does not discriminate on pay or on other issues such as the gender, age, race, colour, heritage, national or ethnic background of its employees.

### 5.5 HEALTH & SAFETY

The PPC approach to the health and safety of its workers is in accordance with the PPC Group's policy on occupational health and safety and its accident prevention policy. Since March 2012 the Occupational Health and Safety Department, which is responsible for managing these issues in PPC and is the In-House Protection and Prevention Service, has held ELOT EN ISO 9001:2008 certification for the Quality Management System it operates. Moreover, since 2012 the Occupational Health and Safety Department has held a license as an External Protection and Prevention Service Provider with the ability to provide protection and prevention services to customers inside and outside the PPC Group.

PPC is committed to implementing the relevant provisions of Greek law on occupational health and safety, and to immediately bringing its practices into line with all new European directives in this field. Thus in 2016 the Occupational Health and Safety Department set up a platform offering legal advice to its units, and assessing their compliance with legal requirements.

To curb the risk of accidents occurring, the Occupational Health and Safety Department's priority is to cultivate a culture of occupational safety at all levels within the organisation. The Department's goal is to have all employees at all levels and anyone who has a working relationship with the Corporation to be committed to the general accident prevention objectives.

During 2016, 8 Written Occupational Risk Assessments at PPC Group plants were prepared (new documents or revisions of old ones). 6 reports related to HEDNO (covering Agios Nikolaos, Eliada, Kallithea, Mesogeia, Samos, and the head offices of the Central Greece Regional Department). The other 2 related to PPC (Amynteo Mines Section, Kardia Mines Section).

PPC's rules require emergency protocols to be implemented. The Occupational Health and Safety Department runs training courses in risk/disaster management and carries out emergency drills so that employees of the Corporation are able to deal with any emergencies / incidents. In 2016 the PPC Group carried out 8 such drills, and 57 emergency response training sessions (15 for HEDNO and 42 for PPC). A total of 1,712 employees received 10,272 hours of training.

In 2016 independent bodies successfully completed the annual review of the OHSAS 18001:2007 / (ELOT 1801)-compliant Occupational Health and Safety Management System at the Agios Dimitrios, Kardia, Amynteo - Filota, Meliti, Komotini, Aliveri, Keratea - Lavrio, Rhodes, Megalopolis I, Megalopolis II, Hania and Atherinolakkos Steam Electric Plants. An independent body also successfully completed the first certification of the OHSAS 18001:2007 / (ELOT 1801)-compliant Occupational Health and Safety Management System at the Linoperama Steam Electric Plant. Since 2014 the Megalopolis Lignite Centre Department has held certification for its OHSAS 18001:2007 / (ELOT 1801)-compliant Occupational Health and Safety Management System, and between March and November 2016 certification for the OHSAS 18001:2007 / (ELOT 1801) standard was carried out at the Main Field Mine at the Western Macedonia Lignite Centre. The process was a success and the certificate was issued.

Two level-3 inspections were carried out on HEDNO during 2016 by teams of inspectors from both the Occupational Health and Safety Department and HEDNO, and two level-3 inspections were also carried out in PPC by teams of inspectors from both the Occupational Health and Safety Department and PPC's Mines Division. Inspectors from the Occupational Health and Safety Department also provided 7 expert opinions in power stations inspections operated by the Generation Division. The inspections examined occupational safety issues and their results were notified to the heads of department.

Note that level-3 inspectors from the Occupational Health and Safety Department have attended the ELOT 1801:2008 Occupational Health and Safety Inspector Certification seminar.

## 5. EMPLOYEES

The PPC Group's health and safety policy clearly refers to ongoing consultation with trade unions and employee representatives concerning occupational health and safety issues. Although there is no formal agreement governing the matter, the Occupational Health and Safety Department is, in fact, in constant communication with PPC employees.

In 2016 the Social Workers Subsection / Occupational Medicine Section of the Occupational Health and Safety Department prepared 134 social surveys (84 were requested by PPC and 50 by HEDNO). The subsection's job includes offering individual and family counselling and support to employees, briefing them and referring them to the competent agencies, preparing detailed social surveys and short statements of their recommendations / findings, among other things.

In addition, 68 employees who needed social protection, support and assistance received counselling and support in cooperation with their superiors and family circle (if applicable) and additional professional support was also sought. In all cases employees were provided with guidance, counselling about how to address their personal problems, and were referred on to centres and agencies outside of PPC with experience in the relevant problem.

As part of a new scheme whereby social workers visit the regions to identify and address problems there, pilot visits were arranged to PPC and HEDNO plants in Nafpaktos, Corinth, Patra and Kalamata.

Moreover, the social services unit on Crete ran 5 social solidarity actions. Milk and meat were offered to the Agios Spyridon Special Children's Centre and to the children of families supported by SOS Children's Villages.

Since 2015 a psychologist's office has been operating in a separate section of the Occupational Physician's Offices in Thessaloniki, providing personal or family psychological and counselling support to employees facing difficulties handling workplace issues as a result of mental or physical illness, psychotherapy, psychological evaluations, and psychometric tests, in collaboration with agencies and bodies outside of PPC, in partnership with the occupational physicians and social workers. During 2016 the office provided psychological support and counselling to 20 people in total.

In parallel to the psychologist's office in Thessaloniki, in May 2016 we launched a pilot scheme whereby experts visit the Western Macedonia Lignite Centre in Ptolemaida once a week to provide psychological support and counselling to PPC staff in the Western Macedonia region and members of their families.

In 2016, 153 employees and members of their families attended sessions (136 at the Thessaloniki psychologist's office and 17 at the Ptolemaida psychologist's office).

2016 also saw a short film about occupational health and safety issues produced. It is intended for visitors to steam electric plants and has been distributed to all such plants and already a large number of visitors have seen it.

### Health and Safety Training

Health and Safety Training is an integral part of the basic and the special, technical training our employees receive. Training courses are held at PPC plants. The courses are designed in partnership with the Occupational Physician, the Safety Technician and the Plant Manager, or take the form of training seminars held by the Training Department.

The training courses include the following subjects: health, medicine, occupational safety, first aid, and the safe use of work equipment and of the personal protective equipment. Furthermore, employees are informed about contagious diseases and participate in emergency drills in collaboration with local organisations, agencies of the General Secretariat for Civil Protection and in some cases the Armed Forces. Training seminars for staff concerning civil emergencies may not have taken place in 2016 but two new cycles of seminars have already been scheduled for HEDNO for the first two months of 2017.

When training and briefing staff about health, medicine and occupational safety issues, the 33 occupational physicians also provide information about serious illnesses.

The safety engineer training - briefing seminars are the main occupational health and safety seminars. 2 cycles of seminars for safety engineers from the Generation Division ran in 2016.

Moreover, in 2016 4 cycles of training cycles for members of Employee Health & Safety Committees took place in Athens, Megalopolis, Crete and Kozani.

Specific occupational health and safety topics and relevant subjects are included in the materials for other seminars run by the Training Department, such as the orientation training which new recruits receive. Over a 3-month period in 2016 seminars relevant to health and safety issues were held for all technical staff at mines at PPC's training centre in Megalopolis.

A quarterly manual entitled 'Ergodigos' (The Foreman) is published to brief foremen about those occupational health and safety issues which are a constant concern for PPC.

## 5. EMPLOYEES

PPC units	2014			2015			2016		
	Number of participants in training programmes	Total training man-hours	Average training man-hours per participant	Number of participants in training programmes	Total training man-hours	Average training man-hours per participant	Number of participants in training programmes	Total training man-hours	Average training man-hours per participant
Mines Division	2,173	25,735	11.84	2,871	32,151	11.20	2,709	28,703	10.60
Generation Division	1,518	12,249	8.07	1,420	11,188	7.88	2,767	24,670	8.92
Supply Division	20	191	9.55	131	587	4.48	198	510	2.58
Finance Division	3	16	5.33	-	-	-	85	216	2.54
HR Division	84	827	9.85	124	857	6.91	91	656	7.21
Support Operations Division	39	226	5.79	4	32	8.00	39	306	7.85
Other divisions / units	35	250	7.14	-	-	-	61	308	5.05
<b>Total</b>	<b>3,872</b>	<b>39,494</b>	<b>10.20</b>	<b>4,550</b>	<b>44,815</b>	<b>9.85</b>	<b>5,950</b>	<b>55,369</b>	<b>9.31</b>

Note: The data in the table above relate to training programmes handled and organised by the Training Department («locally» implemented training conducted by the Divisions in PPC power plants is not included).

### Health and safety for contractors and subcontractors

To ensure the health and safety of the staff of PPC's contractors, those contractors are responsible for implementing occupational health and safety legislation and are subject to the legal sanctions involved. Contractors expressly undertake exclusive responsibility for designing and implementing safe working practices for persons employed on Project construction and for third parties.

Contractors/subcontractors are obliged to provide staff with suitable personal protective equipment (PPE) depending on the work being carried out, to take all health and safety at work measures required by law and to comply with the obligations for a safety engineer and occupational physician, to assess and prevent occupational risk, to protect against harmful agents and to keep employees informed about these issues.

Upon entering the worksite, contractors are obliged to provide the Corporation with a list of staff to be employed (number, area of specialisation) as well as all other information which the Corporation considers necessary about such staff. If the Corporation considers this necessary, the contractor's

staff must undergo training relevant to specialised technical work tasks which are to be undertaken. That training is provided at the PPC Vocational Training Centre.

PPC inspects contractor work crews and examines:

- The PPE, the group protective equipment and tools, to check that they are adequate, what condition they are in and whether the contractor's staff are using them.
- Whether the contractor's staff hold the necessary licenses and permits.
- Whether the provisions of contracts and the PPC CEO's decision No. 96/2010 are being implemented, to ensure that PPC's contractors implement labour and social security law.

In 2016 inspections were carried out on 4 contractor work crews engaged by HEDNO and on 9 contractor work crews engaged by PPC. An inspector from the Occupational Health and Safety Department took part in the inspections.

## Health and Safety Performance

PPC Health and Safety Data	2014	2015	2016
Total No. of accidents <sup>1a</sup>	64	56	60
Total No. of fatal accidents <sup>1b</sup>	3	0	1
Fatal accident frequency rate <sup>2</sup>	2.33	0	0.81
Accident frequency rate <sup>3</sup>	2.64	2.95	2.77
Total No. of days of absence due to accidents	19,970	1,934	7,576
Accident severity rate <sup>4</sup>	0.82	0.10	0.35
Total No. of days of absence from work <sup>5</sup>	55,464	63,930	64,692
Absence rate <sup>5</sup>	2.14%	2.48%	2.47%

1a The number of accidents includes all accidents occurring during employment of the permanent and seasonal/ temporary staff, which caused absence from work for more than 3 calendar days. Accidents occurring while travelling to and from work or cases of sickness, which are analysed separately (from a statistical viewpoint), are not included.

1b Total No. of fatal accidents among employees based on the European statistics on accidents at work (ESAW) - Methodology - 2001 edition.

2 Calculation Method: No. of fatal accidents per 10,000 employees in line with ESAW.

3 The methodology taken into account to calculate the indicators is the «European statistics on accidents at work (ESAW) - Methodology - 2001 edition», which is also followed by the European Agency for Safety and Health at Work (EU-OSHA) and EURELECTRIC Calculation Method: Number of accidents per  $10^6$  hours of exposure to risk.

4 The methodology taken into account to calculate the indicators is the «European statistics on accidents at work (ESAW) - Methodology - 2001 edition», which is also followed by the European Agency for Safety and Health at Work (EU-OSHA) and EURELECTRIC Calculation Method: Number of calendar days of absence from work per  $10^3$  hours of exposure to risk.

5 The total number of absences from work and the respective absence rate relate to absence from work, registered as absence due to illness and sick leave.

## 5. EMPLOYEES

Accidents	2014		2015		2016	
	Number of non-fatal accidents	Number of fatal accidents	Number of non-fatal accidents	Number of fatal accidents	Number of non-fatal accidents	Number of fatal accidents
PPC employee accidents	61	3	56	0	59	1
PPC contractor accidents <sup>1</sup>	22	1	16	3	1	0
Third party accidents <sup>2</sup>	1	1	0	0	1	0

1 It is quite possible that some accidents may have gone unnoticed as a contractor may have failed to report them to the relevant authorities and consequently to PPC.

2 These accidents usually relate to electrocution or road traffic accidents. Electrocution is caused by involuntary contact with «live» parts of the network either during the construction of structures (buildings, advertising signs, etc.) or during the operation of lifting equipment. These are usually due to failure to keep the correct safety distances or even due to the failure (by private citizens) to request that specific parts of the network be disconnected.

In 2016 a PPC employee was involved in fatal accident while repairing damage to electrical facilities at a substation involved in operating the conveyor belt at the Amynteo Mine. PPC set up an investigative committee and the Public Prosecutor's Office is also carrying out its own investigations.

Following this sad event, in the autumn of 2016 the Mines Division / Central Mines Support Department held a working meeting on “Preventing electrical accidents in the Mines Division”. A series of actions for the last quarter of 2016 and first quarter of 2017 were decided on at that meeting. These included:

- a) the Electrical Sections at all Mines agreed to set up a working group to write and publish an occupational health and safety manual for electricians.
- b) training the staff of the Electrical Sections.
- c) testing the adequacy of personal protective equipment and group protective equipment used by Electrical Section work crews and
- d) ensuring that employees who are not qualified electricians cannot access electrical facilities.

Inspections were also carried out about whether personal protective equipment was being properly used. These are still continuing.

Of the 59 non-fatal occupational accidents involving PPC's employees, 1 took place at the PPC branch in the Fokida Regional Unit, 9 occurred in activities unrelated to lignite production (1 in Attica, 5 on Crete, and 3 on various Aegean islands) while 49 involved lignite production activities. Of those 49, 38 took place in the Western Macedonia Region (33 in the Kozani Regional Unit and 5 in the Florina Regional Unit) and 11 took place at Megalopolis.

A contractor on the Aoos Springs Project inspection team was also involved in an accident. While approaching a water pump the employee tripped and slightly injured his right leg.

As for accidents involving third parties, there was 1 road traffic accident in 2016, when a PPC truck collided head on into a third party motorbike which was in the opposite lane. The motorcycle driver reported that he was slightly injured in the incident.

PPC units	2014				2015				2016			
	No. of accidents	Accident frequency rate	No. of days absent due to accidents	Accident severity rate	No. of accidents	Accident frequency rate	No. of days absent due to accidents	Accident severity rate	No. of accidents	Accident frequency rate	No. of days absent due to accidents	Accident severity rate
Mines Division	43	4.90	19,417	2.21	37	5.16	1,202	0.17	41	5.15	7,020	0.88
Generation Division	19	1.71	451	0.04	15	1.94	610	0.08	18	1.92	534	0.06
Supply Division	0	0	0	0	0	0	0	0	1	0.54	22	0.01
Other divisions / headquarters	2	0.81	102	0.04	4	1.79	122	0.05	0	0.00	0	0.00

Despite a rise in the absolute number of accidents (60 accidents in 2016 compared to 56 in 2015), the accident frequency rate actually declined, due to the rise in the actual number of hours worked (which equate to hours of exposure to risk).

In terms of accident severity, the index did rise despite the drop in the number of days of absence as a result of non-fatal accidents. This was due to the inclusion of 6,000 days of absence as a result of the fatal accident which occurred.

The Occupational Health and Safety Department ensures that PPC's Accident Prevention Policy and its effectiveness are fully documented and systematically evaluated. In 2016, 2 accident statistical analysis reports for 2015 (1 for PPC and 1 for HEDNO) and 1 report / commentary on the features of accidents involving staff of the Mines and Production Divisions for the 2015 period were published. The commentary on the most important accidents was sent to all PPC business units to prevent similar incidents occurring again.

### 5.6 INTERNAL COMMUNICATION

In addition to the steps mentioned above, PPC's Corporate Affairs and Communications Department also keeps employees well-informed about electricity, about how to use it safely, how to make energy savings and various other issues. The following measures were taken in 2016. These are just a taste of the sort of things PPC does in this field:

- Information is provided on the PPC intranet about energy savings, the safe use of energy and/or general health and safety at work issues.
- Staff are briefed each month about European energy market issued based on the EURELECTRIC information bulletins.
- Executives and staff receive weekly, monthly and special online briefings about:
  - Current statutory, regulatory and other issues at various levels (European Commission, European Parliament, etc.) of direct concern to European energy businesses.
  - Studies, reports and so on, about the state and prospects of energy and electricity companies.
- Comprehensive memos are drafted about talks given at colloquia, conferences, etc. in Greece about energy, energy technologies, environmental protection policies, etc. that are of interest to PPC executives and staff.
- Meetings were jointly organised with trades unions on the following topics:
  - «Lignite Memories - a Tribute to the Lignite Miners», a sports event with races for PPC employees, retirees and athletes from various parts of Greece.
  - Staff info-events.

It is worth noting that on 3.12.2016 Giannis Markopoulos held a large concert at the Lefkovrysi indoor stadium in Kozani, which was the high point on the celebrations to mark 60 years of lignite mining. The event was attended by PPC's CEO, politicians and figures from the local community. PPC organised the concert for current and former employees, in recognition of the contribution they have made to operating the mines. 92 years old Paschos Karagiannis, the oldest surviving lignite miner, who was among the first workers at the old LIPTOL and PPC mines, received an award at the event.

## 5.7

### REGULATORY AND LEGISLATIVE COMPLIANCE

Complying with the applicable legislation and other regulations lies at the very core of what PPC does, both in relation to HR issues, and in general in relation to all its activities. However, due to PPC's size and sheer scale of its operations, various critical issues do arise from time to time.

All cases of corruption which come to the PPC's attention, either as a result of complaints or inspections carried out by a supervisor / departmental team and/or the Internal Audit Department, are fully investigated and then disciplinary measures are taken against the employees involved in line with Chapter VI of the PPC's Staff Regulations. In most cases, given the severity of the disciplinary offences that cases of this type by employees involve, these disciplinary matters are referred by the CEO to the First Instance Disciplinary Board which can impose any of the sanctions specified in Articles 26 and 32 of the PPC Staff Regulations. In 2016, 1 Corporation employee was subject to disciplinary proceedings for corruption issues. He was temporarily suspended from work without pay.

In 2016, legal proceedings were launched against 6 PPC employees resulting in judgments acquitting them or a judicial council decision terminating proceedings against the accused persons. Those cases involved breach of duty by an employee (1 case), complicity in breach of duty by an employee (1 case), complaints about structures at PPC plants without planning permission (2 cases) and occupational accidents (2 cases).

8 other cases are also under way. One relates to fraud committed by a PPC employee who has already been dismissed. That case is pending before the criminal courts. 2 relate to breach of the duty of loyalty to the Corporation and by extension to the Greek State, 1 relates to an occupational accident, 2 relate to violations of environmental legislation, 1 to damage to third party property and 1 to insult/aggravated defamation.

In addition 2 fines were imposed on one of the Corporation's steam electric plants during 2016 by the Labour Inspectorate. The first involved a fine of € 20,000. No legal steps were taken to avoid the fine. Instead PPC accepted the fine and received a 30% discount, and so only paid € 14,000 in the end. The second involved a fine of € 45,000. PPC filed an application for redress before the competent authority and the fine was reduced to € 30,001. The Corporation then paid the fine imposed with a 30% reduction for accepting it, meaning it only paid € 21,000.70.

## 6. ENVIRONMENT



PPC acknowledges that the environmental performance is key to the sustainable development of enterprises and to improving their competitiveness

### 6.1 ENVIRONMENTAL MANAGEMENT

Most electricity generation activities are regulated by strict laws, regulations and permits at global, European, national and local level. PPC manages many different energy sources and technologies with different environmental characteristics and challenges as part of its activities. It recognises that environmental performance is key to the sustainable development of enterprises and to improving their competitiveness.

To this end, given the wide range of PPC's activities, organisational units related to the environment have been established in all Divisions of the Corporation. These are:

- The Mines Environment Department in the Mines Division,
- The Generation Environment Department in the Generation Division, and
- The Environment Branch in the Strategy Department (executive services).

Furthermore, there are Environment Sections at the individual power generation facilities (at lignite centres and at power plants).

#### Environmental Management Systems

To ensure continuous improvements in its environmental performance, PPC has put in place Environmental Management Systems at its power generation facilities. PPC is in the process of gradually obtaining certification for

these systems. To date PPC has certified Environmental Management Systems (ISO 14001:2004) for the Western Macedonia Lignite Centre and the following power plants which generate around 90.5% of PPC's total electricity output:

Lignite plants	Oil plants	Natural gas plants	Hydroelectric stations
Agios Dimitrios	Atherinolakkos	Agios Georgios	Aliakmon
Amynteo-Filota	Hania	Keratea - Lavrio	Arachthos
Kardia	Linoperama	Komotini	Acheloos
Megalopolis I	Skyros	Aliveri	Nestos
Megalopolis II			Ladonas (HPP)
Meliti			

In 2016 the annual inspections to re-assess those Environmental Management Systems were successfully completed meaning ISO 14001:2004 certification was retained for yet another year. Another two power plants also obtained ISO 14001:2004 certification for the first time (the Linoperamata steam electric plant and the Skyros local power plant. € 14,210 was spent on certification / re-evaluation of the Environmental Management Systems for those hydroelectric and steam electric plants (excluding the Acheloos complex).

- The Environmental Management System for the Soroni Steam Electric Plant on Rhodes was successfully put in place in 2016. The ISO 14001 Environmental Management System certificate was issued for the Soroni Steam Electric Plant in May 2017.
- During 2016 preparations began to extend the certification programme to 9 autonomous and local power plants and to the N. Plastiras Hydroelectric power plant which is PPC's only hydroelectric power plant, and which until now did not have ISO 14001 certification. The autonomous and local power plants chosen are the Lesbos, Hios, Limnos, Samos, Milos, Santorini and Karpathos autonomous plants and the Symi and Megisti local power plants. The process of developing and putting the Environmental Management Systems in place for those plants will continue throughout 2017 and we expect to obtain certification in 2018.
- The Skyros local power plant is the Island Generation Department's first power plant to obtain ISO 14001:2004 certification.
- 4 training courses on ISO 14001:2015 Environmental Management System issues were held in 2016. The training courses were designed to train and certify the Corporation's staff involved in or who will be involved with the Environmental Management System in any manner in line with the requirements of the new revised ISO 14001:2015 standard.

## 6. ENVIRONMENT

Moreover, it is expected that ISO 14001 certification for the Environmental Management System at the Megalopolis Lignite Centre will be awarded in 2017 after the permitting authority completes its evaluation of the amended Environmental Impact Study submitted to renew the mines' environmental terms and conditions.

PPC runs various laboratories to help ensure compliance with the environmental terms and conditions under which its power plants operate, to support implementation of Environmental Management Systems and to enable it to comply with requirements that mandate environmental reporting to the competent authorities (such as annual reports in the context of the European Emissions Trading Scheme). These labs which operate at the PPC Testing, Inspection & Standards Centre:

- Analyse fuels, lubricants and water used by PPC in its engines.
- Carry out analysis on the water and solid waste PPC generates.
- Develop new photometric methods to measure additional environmental parameters such as ammonia, phenol, weak chlorine and cyanide compound levels in liquid waste.
- Calibrate measuring devices at PPC's plants.

In 2016 the Centre retained its official scope of accreditation as a testing and calibration lab and as a type B inspection body.



## **6.2 CONSUMPTION OF RAW MATERIALS, FUELS AND ENERGY**

## Use of materials and fuels

As a large electricity company, PPC both uses and consumes large quantities of raw materials and other items, both to generate electricity and to cover other needs. The main fossil fuel PPC uses to generate electricity is lignite. In effect this is the only fossil fuel Greece produces. Natural gas, though, plays a very important role in ensuring the Corporation's energy balance. The island power generation systems are based on the consumption of oil products (LFO and diesel) to generate electricity.

<b>Raw Materials</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	
Lignite-solid fossil fuels (tons)	51,630,691	44,023,254	31,427,537	
Hard coal (tons)	-	-	-	
LFO (tons)	885,813	878,972	876,505	
Diesel (kilolitres)	323,747	336,594	339,396	
Natural Gas (kNm <sup>3</sup> )	767,218	871,021	1,074,750	
LNG (kNm <sup>3</sup> )	-	-	-	
Biomass (tons)	-	-	-	
Desulphurisation limestone (tons)	438,289	371,877	318,412	
Lime (tons)	-	-	-	
Lubricants and mineral oils without PCBs				
	(tons)	7,009	5,420	5,488
	(kilolitres)	1.1	1.048	1.296

In 2016, 24.6 tons of combustion improvers and quantities of lubricants and PCB-free oil (330 containers) were consumed in addition to the products listed in the table.

It should be noted that there are no longer any quantities of PCBs in PPC equipment, as the programme to completely remove them and decontaminate all equipment containing or contaminated by PCBs has been completed in line with the relevant provisions of law. Checks for PCBs that may potentially be present are carried out on all equipment decommissioned from the network, even when it is certain that there is no contamination whatsoever.

## Energy consumption

PPC's own energy consumption primarily relates to power generation. When PPC consumes energy this is primarily related to electricity

## 6. ENVIRONMENT

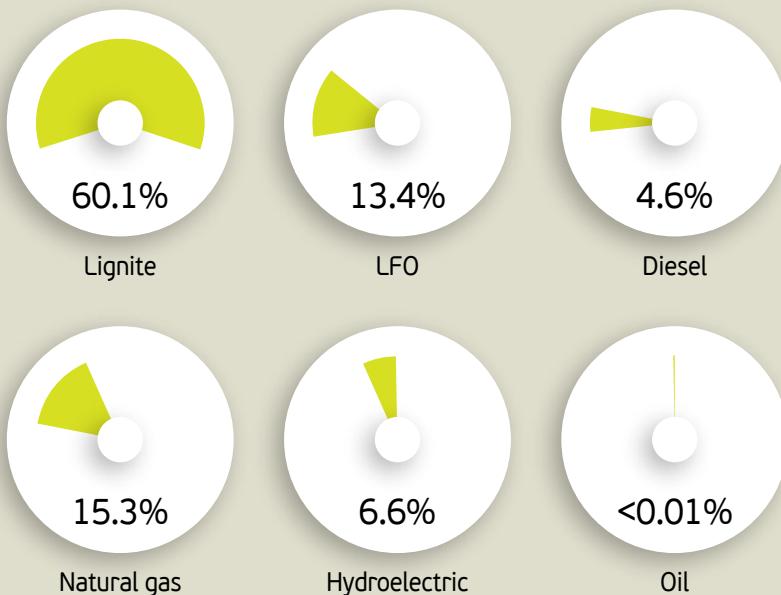
generation, to the running of the Corporation's buildings (for heating/cooling and electrical purposes) and to use of its vehicles (service and corporate vehicles).

Total direct energy consumption (in primary energy terms) was 265.5 PJ in 2016, down some 18% compared to 2015. The drop in net production at PPC's units as part of electricity market operations, the final withdrawal of old, inefficient production plants and minimal use of others (see sections 6.3 and 6.4 below for more information about this) and the rise in the use of natural gas in overall energy consumption has all contributed to this change. In 2016 electricity consumption levels in Greece remained at the same levels as in 2015. As a result, energy intensity (defined as energy consumed to produce electricity / revenues from the sale of electricity) in 2016 improved by around 9% compared to 2015 (from 58.8 MJ/€ in 2015 to 53.3 MJ/€ in 2016).

Consumption figures can be broken down as follows:

- Fuel use at thermal plants was 248 PJ (accounting for 93% of overall energy consumption). This figure includes consumption by the plants themselves (0.8 PJ) and consumption for district heating schemes (2.1 PJ).
- Electricity produced by PPC hydroelectric power plants (around 6.6% of overall energy consumption).
- Fuel consumption for vehicles (54.4 TJ) and to heat buildings (5 TJ). Overall, these two categories account for 0.02% of total energy consumption.
  - PPC runs a fleet of 1,851 vehicles including 1,065 with ordinary license plates and 343 off-road mobile vehicles, 176 of which are only used within the boundaries of the Corporation's premises and 267 vehicles with license plates issued with Prefectural authorisation. Data is available about fuel consumption and vehicle usage for 64% of the vehicles with ordinary license plates. Those vehicles travelled 6.8 million km or 9,955 km per vehicle (down 5% compared to 2015).
  - Fuel consumption data for buildings only relates to buildings in Attica (covering a surface area of 530,000 m<sup>2</sup>, which consist of offices, substations, storage areas and archives) which account for 27% of all PPC buildings (both rented and owned). 53% of the consumption figure relates to natural gas. This does not include energy consumption in buildings (5.92 GWh) since the quantities concerned are generated by the Corporation itself and are included in the figures for energy consumed in producing electricity.

### Energy consumption in 2016



Energy consumption: 265,530 TJ

## 6.3 GREENHOUSE GAS AND OTHER GAS EMISSIONS

### Material aspect: Climate change and greenhouse gas/ particle emissions

Climate change is a global environmental problem, whose impacts affect all aspects of human life (the environment, health, the food chain, infrastructure, the economy and politics). According to the 5th IPCC assessment report, it is extremely likely that man-made GHG emissions ( $\text{CO}_2$ , methane, nitrogen oxide and fluoride gases) are the main cause of climate change. When generating electricity from fossil fuels, GHGs and atmospheric pollutants are released into the air. In this regard, climate change and gas / particle emissions have been recognised as material matters by the Corporation's Management team, customers, associates and suppliers, the State, regulatory authorities and public agencies, regions, local government authorities and local communities, as well as by non-governmental and non-profit organisations. Keeping the rise in the average global temperature sufficiently below  $2^\circ\text{C}$  and the attempt to bring it even lower, to  $1.5^\circ\text{C}$  compared to pre-industrial age levels (targets which were agreed at the 21st Conference of Parties to the United Nations Framework Convention on Climate Change in Paris) require measures to be taken to curtail GHGs in the power generation sector.

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According to the most recent national survey of GHG emissions submitted by Greece to the Secretariat of the United Nations Framework Convention on Climate Change for the period 1990-2015, GHG emissions from burning fossil fuels and PPC's thermal power plants and by individuals to generate electricity and heat in 2015 accounted for 35.62 million tons of CO<sub>2</sub> eq, which was around 37% of all national emissions which stood at 95.7 million tons of CO<sub>2</sub> eq.

Recognising the environmental impacts of its activities, PPC has put in place and is implementing control and prevention programmes. These programmes are based on systematic monitoring of PPC activities and their impact on the environment.

### Greenhouse Gas Emissions

GHG emissions from thermal power plants (which are the main source of PPC emissions) are monitored in line with European Commission guidelines on plants participating in the European Union Emissions Trading Scheme (EU ETS) and with monitoring programmes developed by PPC and approved by the Ministry of the Environment & Energy.

Emissions from the thermal power plants are considered to be direct emissions (Scope 1, to use the terminology of the GHG Protocol Initiative). Methane (CH<sub>4</sub>) emissions from the mining of lignite at PPC mines and fuel consumption at Corporation buildings and by vehicles are also included in the same category. Indirect emissions (Scope 2) from electricity consumption at PPC (self-consumption by power plants and electricity consumption at the Corporation's buildings and other facilities) are not included as they have already been included in the Corporation's direct emissions. Emissions from business flights were calculated as 'Other indirect emissions' (Scope 3).



Greenhouse gas emissions	Type	2014	2015	2016
<b>Running of power plants</b>				
<b>Per fuel (kt CO<sub>2</sub>)</b>	<b>Scope 1</b>	<b>39,290</b>	<b>34,352</b>	<b>28,468</b>
Lignite (kt CO <sub>2</sub> )		33,954	28,755	22,430
Fuel oil (kt CO <sub>2</sub> )		2,727	2,765	2,758
Diesel (kt CO <sub>2</sub> )		785	822	830
Desulphurisation (kt CO <sub>2</sub> )		192	160	129
Natural gas (kt CO <sub>2</sub> )		1,581	1,797	2,267
Plants not included in EU ETS system (kt CO <sub>2</sub> )		51	53	54
<b>Other activities</b>				
<b>Lignite Mining<sup>(1)</sup> (kt CO<sub>2</sub> eq)</b>	<b>Scope 1</b>	<b>1,124</b>	<b>959</b>	<b>684</b>
<b>Buildings<sup>(2)</sup> (t CO<sub>2</sub>)</b>	<b>Scope 1</b>	<b>415</b>	<b>394</b>	<b>324</b>
<b>Fuel for vehicles<sup>(2)</sup> (t CO<sub>2</sub>)</b>	<b>Scope 1</b>	<b>2,591</b>	<b>2,277</b>	<b>4,000</b>
<b>Flights<sup>(3)</sup> (t CO<sub>2</sub>)</b>	<b>Scope 3</b>	<b>267</b>	<b>81</b>	<b>336</b>

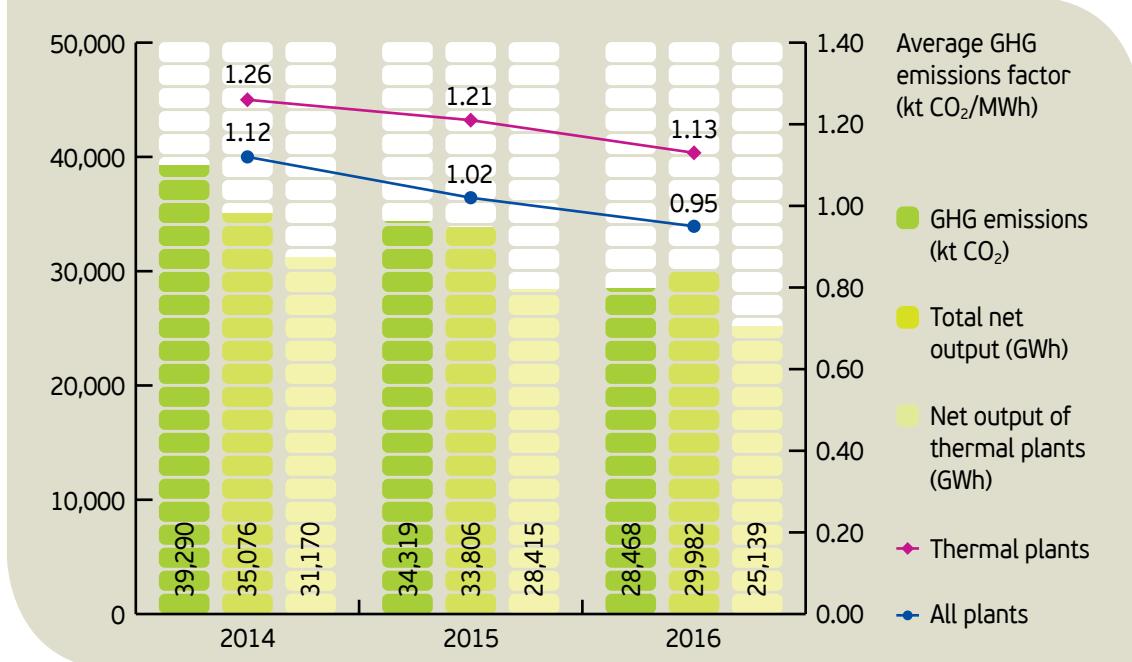
Note: Other indirect emissions from electricity imported by PPC are not counted since detailed data about the power plants and/or power systems that provide imported electricity are required, and that data is not available.

(1) The emission factor from the national emissions inventory has been used. To calculate the Global Warming Potential of methane, the value which appears in Annex III of Decision 24/CP.19 was used (GWP = 25) so that the relevant national obligations conform to the UN Framework Convention on Climate Change (UNFCCC) and European Commission figures.

(2) The emission factors proposed in the IPCC Guidelines (2006) were used to calculate emissions from fuel consumption at buildings and by vehicles.

(3) Business flight emissions were calculated by allocating the flights to various categories (domestic, European and transatlantic flights). The emission factors proposed by the GHG Protocol were used.

### Net output (in GWh) and greenhouse gas emissions (in kt CO<sub>2</sub>) from generation plants



## 6. ENVIRONMENT

In 2016 PPC reduced CO<sub>2</sub> emissions by 17% compared to 2015. The average rate of CO<sub>2</sub> emissions by PPC thermal plants (1.13 t CO<sub>2</sub> / MWh) was down 6.2% compared to 2015 (1.21 t CO<sub>2</sub> / MWh) while the average emission rate for all plants (thermal and hydroelectric) was down 6.5% (from 1.02 t CO<sub>2</sub> / MWh in 2015 to 0.95 t CO<sub>2</sub> / MWh in 2016). Moreover, in 2016 emission intensity (defined as GHG emissions from electricity generation and the extraction of lignite / revenues from the sale of electricity) continued to improve, down around 8% compared to 2015 (from 6.4 kg CO<sub>2</sub> eq/€ in 2015 to 5.8 kg CO<sub>2</sub> eq/€ in 2016).

- The values of the average thermal plant emission rate depend on the quality of the lignite extracted and the percentage of lignite and natural gas used to produce electricity, in the overall context of how the electricity market operates. In 2016, net energy production by lignite plants dropped by 23.3% (4,520 GWh) while net production by natural gas plants rose by 26.7% (1,179 GWh). In addition, the final withdrawal from service of old, inefficient power plants and minimal use of others had a positive impact on greenhouse gas emissions (for more information see paragraphs 6.3 and 6.4 below).
- The value for the overall emission rate is affected to a major degree by the productivity of hydroelectric power plants. In 2016, the quantity of electricity produced by hydroelectric power plants dropped by 10% compared to 2015 (which was a year with average hydraulicity) meaning that the contribution hydroelectric power plants made to overall power production by PPC plants remained at 16% of net output in 2016.

Overall, PPC has managed to reduce the CO<sub>2</sub> emissions rate of its overall power production system by around 27% compared to 1990 (1.3 t CO<sub>2</sub> / MWh).

### EU Emissions Trading Scheme

The Emissions Trading Scheme (ETS) is one of the European Union's main tools for reducing greenhouse gas emissions. ETS was launched in 2005 and the third phase of its operation started in 2013 (2013 - 2020). From 2013 onwards, all electricity companies are obliged to buy all allowances necessary to cover their emissions arising from electricity generation (as opposed to the free allocation that was in force from 2005 to 2012). More information about the regulatory framework on how the EU ETS operates can be found on the websites of both the Ministry of the Environment & Energy (<http://www.ypeka.gr/Default.aspx?tabid=456&language=el-GR>) and the European Commission ([http://ec.europa.eu/clima/policies/ets/index\\_en.htm](http://ec.europa.eu/clima/policies/ets/index_en.htm)). Detailed data about the plants covered by the scheme in the European Union can be found in the European Transaction Log (<http://ec.europa.eu/environment/ets/>).

72,821 CO<sub>2</sub> emission allowances were allocated to PPC for 2016 (for running the district heating schemes at the Agios Dimitrios, Amynteo,

Megalopolis I and Kardia Steam Electric Plants), and PPC handed back 28.4 million allowances. The allowances were acquired at a cost of € 178.2 million, down € 72.9 million compared to 2015 due to the roughly 17% drop in emissions compared to 2015 as a result of less power generated from lignite.

### Air Pollutant Emissions

As a result of burning conventional fuels to generate electricity at thermal power plants the air pollutants released into the atmosphere contribute to air pollution and cross-border pollution. The most important air pollutants are Sulphur Oxides ( $\text{SO}_x$ ), Nitrogen Oxides ( $\text{NO}_x$ ) and airborne particles. The quality of the lignite uses is a major defining factor in the emissions produced.

In 2016 all pollutant gas emissions fell compared to 2015.  $\text{SO}_x$  emissions dropped by more than in 2015 (over 40%). The drop in pollutant emissions was due to the reduced amount of electricity generated than in 2015, the drop in electricity produced from lignite and the decommissioning of old lignite plants (see sections 6.3 and 6.4 for more information).

Pollutants <sup>(1)</sup>	Emissions in 2014 <sup>(2)</sup> (tons)	Emissions in 2015 <sup>(2)</sup> (tons)	Emissions in 2016 (tons)
Sulphur oxides ( $\text{SO}_x$ )	53,800	51,300	30,600
Nitrogen oxides ( $\text{NO}_x$ )	54,000	49,100	44,900
Particle emissions (PM)	12,700	3,350	2,840
Pb	2.75	2.46	2.00
Ni	12.7	11.2	9.2
Cu	5.0	3.8	3.1
Cr(tot)	9.21	7.76	6.35
Zn	12.37	9.18	7.52
Cd	0.74	0.37	0.30
Hg	0.98	0.85	0.70
As	2.25	1.92	1.6

(1) The figures in the table are those that PPC publishes in the European Pollutant Release and Transfer Register (E-PRTR, Regulation (EC) No 166/2006).

(2) Final historical data

The Transitional National Emissions Reduction Plan for the period 2016-2020 (in implementation of Article 32 of Directive 2010/75/EU) requires a linear reduction (between 2016 and 2019) of overall annual emissions by units included in the plan (for  $\text{SO}_2$  and particles), while also allowing gradual implementation of the necessary environmental investments at those plants, while for  $\text{NO}_x$  emissions, compliance must take place by 1.1.2016. The Plan includes the Agios Dimitrios, Meliti, Megalopolis I and II steam electric plants and the Amynteo and Kardia steam electric plants are under a limited-duration derogation.

## 6. ENVIRONMENT

In the Plan, the Corporation has set out its policy and defined how it will operate its lignite plants over the time period specified, the actions and environmental projects which are required, and the timeframe for implementing them, coupled with the longer-term maintenance plans it has for those facilities.

The investments being made primarily relate to projects to reduce NO<sub>x</sub> emissions (such as replacing existing burners with new low-NO<sub>x</sub> emission ones, installing additional and/or modifying existing gas afterburn systems, recycling cold flue gases and in general anything other primary measures deemed necessary to achieve the targets set) at the Agios Dimitrios steam electric plants, as well as projects to reduce SO<sub>2</sub> emissions at the Agios Dimitrios steam electric plant (Unit V). The cost of the investment projects to reduce NO<sub>x</sub> emissions is € 31.51 million and the budget for SO<sub>2</sub> reduction works is around € 100 million. The relevant procedures for implementing these projects and signing contracts for them are under way. The following points are important in this regard:

- A decision has been taken to construct a flue gas wet desulphurisation plant at Unit V at the Agios Dimitrios steam electric plant (forced oxidation wet desulphurisation using lime). The project tender notice was published on 26.2.2015. After the tender procedure was completed, a contract was signed on 30.6.2017 with the lowest bidder (J&P- AVAX S.A.) for € 68 million.
- After an international lowest bidder tender procedure was launched on 7.10.2013, the contract for the project entitled "Upgrade of boiler at Unit V of the Agios Dimitrios Steam Electric Plant to reduce NO<sub>x</sub> emissions by taking direct measures" was signed with SOLERGON S.A. on 24.6.2014 (contractual price: € 2.94 million). The project is now in commercial service, and performance testing of the system will take place in the near future.
- Pilot testing of the hybrid dry desulphurisation method at Unit III of the Agios Dimitrios steam electric plant has been successfully completed. The tender notice for an open lowest bidder tender procedure for the dry desulphurisation project at Units I to IV has already been launched.
- On 7.8.2014 the project entitled "Upgrade of boilers at Units I and II of the Agios Dimitrios Steam Electric Plant to reduce NO<sub>x</sub> emissions by taking direct measures" was announced, and the contract with METKA S.A. was signed on 23.11.2015 (for a contractual Price of € 13.75 million). The project is currently under way.
- On 26.5.2015 the project entitled "Upgrade of boilers at Units III and IV of the Agios Dimitrios Steam Electric Plant to reduce NO<sub>x</sub> emissions by taking direct measures" was announced, and the contract with ERGOTEM S.A. was signed on 12.11.2015 for a contractual price of € 14.82 million. Installation of the new equipment at Unit IV has been

completed and preliminary and operational tests of the system are under way.

- Limited scale interventions at the Megalopolis Steam Electric Plant may be needed in order to reduce NO<sub>x</sub> emissions, without the boilers having to be replaced.
- On 30.6.2014 the project entitled “Interconnection of exchangers at Units I and II with existing energy recovery systems already installed at Units III and IV of the Agios Dimitrios Steam Electric Plant” was announced. The contract was signed on 29.5.2015 with the project contractor ERGOTEM S.A. (contractual price: € 2.88 million). The project is expected to be completed in the second half of 2017.

In order to monitor pollutant gas emissions, PPC operates a network of 33 stations that measure air quality and meteorological parameters in the wider areas around its power plants and mining sites. This network will be expanded should the need arise. The relevant authorities are systematically briefed about air pollutant emissions through annual and quarterly reports about excessive emissions, wherever necessary, in line with the decisions approving the environmental terms and conditions. In the event of excessive emissions, or damage to pollution control equipment, and in other relevant cases, a report is submitted immediately, within 24 hours.

The Vice Chairman and Deputy CEO have issued a decision setting up a Critical Environmental Issues Management Team comprised of staff from the Generation and Mines Divisions. The team's task is to constantly monitor the results of air quality measurements and to develop a specific strategy to deal with and limit exceedances of the permissible limits to the minimum possible. In 2016 the results of the Western Macedonia Tech. Educ. Inst. Research programme which objectively estimates extractive operations' involvement in the release to PM 10 suspended particulates into the air were used.

#### Ozone-depleting substances and fluorinated greenhouse gases

PPC's installed cooling capacity for its central air-conditioners at buildings in Attica is 2,960 RT (10.41 MW). The cooling fluids used at units are either categorised as ozone-depleting substances (ODS) or fluorinated greenhouse gases.

- In line with legislative requirements, during 2016 no existing facilities were topped up with R22, which is listed as an ozone-depleting substance.
- The fluorinated greenhouse gases used in air-conditioning facilities are R407C, R410, R134A and R404A. 197 kg, 10 kg, 12 kg and 100 kg were used respectively to top up air-conditioners. These quantities correspond to emission of 615 t CO<sub>2</sub> eq.

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### 6.4 ACTIONS TO REDUCE GREENHOUSE GAS EMISSIONS

#### Material aspects: Energy efficiency / new technologies and promotion of renewable energy sources

Investments in new technologies to improve energy efficiency, and promotion of renewable energy sources are aspects which are deemed material by Company management as well as by all stakeholders. Improving energy efficiency makes a positive contribution to the Company's financial results, while further promoting RES reduces the Corporation's exposure to fluctuations in carbon prices in the EU's ETS. At the same time PPC recognises its own responsibility for GHG emissions resulting from its operations, and helps effectively limit such emissions and thereby combat climate change.

PPC recognises the impact of climate change on all sectors of the economy, as well as its own responsibility as regards greenhouse gas emissions from its operations. Over the years PPC has been investing to improve the energy efficiency of its thermal power plants, improving the characteristics of the energy mix for electricity generation and developing hydroelectric power plants and RES projects. As a result, there has been a decrease in the average CO<sub>2</sub> emission factor of the PPC's electricity generation system over time.

#### PPC's capital expenditure plan

As part of the PPC's strategic priorities, the Generation Division has undertaken to implement investment projects to replace obsolete power plants with new, environmentally-friendly, cutting-edge, more efficient power plants. The following can be noted regarding the progress of the relevant investment projects in 2016:

- The natural gas-fuelled Megalopolis V combined cycle plant, with a net capacity of 811 MW, initially went into commercial service on 27.1.2016 and the process was completed by 9.6.2016. Performance testing at the plant has already been carried out and a third party recently submitted an evaluation report of those tests to PPC. On 30.11.2016 provisional acceptance of the plant commenced. HEDNO Code compliance tests for the plant have already been carried out and on 30.6.2017 IPTO was sent an application to enter it in the IPTO register of units.
- Civil engineering works for the new steam electric plant at Ptolemaida (Unit V) fuelled by pulped lignite, with a gross capacity of 660 MW and capable to generating 140 MWth of thermal power for a district heating scheme, are under way. Mechanical and electrical equipment is in production. PPC is also examining the updated project implementation

schedule submitted by the Contractor, according to which the Unit is expected to be put into commercial service in July 2020. There are plans to install a CO<sub>2</sub> capture and compression system at this unit (which will replace the decommissioned Ptolemaida Steam Electric Plant) when CO<sub>2</sub> capture technology is ready.

- Work to build the new Southern Roads Thermal Electric Plant which consists of 7 identical 4-piston diesel-powered units with a total net output of 115,439 MW, fuelled by LFO, but also capable of burning natural gas, is already at an advanced stage, as are ancillary buildings and facilities. It is located at Piso Kambos and Plaka Steni in southern Rhodes. The new plant is expected to replace older, less efficient units at the Soroni Steam Electric Plant on Rhodes.

In 2016 the plan to withdraw old units from service continued. The units to be withdrawn from service are chosen based on criteria to do with their technical and economic obsolescence, and the inability (in technical and financial terms) to adapt them to new stricter environmental requirements. The commitments undertaken at national level to address climate change, and combat air pollution have also been taken into account. In light of that, the following units have already been completely decommissioned:

- Lignite units I and II at Megalopolis I Steam Electric Plant and the LIPTOL Steam Electric Plant (RAE Decision No. 111/2014), Units I, II and III (2016) and IV (2016) at the Ptolemaida Steam Electric Plant (Decision No. Δ5/ΗΛ/Α/Φ.7/161/3800/9.3.2011, and RAE Decisions No. 654/2014, 184/2015 and 405/2016), with a total installed capacity of 913 MW.
- Natural gas-fuelled unit III at the Lavrio Steam Electric Plant and similar units 8 (2016) and 9 at the Agios Georgios Steam Electric Plant with a total installed capacity of 536.5 MW (RAE Decisions No. 654/2014 and 405/2016).
- Oil-fuelled units I and II at Lavrio Steam Electric Plant and III and IV at Aliveri Steam Electric Plant with a total installed capacity of 730 MW (RAE Decision No 405/2016).

To optimise mining operations at the Ptolemaida Mines run by the Western Macedonia Lignite Centre, a project is currently under way to connect the Mavropigi mines via conveyor belts with the Kardia and Agios Dimitrios Steam Electric Plants. This is the first phase of a wider project to interconnect all Ptolemaida mines to the Steam Electric Plants in the area via suitable homogenisation systems. The benefits include improving the quality of the fuel supplied to the Steam Electric Plants, thereby improving the environmental performance of the power plants and also reducing costs.

More information about the PPC Capital Expenditure Plan is included in the 2016 Annual Report (pages 38-42).

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### Renewable energy sources

Apart from developing low carbon technologies, the PPC Environmental Strategy also includes significant investments to increase the share of power generated by utilising Greece's hydrodynamic potential and by developing projects that use renewable energy sources (through PPC Renewables S.A., a PPC subsidiary, in collaboration with other private investors). This includes investments in wind parks, small hydroelectric power plants, solar parks, biomass plants and geothermal power plants.

The Corporation takes advantage of the fact that Greece is intensely mountainous and so has built dams and created reservoirs to utilise the country's hydrodynamic potential to ensure that supply meets demand in each local catchment area. Today, PPC owns and operates 16 major hydroelectric power plants in various regions of Greece.

Note that the Sfikia hydroelectric power plant on the Aliakmon River and the Thisavros hydroelectric power plant on the Nestos River are pumping plants which store excess hydroelectric energy to distribute it when there is excess demand compared to output.

The following specific points should be borne in mind with regard to the development of hydroelectric plants (more information is also available in the 2016 Annual Report):

- Operational tests at the units comprising the Hilarion HPP (with an installed capacity of 157 MW, and estimated new electricity output of 330 GWh) have been completed and the procedure to enter the units in the Register of Units and the Dispatchable Units Register is under way. This is expected to be completed by the second half of 2017.
- Construction of civil engineering works at the Metsovitiko HPP (29 MW) is also under way. The tender procedure for the supply, installation and commissioning of electromechanical equipment is in its final stages and the contract is scheduled to be signed within the second half of 2017.
- As for the Mesohora HPP (the hydroelectric project upstream on the Acheloos River, with units with a  $2 \times 80 \text{ MW} + 1 \times 1.6 \text{ MW}$  capacity), PPC's view is that the plant is independent of the scheme to divert the Acheloos River towards Thessaly, and its continuation and completion must not be affected by issues associated with the diversion. In examining whether the Mesohora HPP can be disentangled from the overall project to divert the Acheloos towards Thessaly so that the project can be treated separately and environmental permits can be obtained independently of the progress of other projects in the river diversion plan, after decisions approving the management plans for catchment basins in the Western Mainland Greece water region and the Thessaly water region

were issued and published, PPC submitted an updated Environmental Impact Assessment to the Environmental Permitting Directorate of the Ministry of the Environment and Energy to enable steps to be taken to issue a Joint Ministerial Decision approving the environmental terms and conditions. The Environmental Permitting Directorate then sent the Environmental Impact Assessment to the competent bodies for consultation. The Thessaly Region and the Western Greece Water Directorate of the Peloponnese, Western Greece and Ionian Islands Decentralised Administration have all expressed a positive opinion about the EIA. It is expected that the steps required to issue the Joint Ministerial Decision approving the environmental terms and conditions for the Mesohora HPP will be completed during the second half of 2017. PPC will then take the other steps needed to complete expropriations of land, to enable it to block the diversion tunnel and start filling the reservoir, with the aim of ensuring that the project is operational within the first half of 2020.

#### **Other initiatives**

In order to reduce the environmental footprint of its operations, and to play an active role in international endeavours to combat climate change (by limiting emissions and impacts and by adapting practices), PPC participates in a number of voluntary initiatives and research programmes and takes a series of relevant measures. Some examples of what it does in this area are shown below:

- The Corporation is participating the EU's Greenbuilding scheme to carry out energy improvements to and obtain certification for its buildings. It has included its buildings in Kallithea (covering 1,400 m<sup>2</sup>) and Pagrati (covering 1,075 m<sup>2</sup>) that house customer service facilities in the scheme. Energy saving measures with a total capacity of 288 MWh were implemented at these buildings (which accounts for around 68% of consumption at the buildings before the measures were taken).
- PPC is also participating in EURELECTRIC's climate change adaptation working group, which it represents on the EU's Adaptation Steering Group.

## **6.5 WATER MANAGEMENT**

Developing Greece's hydrodynamic potential for electricity generation is one of PPC's most important activities, which contributes to reducing Greece's energy dependence and also reduces greenhouse and other gas

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emissions. To this end, dams are being built and reservoirs created. At the same time, PPC recognises the importance of water resources for sustainable development and, for this very reason is implementing a series of measures and preventative actions to protect and ensure integrated water management, in a responsible way, with a view to maximising the overall social and environmental benefits.

PPC also places particular emphasis on systematically monitoring the country's hydrological potential by maintaining a model monitoring network, which includes a highly reliable rain and meteorological network, with 173 metering stations primarily in mountainous areas, and a hydrometric network comprised of 45 stations that measure flow levels in rivers.

In addition to using data from the hydro-meteorological network for the PPC's own purposes, and to ensure safe planning of public and private works, the data also provides Greece's public authorities and other parties concerned with valuable information to help them effectively manage and protect the aqueous environment. Hydro-meteorological data continued to be provided free of charge to support education and research activities in the field of water resources. More specifically:

- During the year, hydrological data worth a total of € 45,000 was provided during the year to private researchers and research foundations, and fees of only € 650 were paid by private individuals in relation to these matters.
- The Corporation's Board of Directors Decision No. 189/26.7.2016 approved hydrological data from 90 meteorological stations operated by PPC, worth € 95,000, being supplied to the National Meteorological Service to complete the Service's Digital Climate Atlas for the 30-year period 1971-2000. That data was provided free of charge.

The water sources affected by the pumping carried out by the PPC (for thermal and hydro power plants) are presented in the following table, together with the protection status of each area (due to the high value of their biodiversity features). Information about the European ecological network Natura 2000 is available on the Ministry of the Environment & Energy's website (<http://www.ypeka.gr/Default.aspx?tabid=432&language=el-GR>).

Name of water source	Type	Protection regime
Almyros, Hania*	Lake (outlet)	NATURA 2000
Acheloos (Kremasta, Kastraki, Stratos)	Reservoirs	None
Aliakmon (Hilarion, Polyfyto, Sfikia)	Reservoirs	None
Aliakmon (Asomata HPP)	Reservoir	NATURA 2000
Agras	Reservoir	NATURA 2000
Nestos (Thisavros, Platanovrysi)	Reservoirs	NATURA 2000
Arachthos (Pournari I and II)	Reservoirs	None
Aoos	Reservoir	NATURA 2000
Ladonas (Ladonas HPP)	Reservoir	None
Tavropos (Plastiras HPP)	Reservoir	NATURA 2000

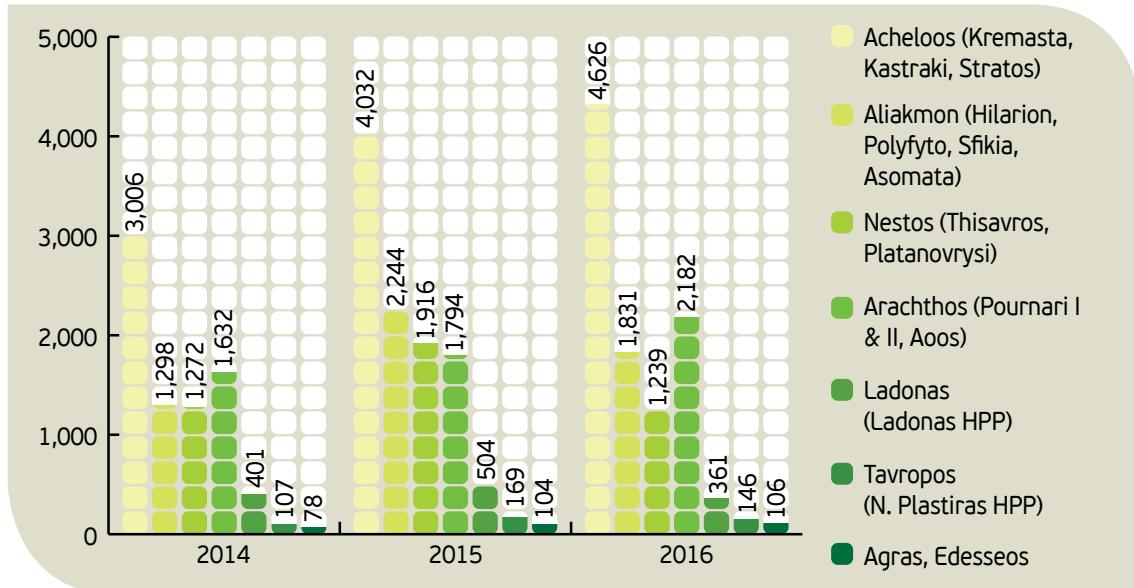
\* The Almyros source at Hania is within PPC Renewables' jurisdiction. According to the contract between PPC and PPC Renewables, responsibility for operating the hydroelectric power plant and monitoring the quality of water in the reservoir lies with the Hania Steam Electric Plant, in line with the Joint Ministerial Decision on the environmental terms and conditions applicable to the plant.

### Water management at hydroelectric power plants

2016 was a year with average hydraulicity, with water inflows to reservoirs down around 2.5% compared to 2015.

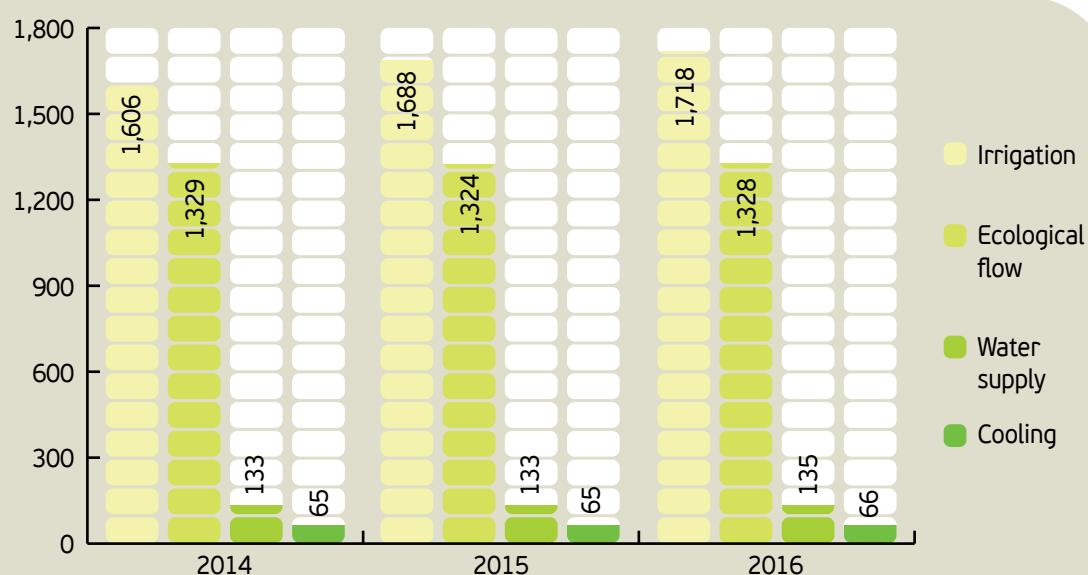
Hydroelectric projects ensure flood protection and meet both the water supply and irrigation needs of adjacent areas. In addition, dams ensure a minimum continuous supply of water in the riverbed (ecological flow), even in times of severe drought, thereby contributing significantly to protecting and managing Greece's water resources. Plant operations are scheduled to ensure that ecological flow requirements as well as water supply and irrigation needs are met. This is done in cooperation with the competent regions (for annual and daily scheduling) taking into account the system's energy requirements.

### Water inflows per reservoir (millions of m<sup>3</sup>)



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### Use of water per usage category (millions of m<sup>3</sup>)

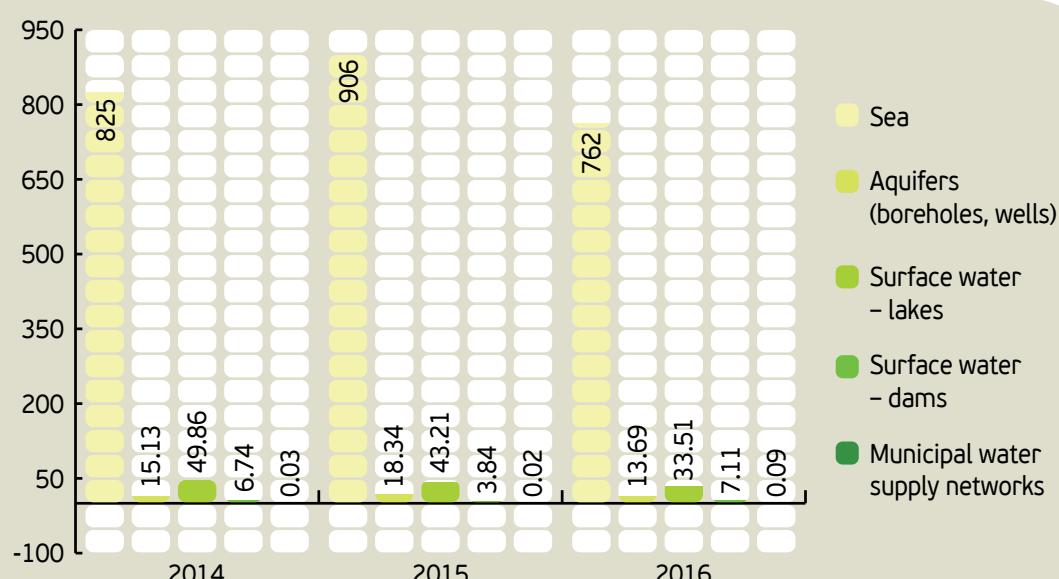


Note: The PPC reservoirs mostly provide water to Thessaloniki, Agrinio, and Karditsa, Lefkada and many areas near the reservoirs.

### Water management at thermal power plants

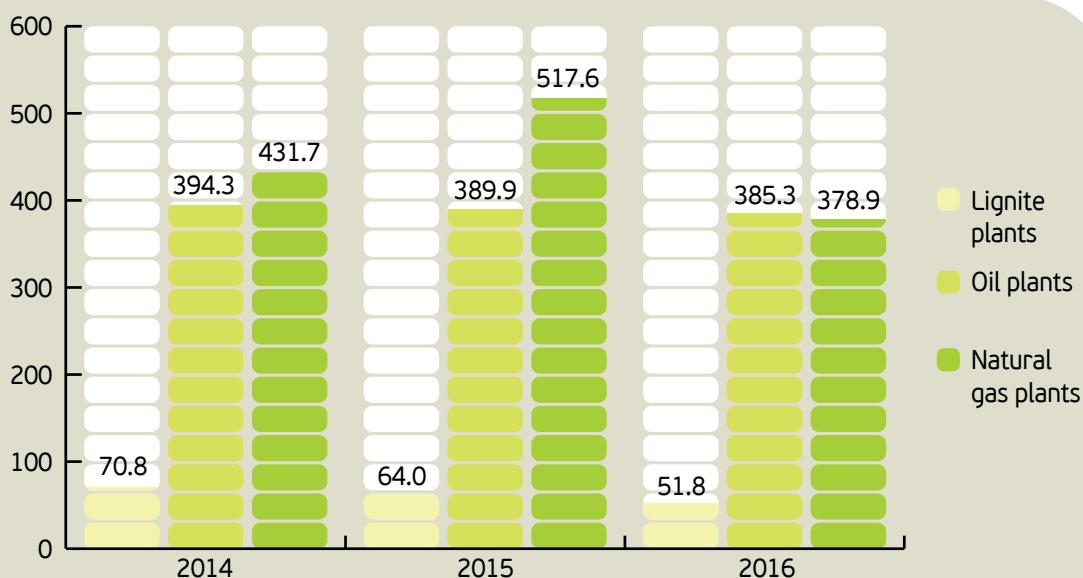
Water is abstracted in the area around thermal power plant projects for various uses, such as for cooling the power generation towers.

### Quantity of water drawn from abstraction sources (millions of m<sup>3</sup>)



Note: This includes the quantity of seawater used for cooling (2014: 822 million m<sup>3</sup>, 2015: 903 million m<sup>3</sup>, 2016: 816 million m<sup>3</sup>).

### Quantity of water drawn per category of thermal power plant (millions of m<sup>3</sup>)



Note: This includes the quantity of seawater used for cooling (2014: 822 million m<sup>3</sup>, 2015: 903 million m<sup>3</sup>, 2016: 816 million m<sup>3</sup>).

To ensure rational water management, PPC recycles and reuses significant quantities of water thereby reducing the total volume required to meet its needs. The relevant amounts of water recycled and reused at its power plants, are 10.17% for the lignite-fuelled plants and 64.37% for oil plants. Please note that the estimated recycling rates above do not include the quantity of sea water used for cooling.

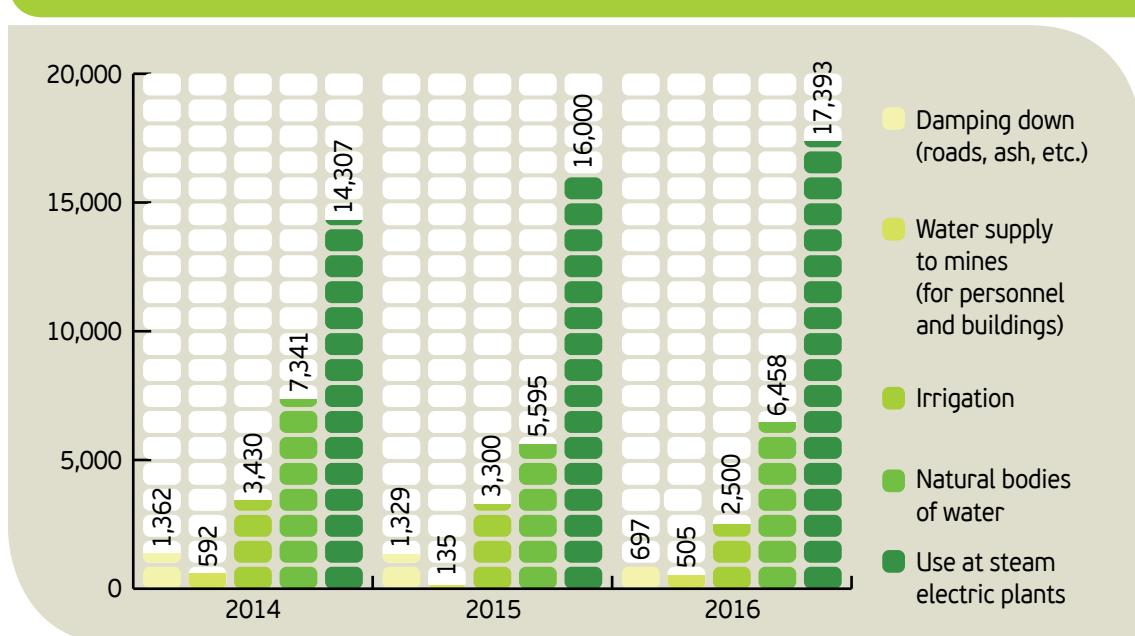
#### Water management at lignite mines

In areas where mining activity is carried on, pumped water is used to meet the needs of the mines (which is either groundwater to protect excavated areas from water ingress, or surface water from the drainage pumping stations located on the mine floors). Furthermore, depending on needs, in the context of existing established policy of good cooperation with local communities, water is made available to neighbouring municipalities to irrigate local crops or for other uses. At the same time, excess amounts of water are returned to natural bodies of water in the region, thereby improving the water balance and their overall quality, since the water is groundwater abstracted from boreholes.

It should be noted that the Corporation makes a positive contribution to maintaining the Soulou canal in the Ptolemaida area, ensuring that it is sustainable and guaranteeing ecosystem balance.

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Use of water per usage category (millions of m<sup>3</sup>)



Experts from the Corporation prepare mine drainage studies every year. In addition to containing data about the quantities of water pumped out during the previous year, these studies also show the hydrogeological conditions in the area around each mine as extraction work progresses, and an assessment of the impact of pumping activities on the aqueous environment in the area is made, and measures to limit that impact are proposed.

### 6.6 WASTE MANAGEMENT - USE OF BY-PRODUCTS

#### Material aspect: Waste

Waste management has been recognised as a material aspect by Company management and almost all PPC stakeholders, since rational management contributes to efficient operation of the Corporation and aids its compliance with environmental legislation, while minimising the environmental impacts on all media.

#### Solid waste and waste in liquid form

PPC production processes (power plants and mines) generate solid waste which the Corporation ensures is suitably managed in line with the provisions of the applicable legislation. The criteria here are protection of the environment and sustainable development. Waste management

is based on PPC cooperating with alternative management system companies that have been approved by the Hellenic Recycling Agency in line with the applicable legislation, and with collection companies that are licensed for each type of waste in relation to the transfer, management and reuse of waste in Greece and abroad.

PPC takes all necessary measures to minimise leakages/spillages and to ensure the safe collection of waste oils and liquid fuels in suitable tanks.

Waste description	Quantity (tons)	Management method
<b>Material, Fuel, Purchasing And Transportation Department</b>		
Metals (iron, steel, steel ropes, etc.)	8,139.92	Sale through highest bidder tenders
Different types of cables	113.32	
Project machinery - decommissioned vehicles - decommissioned machinery	453.23	
Plastics	49.05	
Waste oils / lubricants	2,551.05	
<b>Thermal Power Plants Operations Department</b>		
Print toner waste containing hazardous substances	0.11	Disposal
Fly ash and dust from oil boilers	97.25	Recovery
Sludge from on-site treatment of discharged liquids containing hazardous substances	180.49	Recovery
Sandblasting materials containing hazardous substances	87.43	Recovery
All types of mineral oil	725.45	Recovery
Oils, oils mixed with water, from oil/water separators	145.46	Recovery
Waste oil and diesel	687.03	Recovery
Packaging containing residues of hazardous substances or that have been polluted with hazardous substances	19.33	Recovery
Absorptive materials, filter materials, wiping cloths, protective clothing polluted with hazardous substances	31.15	Recovery
Organic waste containing hazardous substances	1.6	Recovery
Chemicals disposed of	52.45	Recovery / disposal
All categories of batteries and accumulators	21.27	Recovery
Waste containing oil	287.63	Recovery
Construction materials containing asbestos	0.76	Disposal
Equipment disposed of which contains CFCs	1,384.20	Recovery
Used active carbon	2.16	Recovery / disposal
Waste electrical and electronic equipment, fluorescent tubes and other mercury-containing waste	1,615.47	Recovery

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Mines Environment Department		
Ferrous scrap metal	2,280.12	Recovery
Copper cables uses (30-65% copper content) and other cables	26.68	Recovery
Used lead accumulators	35.70	Recovery
Used contaminated absorbents and filters	90.24	Recovery
Waste from electronic equipment	5.78 and 200 items	Recovery
Lights, fluorescent bulbs and batteries	119.64 and 21 bins with fluorescent bulbs	Recovery
Waste oils / lubricants	446.2	Recovery
Packaging with waste belt fixing adhesive	0.96	Recovery
Damaged high pressure flexitubes	10.92	Recovery
Miscellaneous parts	260.02	Recovery
Paper	35.00	Recovery
Spent cooking oils	0.17	Recovery
Vehicles	3 items	Recovery
Decommissioned machinery and earthworks machinery	957.48 and 11 items	Recovery
Empty barrels that contained lubricants	7,376 items	Recovery
Empty print cartridges	161 items	Recovery

Note: The figures have been calculated based on those cited in packing lists, delivery notes and invoices from collectors / hauliers. For decommissioned vehicles, the data comes from their disposal certificates. The terms 'recovery' and 'disposal' are used in accordance with the provisions of Annexes I and II of Section B of Law 4042/2012.

To better utilise the waste it generates, in 2016 the Western Macedonia Lignite Centre presented the results of a study entitled 'Study to explore alternative solutions to managing used conveyor belts at the Western Macedonia and Megalopolis Lignite Centre mines' which had been commissioned by the Mines Division. The study sought to record and evaluate methods and best practices for utilising used conveyor belts from the mines, including the use of pyrolysis to produce alternative fuels, while also recovering the metal parts from that equipment. The study's results and conclusions will serve as useful tools in choosing the optimal solution from an environmental and financial perspective.

### Use of by-products

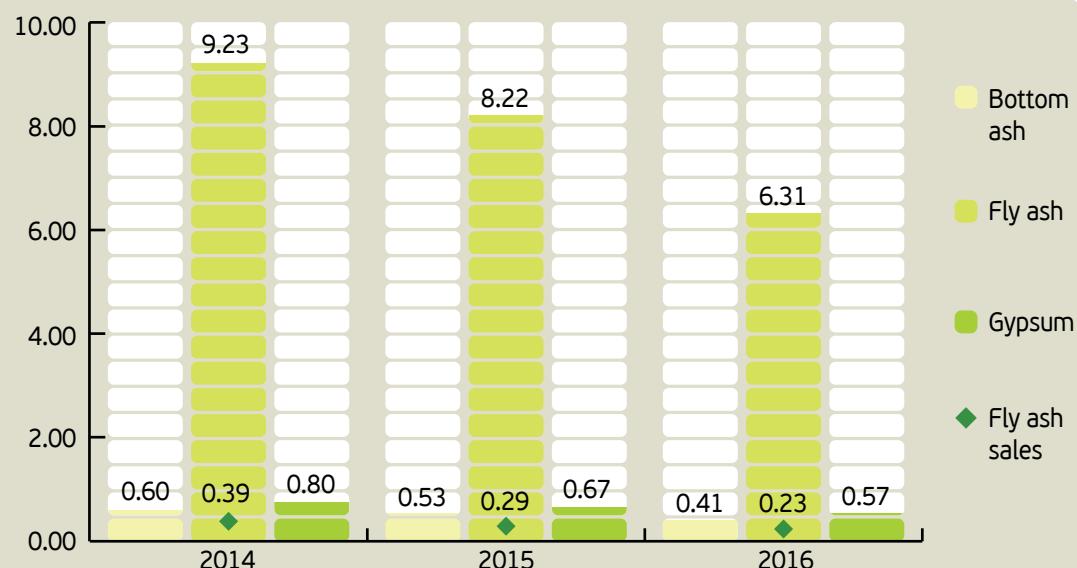
The main PPC by-product is fly and bottom ash while gypsum is produced in large quantities by the desulphurisation units of thermal power plants. PPC has already recorded the quantities of ash it commercially trades, in line with the European REACH Regulation (registration number: 01-2119491179-27-0086). In 2011, the Corporation also began to register gypsum so that this by-product could also be disposed of commercially. Due to the lack of commercial interest which would make trading in

gypsum financially advantageous, the process of registering under the REACH regulation has been temporarily suspended.

In 2016, the burning of lignite at the Corporation's thermal power plants produced nearly 6.3 million tons of fly ash, 0.4 million tons of bottom ash and 0.57 million tons of gypsum.

- 4.7 million tons of ash were deposited along with inactive materials in the mines of the Western Macedonia Lignite Centre.
- 0.34 million tons of ash and 0.07 million tons of gypsum were deposited in a specifically licensed area near the Meliti Steam Electric Plant.
- 1.1 million tons of ash and 0.5 million tons of gypsum were deposited in a specially designed area within a depleted mine at the Megalopolis Lignite Centre.
- 0.23 million tons of fly ash were sold in 2016.
- For the time being, the gypsum is being placed along with ash from the units at the Company's mines.

#### Use of by-products (quantities in millions of tons)



Note: The difference in the quantities of total quantity of ash produced and the total quantity used, as well as all quantities of gypsum produced, are deposited in specially designed facilities at the Corporation's mines.

To limit environmental impacts from transporting ash from disposal sites, in 2016 a project was launched to construct conveyor belts to carry the ash generated, from the Agios Dimitrios Steam Electric Plant to the network of conveyor belts at the Southern Field Mine. There the ash will be mixed with pure excavation materials and then disposed of in the mine's deposition sites. The project will be operational in the 2nd quarter of 2017.

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The new conveyor belt for collecting ash will replace the existing backup ash conveyor belt which will be withdrawn from service. The old main ash line now serves as a backup for the new main line.

The optimum solution from among the various alternatives examined was chosen based on technical, environmental and financial criteria. The solution chosen in the end entails construction of an open, raised, 1,800 mm wide conveyor belt fitted with a damping and misting system.

This is the first time a conveyor belt of that size is being used in Greece to transport and dispose of ash, though one has been used to convey other materials. There are both environmental and operational advantages, since it ensures:

- A major drop in the number of ash transhipment sites, meaning a decline in the leakage of suspended particles to the atmosphere.
- A drastic reduction in lateral ash leakage, due to the deliberately large size of the conveyor belt. In effect, this ensures that only half the cross-section of the belt is filled.
- Easier cleaning of the surface below the belt is also possible because it is raised. This means that there is easier access for cleaning the equipment.

### Liquid waste

All power plants operated by the Corporation have state-of-the-art systems for treating liquid waste, in accordance with the provisions of relevant decisions approving the environmental terms and conditions of each plant, and in accordance with the Best Available Techniques Manual for Large Combustion Plants. Treated wastewater is either disposed of into natural bodies of surface water or ground water depending on the location of the facility and the authorisations in place. The Corporation systematically monitors the quantities and characteristics of the waste generated and briefs the competent authorities on a regular basis as it is obliged to.

	2014	2015	2016
<b>Sea water for cooling (m<sup>3</sup>)</b>			
Lignite plants	-	-	-
Oil plants	392,074,665	387,400,496	382,736,114
Natural gas plants	429,963,425	515,504,779	375,891,713
<b>Treated liquid waste (m<sup>3</sup>)</b>			
Lignite plants	30,022,771	25,337,549	21,536,217
Oil plants	155,463	149,571	146,250
Natural gas plants	554,760	941,017	1,328,471

Note: The quantities of waste are measured by flow meters and the quantities of cooling water are estimated based on the capacity of the pumps under conditions of maximum dispatch, and length of operation.

It should also be noted that a significant quantity of treated waste is disposed of for various purposes, primarily irrigation, especially during the summer months. The quantity disposed of in 2016 was approximately 800 million m<sup>3</sup>.

## 6.7 BIODIVERSITY

Protecting biodiversity is an integral part of the PPC environmental policy. In line with the applicable legislation and decisions approving the environmental terms and conditions for running its power plants (and the technical studies that accompany the applications submitted to the competent authorities) the Corporation takes steps to manage the natural environment in those areas where it extracts lignite and generates electricity. These measures seek to preserve or rehabilitate natural habitats for endemic flora and wildlife. As far as technically feasible, it also employs pollution abatement technologies and best practices to limit the pollution load generated for all possible media and to minimise the impact of PPC operations on the environment and the ecosystem.

Around the mines, for decades now PPC has been implementing extensive soil rehabilitation schemes and takes measures to optimise the way in which affected areas are rehabilitated and to select the most appropriate final land use, taking into account a number of parameters, such as:

- the local terrain and the climate conditions,
- ecosystem variables after the end of the mining activity,
- human geography and the socio-economic structure, and
- prevailing land uses and the necessity of these uses.

Soil rehabilitation projects include tree planting schemes, landscaping the ground, planting trial crops, and cleaning and tidying up the mines. The land rehabilitated with tree plantations produces particularly beautiful ecosystems which are home to a variety of wildlife.

Around 4,000 ha of land at the Western Macedonia Lignite Centre, where the Ptolemaida and Amynteo mines are located had been rehabilitated by the end of 2016. Plantations with forest species have been established on more than 2,000 ha, farmland and pastures occupy 1,400 ha and around 600 ha have been laid with fresh soil.

Rehabilitated land at the Ptolemaida mine covers 3,002 ha, including 345.5 ha covered with fresh soil, 1,047 ha of farmland, 9 ha of lakes, and 1,601 ha planted with trees, 85.5 ha of which were planted in 2016. The following measures have been taken:

- 99,000 acacia saplings were planted in various locations at the deposition sites at the Western Macedonia Lignite Centre. 1,350 Leyland cypress

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saplings were also planted at the Lignite Stockpile area at the Agios Dimitrios Steam Electric Plant.

- Agrochemicals and pesticides were applied using conventional means to 6.2 ha of experimental orchards.
- Lavender is being grown, which is used to produce essential oils. Other herbs have also been planted on the outer deposition site at the Main Field Mine.
- Soil tests have been carried out (in partnership with the Thessaloniki Institute of Pedology, operated by the Greek Agricultural Institute DIMITRA). 90 samples were taken from 30 locations at the Main Field deposition sites. The objective was to assess the suitability of these new soils for agriculture.
- Landscaping at new facilities at the Kardia Field Mine. The area was sown with grass and an automatically watering system installed.

No trees were planted at the Amynteo Mine in 2016 and no landscaping works were carried out. The works that were carried out related to cleaning and tidying up the mines and maintaining the forests (pruning and thinning of trees, etc.) and green areas (lawns, hedges, etc.).

Around 700 hectares so far have undergone rehabilitation at the Megalopolis Lignite Centre, with plantations of forest species having been created on an area of 500 hectares and 200 hectares given over to farming.

- To manage the areas given over to agriculture use, new top soil was added, lanes were created and 13 plots demarcated on an area of 81.5 ha at the Kyparissia inner deposition site.
- During 2016, 25,000 plants were planted on the western outer deposition site at Horemi on 23.6 ha, which had not until then undergone rehabilitation. Before planting took place, the area was landscaped where needed, and fencing was installed. 1,314 plants which had been destroyed at the western outer deposition site at Horemi were replaced (hedges around farmland) and 400 fruit trees were planted at the Thoknia outer deposition site.

In 2016 PPC leased the following areas of cultivable land to others:

- 14 model farms at the Megalopolis Lignite Centre (used to grow oats and barley).
- 318.5 ha at the aggregate deposition sites at the Ptolemaida Mines.
- 87.8 ha of rehabilitated land at the aggregate deposition sites at the Amynteo Mines.

Rehabilitation projects were put to special uses such as a pilot hydroponic greenhouse heated by a district heating scheme in cooperation with the National Agricultural Research Institute and the Florina Technological Educational Institute, artificial wetlands, a forestry park,

outdoor disposal areas at the Main Field Mine in Western Macedonia planted with all species of trees that flourish in Northern Greece, leisure parks, exhibition centres, waste disposal facilities, a nursery for small birds and animals, and moto-cross tracks, to name a few. A section of the land covered with fresh top soil at the Western Macedonia Lignite Centre has been transferred to DIADYMA S.A. to house waste management facilities.

Other actions taken by PPC to protect biodiversity are:

- Artificial plantations of forest species have been created based on the species deemed suitable for the specific location of the mine deposition sites, and
- Artificial nests and habitats have been created and small wetlands developed to encourage a growth in bird populations.

#### **Ecosystem equilibrium studies and other protection / rehabilitation measures**

<b>Natural area</b>	<b>Protection / rehabilitation actions in 2016</b>
Lakes along the course of the Rivers Acheloos, Aliakmon, Nestos, Arachthos, Megdova, Ladonas and Agras	Dams and the surface of reservoirs in the immediate area around dams are regularly cleaned to remove wood and rubbish (ongoing action). Boats and personnel are provided to take samples of waters from all lakes and measurements of qualitative and biological parameters are performed by the Greek Biotope-Wetland Centre.
River Nestos and the Thisavros and Platanovrysi Reservoirs	PPC/Nestos Complex is also cooperating with the Interbalkan Environment Centre to implement actions to measure quality and biological parameters on river and lake waters in the Nestos system (ongoing action).
Hydroelectric power plant complexes	The power plants are scheduled to operate so as to ensure that the minimum flow in the bed of the river downstream of the PPC S.A. Works, which is required for ecological purposes, is maintained.
Wider area around PPC projects on the Nestos River	Meteorological data is being collected following the installation of two meteorological stations at locations proposed in the study to identify potential changes in microclimates in the wider area of PPC projects on the Nestos River (ongoing action). The network of meteorological stations is being extended (by adding one further station) in the wider area of PPC S.A. projects along the Nestos River. In partnership with the Rhodopi Mountain Range National Park Management Agency, PPC is designing a system to monitor indicators for protected species of flora and fauna in the wider area of PPC S.A. projects along the Nestos River. PPC has provided the Rhodopi Mountain Range National Park Management Agency with (a) 80 timber posts to be installed parallel to the existing road network. This will allow genetic material from bears to be collected; (b) 2 birdwatching huts to be installed on the sides of the Platanovrysi reservoir.

## 6. ENVIRONMENT

Natural area	Protection / rehabilitation actions in 2016
Aoos Springs Hydroelectric Power Plant	<p>Materials resulting from the cultivation of seed potatoes were cleared from the water abstraction pump room.</p> <p>Partnership was developed between the Municipality of Metsovo, the Epirus Region, the Northern Pindos National Park Management Agency, to combat foreign species in the reservoir at the Aoos Springs Hydroelectric Power Plant.</p>
Hilarion HPP	<p>Forestry studies on the following matters were approved during 2016. Construction of the works referred to in these studies is expected to start soon.</p> <ul style="list-style-type: none"> <li>(a) rehabilitation of the forest vegetation and improvement of the look of the landscape around the pump room and water abstraction facilities at the start of the Paliouria - Panagia bridge, following interventions around the reservoirs and landscaping of the excavated slopes.</li> <li>(b) rehabilitation of the forest vegetation and improvement of the look of the landscape around the sand-gravel extraction pits, downstream from the Dimitra - Paliouria bridge, following interventions around the reservoirs and landscaping of the excavated slopes.</li> <li>(c) rehabilitation of the forest vegetation and improvement of the look of the landscape following interventions during construction of the Hilarion HPP, covering the limestone quarry located within the Deskati Municipal Unit.</li> </ul> <p>As part of the rehabilitation and compensatory works carried out in the wider area of the Skopos - Papadia Dam, in 2016 a forestry study was prepared and approved relating to rehabilitation of the forest vegetation and improvement of the look of the landscape following interventions to build the project, while a special technical and forestry study relating to rehabilitation of the clay extraction pit in the Agios Nikolaos area downstream from the dam in the Prefecture of Florina was also prepared. In the near future the proposals contained in these studies will be implemented.</p>
Ladonas HPP	In partnership with Greek Biotope-Wetland Centre actions were also taken to measure quality and biological parameters on waters in the Ladonas lake system.

In collaboration with institutions such as the Hellenic Centre for Marine Research, the National Agricultural Research Foundation, as well as university departments, PPC conducts studies on ecosystem equilibrium so as to develop specific strategies, operations, actions or plans relating to biodiversity rehabilitation / regeneration / management in accordance with the provisions of national and European law.

### NATURA protected areas

The areas where PPC engages in mining operations are not located in NATURA 2000 network areas or other protected areas. The Corporation's hydroelectric facilities located within protected areas (based on Ministry of the Environment NATURA maps) cover an area of 77.54 km<sup>2</sup>.

Name of water source located within a NATURA 2000 Area	Area covered by PPC's Hydroelectric Facilities within protected area (σε km <sup>2</sup> )
Almyros, Hania*	0.08
Aliakmon (Asomata HPP)	2.98
Agras	9.41
Nestos (Thisavros)	27.25
Nestos (Platanovrysi)	2.63
Aoos	11.63
Tavropos (Plastiras HPP)	23.56
<b>Total</b>	<b>77.54**</b>

\* The Almyros source at Hania is within PPC Renewables' jurisdiction. According to the contract between PPC and PPC Renewables, responsibility for operating the hydroelectric power plant and monitoring the quality of water in the reservoir lies with the Hania Steam Electric Plant, in line with the Joint Ministerial Decision on the environmental terms and conditions applicable to the plant.

\*\* In 2016 a reassessment of the area of the PPC protected areas was performed, subject to possible fluctuations in real estate register

## 6.8 REGULATORY AND LEGISLATIVE COMPLIANCE

PPC seeks to fully comply with national and European legislation and regulations on environmental issues. In 2016 PPC paid € 28.6 thousand in fines. No fines relating to compliance with the environmental operating terms of power plants were imposed on PPC.

PPC has filed appeals against the fines with the relevant appellate bodies or the administrative courts.

It should also be noted that PPC takes all necessary measures to ensure that it complies with the maximum permissible noise limits at its facilities, and in 2016 no fine was imposed on PPC in this regard.



## 7. MARKET AND CUSTOMERS



### 7.1 PRODUCTS AND SERVICES

The Corporation's main product is electricity supplied to residential customers, professionals and large businesses nationwide.

PPC offers different tariffs for different categories of customers. The tariffs depend on the voltage (high, medium and low) and on the use (residential, industrial, general, agricultural, daily newspapers and street/square lighting tariffs). In September 2015 PPC launched a new tariff plan (the corporate tariff) available to large enterprises and groups (whose total annual consumption is equal to or greater than 10 GWh) which have many customer service locations nationwide (100 or more meters) connected to the medium and low voltage networks.

RAE has decided that PPC, as the Universal Service Supplier, must undertake to supply electricity to small customers who have not found any other supplier or who cannot find one in the deregulated market taking into account existing commercial terms and conditions. Small customers include households and other customers whose power supply requirements are up to 25kVA. Based on December 2016 data, PPC had 12,555 small customers in the Universal Service scheme.

Detailed information about all PPC connections is available in section 3.1.

## Pricing Policy

PPC's new pricing policy reflects modern trends in the retail market, and was designed to respond to customer needs, both in terms of the new discount policy offered, and in terms of new tariff plans tailored to companies and groups. A new loyalty scheme has also been launched that rewards household customers who regularly pay their bill on time.

PPC wanted to recognise consistent, reliable payers and so developed the consistent household payers scheme (for tariffs Γ1 and Γ1N). Under the scheme household customers who have paid their final bills for 2015 in time will receive a rebate equal to twice the fixed charge, for each final bill they receive in 2016.

Moreover, on 1.4.2016 PPC launched the 'Synepeia' (Consistent) scheme whereby the Corporation gave professionals and businesses a 10% discount on electricity charges in their bill if they paid their bills in time. Then on 1.7.2016 the scheme was modified and extended to give a 15% discount to both professionals and household customers (on tariffs Γ1 and Γ1N).

Implementing Article 1 of law 4320/2015 which requires up to 300 kWh of electricity a month to be provided free to main residences for individuals and families who live in extreme poverty during 2015, PPC took the steps needed in partnership with the competent public agencies to sign the relevant agreements, notify staff in-branch and update its computer systems. As a result, beneficiaries of the scheme received 'free electricity' in their bills. The scheme continued in 2016 as well and came to an end on 31.12.2016. By the end of 2016, more than 85,000 customers had benefited.

PPC's pricing and commercial policies demonstrate in practical terms its support for households and businesses. Among other things, it has devised schemes to facilitate bill repayments and put in place loyalty rewards for regular, consistent households and professionals given the constantly worsening economic environment, thereby helping preserve jobs and promote economic growth in Greece.

## Vulnerable customers

Since 2011 PPC has been offering a Social Residential Tariff following government decisions on this matter. This specific tariff offers up to a 48% discount on the normal residential tariff for selected categories of consumers under the conditions the government has laid down. The discount is available to people on a low income, people with large families, the long-term unemployed, people who are more than 67% disabled and people requiring mechanical support. Since 1996 PPC has also been implementing government policy by giving large families with

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at least 4 dependent children a special 'large family' tariff which is even more favourable than the recent social residential tariff.

After the Ministry for Productive Recovery, the Environment & Energy issued decisions approving the Supply Code and laying down the requirements for households enrolling in the vulnerable customers register, PPC put in place a series of additional, favourable arrangements to help vulnerable social groups pay their bills. Vulnerable groups (i.e. persons benefiting from the social residential tariff, large families and the elderly who meet the relevant criteria) can now enjoy the following benefits:

- They now have 40 days within which to pay their bill, rather than 25 days from the date of issue.
- They can pay their electricity bills in the number of monthly interest-free instalments needed to ensure that each instalment is not more than half the value of the normal monthly outlay on electricity.
- Interest-free repayment plans can be individually arranged.

By the end of 2016, around 660,000 customers had joined the social residential tariff.

The Corporation assists customers submitting applications via the online application form on the HEDNO website, by adopting practices like those listed below which go beyond the requirements of the Ministerial Decision:



- When electricity contracts are first signed, the advance payment required is no more than € 20.
- Customers can now apply over the phone by calling 11770.
- Information is available at any time about the progress of an application and the outcome of the assessment process. Customers simply have to dial 11770.

Beneficiaries of special tariffs	Approved applications in 2016
The disabled	61,081
The unemployed	58,812
Individuals requiring mechanical support	11,464
Large families	1,583
Families with 3 children	31,464
The elderly (over 70)	16,112
Low income customers	496,152
<b>Total</b>	<b>676,668</b>

### e-bills

In 2012 PPC launched its new “e-bill info” service. In 2013 PPC began sending out alerts that a bill had been issued. PPC also upgraded the service, adding links to bank websites to allow bills to be paid automatically in a fully secure environment. The aim was to develop e-bill info, taking into account market best practices so that the bill is eventually only available online.

PPC customers can access their bills for the last 12 months online, and receive updates about new bills that are issued by sms or email.

By the end of 2016, 730,000 customers had registered for the e-bill service.

At the end of 2016 it was decided to take steps to improve the current e-bill info service, so that only e-bills would be issued. Among the many factors examined, careful attention was paid to the design of the ‘Customer registration / authentication’ module so that the service could be offered securely to actual users of properties and customers who have contracts with the Corporation.

The aim of the new service is to provide better information to customers about their bills while also saving resources. The new e-bill online platform will offer customers the following services:

- Applications for e-bills only
- Monitoring of all meters via a single e-bill
- View bills and repayment plans for the last 12 months

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- New bill alerts (showing amount and expiry date).

The project is expected to be completed within 2017.

### Guarantees of Origin

Guarantees of origin (branded as Greenpasses) confirm to anyone concerned that the quantity of electricity consumed at one's facilities has been produced from Renewable Energy Sources and has been specifically set aside by the producer (PPC in our case) in his name. Each guarantee of origin relates to 1 MWh.

In February 2016 PPC's Board approved the pilot launch of 1.2 million Guarantees of Origin for the 2016-2017 period, of the 2.5 million in total the Corporation has from its certified HPPs. These are to be made available to customers who perform their obligations and have a strong environmental focus. In 2016 PPC cancelled 789,854 Guarantees of Origin (cancellation equals delivery and consumption) for the following customers: OTE-Cosmote group, BIC Violex, Alpha Bank, Piraeus Bank and Masoutis Supermarkets.

### Nationwide customer service line

PPC customers can now dial 11770 to receive customer service rather than visiting one of our branches. A comprehensive call centre was launched on a small-scale pilot basis in 2013, and was rolled out nationwide in September 2014. In 2016 the 11770 line received 2,993,000 calls. PPC successfully answered 95% of those calls (a successful call is one which PPC answered which resulted in a conversation).

### Alternative payment channels

To improve the services offered and reduce customer waiting time, contracts were signed with third parties to allow them to collect payments for PPC at more than 6,000 locations in Greece (other than PPC stores) which could be found using the Google Maps application. Those alternative channels are bank ATMs, Hellenic Post offices, WIND, VODAFONE, and ACS Courier stores, large supermarkets, OPAP betting agencies, as well as bank standing orders or cash payments at automatic bill payment machines. Links have also been included on bank websites to encourage automatic, completely secure bill payment using e-banking or phone banking.

After steps taken to inform the public about alternative bill payment methods, as well as following imposition of capital controls and restrictions on cash withdrawals in June 2015, the number of visits to PPC stores to pay bills dropped 28% in 2016, compared to a drop of 35% in 2015.

PPC is closely monitoring developments to see how customers are using the various payment methods. Every week we monitor payments at automatic bill payment machines found in PPC stores and at the cashiers' desks of stores, banks, as well as of other external partners. Customer service times are also monitored at PPC stores which have the Nemo-Q prioritisation system.

Since early 2016 it has been possible to pay bills online at no extra cost using credit, debit and prepaid cards, or on PPC's website ([www.dei.gr](http://www.dei.gr)), or using POS devices installed at all PPC Stores. The aim is to promote yet another alternative payment method which is tailored to new market conditions, both to modernise PPC's image and to ensure better customer service. In 2016, 730,000 customers paid their bills using this service, generating revenues of € 88 million.

### **Repayment plans and disconnections**

For several years now PPC has shown that it is a socially aware, responsible corporation by putting in place actions and measures, like the new Repayment Plan Rules, depending on the category of customers involved (residential, commercial, vulnerable groups, etc.) and how consistent they are in paying their bills, to ensure that they are all treated in a more favourable way, as a response to the challenges Greek households and businesses are facing in the current economic crisis.

To improve service to customers wanting to enter into a repayment plan and reduce waiting time at PPC stores, the Corporation started handling such requests over the phone in 2013. In 2016 around 27% of customers were able to enter into repayment plans over the phone by calling 11770, without needing to visit a PPC store.

In 2016 PPC launched a series of targeted measures to promote repayment plans. The results were very encouraging.

- In March 2016, in an attempt to support farming activities the Board decided that farmers could repay outstanding debts to PPC in 36 instalments without having to make an upfront payment.
- That same month PPC listened to customer requirements and decided to offer a particularly favourable debt repayment scheme. For a period of 4 months from 1.4.2016 to 31.7.2016 all customers were able to arrange repayment of their debts in 36 monthly instalments without any upfront payment. Following successive extensions due to its popularity, this plan came to an end on 9.1.2017. Up to 31.12.2016, around 620,000 repayment plans were entered into and around € 1,600 million was paid. Evaluation of the plan revealed that by January 2017 € 300 million had been paid, and 61% of repayment plans remained active.

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PPC, it should be stressed, faces a major issue with overdue debts, which have risen significantly in recent years thanks to Greece's dire economic straits. So any decline in monies received is an issue of vital importance for PPC, since it impacts on business, competition and any prospect of growth, as well as PPC's ability to implement its societal programmes.

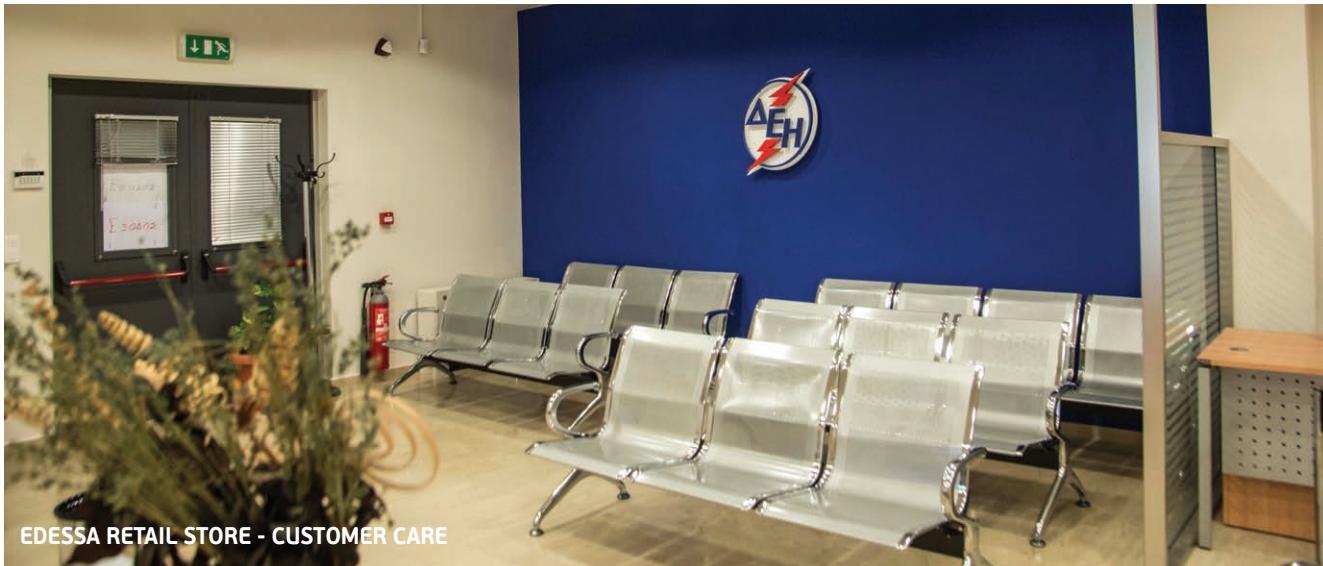
To improve collection rates, PPC has implemented a comprehensive series of mutually complementary, scalable measures and in recently these have been stepped up. One of these is to cut off power supplies to those in debt. This measure is used sparingly, and only for customers who cannot provide justification for late payment of their bills or who fail to comply with promises to pay off bills in instalments. Special categories of customers, such as vulnerable customers, individuals requiring mechanical support, and so on, are excluded.

Under the current Customer Supply Code (Government Gazette 832/B/9.4.2013) and under Corporation procedures, if a bill is not paid by the time the next one is issued, the unpaid amount is automatically incorporated into that bill and the phrase 'Disconnection notice' appears prominently on the bill. This informs the customer in writing that disconnection is imminent if he does not pay at least the minimum amount specified relating to the previous bill by the second bill's expiry date. So in practice customers who receive bi-monthly bills (which is to say almost all customers) now have the following amount of time within which to pay their bills: a) 85 days from the date of issue and b) 25 days from written notice contained in the second bill. Customers who receive monthly bills have the following amount of time to pay their bill before the disconnection notice is acted on: a) 70 days from the date of issue and b) 25 days from written notice which is contained in the second bill or in a letter.

After that deadline elapses, if bills have not been paid the supply will be disconnected based on a set of universal criteria adopted for each category of customer (households, professionals, etc.) taking into account the scale of debt and the past due period. The electricity supply agreement is terminated in line with the provisions of the applicable supply code (Article 39) but this is not a prerequisite for disconnecting electricity in the case of debts.

Special categories of customers are exempted from the automated disconnection procedure and instructions to disconnect power supplies will not be issued to HEDNO for:

- Customers on the social residential tariff or vulnerable customers in general (as defined by the government), not only during the 7 months specified in the new Supply Code (November to



March and July-August) but also at any time during the year except where there is criminal conduct (such as tampering with electricity meters).

- Customers who are dependent on mechanical equipment, provided this has been declared to PPC and the relevant documentation has been supplied.
- Customers entitled to free electricity under the provisions of Article 1 of Law 4320/2015 on measures to be taken immediately for individuals and families living in extreme poverty.
- Customers covered by the repayment plan rules.

Given that PPC is particularly aware when it comes to disconnecting supplies due to debt, and fully grasps the objective difficulties its household and business customers face, in recent years the Corporation has devised and implemented the following policies to reflect the economic situation:

- During periods of extreme weather conditions (harsh winter, heat waves, etc.) or over the Christmas or Easter holiday periods, no disconnections for any PPC customers are issued.
- Disconnection orders are not given for areas which have been affected by extreme weather conditions, flooding, fires, earthquakes which have been declared in a state of emergency.
- PPC's departments are in constant communication with and work in partnership with social players to resolve service social issues whenever they arise.

However, PPC has taken the measures needed to prevent power being disconnected for those who really are unable to pay their bills, and

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all customers are notified in advance that power will be disconnected because of arrears through special messages contained in the electricity bill. Note that it is up to the State to determine the social criteria for customers being placed in vulnerable social groups.

Of those customers disconnected for failure to pay, only 45% have settled their debt or entered into a repayment plan. Customers like that are usually reconnected the same day. Of the other 55% of customers who were disconnected, around 60% illegally reconnected their electricity supply by tampering with the meters, without paying the debt.

However, for those customers who are included in the vulnerable customers register (as defined by the state) (individuals over 70 and large families), and customers who enjoy the Social Residential Tariff, no disconnection notices for arrears are issued. This is the case not just during the 7 months specified in the new Supply Code (November to March and July – August) but during the entire year. The only exception is illegal activity on their part, such as theft of electricity.

### 7.2 CUSTOMER RELATIONSHIP MANAGEMENT

The Corporation constantly strives to improve the way it provides services to its customers to maintain high levels of customer satisfaction. Efforts are being made to strengthen our customer-focused approach, carry out research and examine complaints, taking into account consumer needs.

#### Modern customer engagement methods

In addition to its stores, PPC uses the internet, electronic means



EASTERN THESSALONIKI RETAIL STORE - PAYMENT COUNTERS

of communication and social networking (Twitter, LinkedIn, Flickr, and YouTube) to communicate with its customers. In 2016, Twitter was used to disseminate 54 corporate news stories and customer service issues and 8 videos were uploaded to PPC's YouTube account. 3 of those were advertising and 5 related to participation in / organisation of events.

The PPC website ([www.dei.gr](http://www.dei.gr)) offers information in both Greek and English. PPC customers can learn about new plans relevant to them, about commercial issues, company news and find answers to FAQs. There are also contact forms for each issue of concern (bills, general topics, changes in particulars, etc.) that customers can use. Consumers can also contact the Corporation by email on [info@dei.com.gr](mailto:info@dei.com.gr) in Greek or English. During 2016 the website ([www.dei.gr](http://www.dei.gr)) received around 37,000 emails, primarily from customers but also from stakeholders such as investors or jobseekers.

PPC has developed a special iPhone and Android phone app that allows users to gain immediate, reliable and rapid access to PPC services no matter where they are. By the end of 2016, 93,300 people were using the app. The PPC app offers all current rapid service options available from the Corporation online, such as e-bill info, access to e-banking to enable PPC bills to be paid online, changes to billing address, find the nearest customer service and bill payment location, contact with PPC by phone or email, and access to HEDNO services such as scheduled power cuts and fault reporting. PPC can also send out messages relating to specific geographical areas. Generally speaking, the app has been designed to include the most popular customer service options for anyone on the go.

For people with visual impairments or reading difficulties, PPC also provides information about its services through audio messages. Moreover, PPC is exploring whether electricity bills could be printed in Braille for its visually impaired customers.

Given the new corporate look PPC has adopted, which is gradually being rolled out to all PPC stores (stores in Lamia, Naxos, Trikala, Edessa and Nea Ionia in Attica were redesigned in 2016), stores have not only been revamped, making them safer and look better to reinforce the corporate brand, but also include special disability access ramps.

### **Guaranteed services**

To provider users of the Distribution Network with information about the guaranteed services which HEDNO offers consumers under RAE Decision No. 665/2013 and under the company's compliance plan, HEDNO has prepared printed info-sheets.

To ensure that its own customers are aware of HEDNO's guaranteed services, PPC distributes those info-sheets at its own stores and includes

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them along with bills. This move to raise awareness among customers is a continuation of a similar move in the past which saw information about the Network operator's key activities and the services it offers being included in bills.

### Customer satisfaction surveys

PPC conducts qualitative and quantitative surveys in the context of the customer-centred focus which PPC has put in place in a systematic manner to recognise its customers' new needs and to explore their views about services offered. As a result of this process we developed the one-page bill and the e-bill, and as part of this process we are also planning new e-services for low voltage customers once the new IT system is fully installed.

PPC did not carry out a customer satisfaction survey in 2016 since the Corporation was continuing to work to take into account the results of surveys in previous years, and improve customer services by providing electronic services in accordance with modern demands for such services.

### Managing Complaints and customer requests

Any potential complaints from our customers are an opportunity to improve the services we provide and increase their satisfaction. Complaints and requests to PPC are submitted either in writing (directly by customers, through the Ombudsman or the Hellenic Consumers' Ombudsman, etc.) or by email, or over the phone on the customer service line (11770) and an effort is made to respond to all requests.

PPC's main objective is to ensure quality customer service and to handle customer requests as best it can. The Corporation has designed specific, uniform procedures to ensure rapid, effective handling of customer requests and complaints. These procedures are in line with the Supply Code (Government Gazette 832/B/9.4.2013) and in particular Annex III on principles for managing consumer requests.

To that end, PPC drew up the Customer Requests and Complaints Management Code, which outlines the method and procedures customers must follow if they need more information or clarifications about the supply of electricity to their property and facilities, or want to make a request/file a complaint. The Customer Requests and Complaints Management Code is available on PPC's official website ([www.dei.gr](http://www.dei.gr)).

Customer complaints primarily focus on issues such as electricity charges, the amounts payable to third parties via the electricity bill (municipal tax, public television) and regulated charges (public utility

charges and the pollutants emission tax). These charges tend to account for a significant portion of the bill. Despite the fact that charges have been itemised under ‘supply charges’ and ‘regulated charges’ since 2009 in line with legal requirements, even today a significant number of customers find it difficult to grasp how these charges are calculated.

PPC attempts to respond to customer requests and complaints as soon as possible, and management to answer 95% of them within one day. Note that those requests / complaints which are answered after more than 10 days primarily relate to special cases that need to be further investigated because of their complexity, or they may require collaboration with other PPC Divisions (such as Legal, or the IT Division), or collaboration with other agencies (such as municipalities) or may require information requests to be sent to HEDNO (for emergency readings, meter tests, or violations) or may require HEDNO to take steps (such as cases where no bill was issued because the modem was broken or the meter was damaged).

## **7.3 RESPONSIBLE AND SAFE ENERGY USE**

Providing information to the public and raising awareness about energy savings and protecting the health and safety of consumers and users of electricity is a key concern for PPC.

Under current legislation (Law 4483/1965) internal electrical facilities must be re-inspected by licensed electrical fitters who issue a solemn declaration which is then submitted to HEDNO. Re-inspections must be carried out at regular intervals which are specified in Article 5 of Decision No. Φ.7.5/1816/88 of the Deputy Minister of Development (Government Gazette 470/5.3.2004). Homes must be re-inspected at least every 14 years.

New HEDNO guidelines state that re-inspections may be required under these provisions when properties are being reconnected to the grid or when a name is changed. A re-inspection is no longer needed when changing tariff, changing supplier or installing a night-time tariff meter.

The brochure entitled Save Energy – Share Life became available on PPC’s new website in 2016 [www.dei.gr/el/green-pages](http://www.dei.gr/el/green-pages). The website offers comprehensive information about energy issues and related EU announcements, and also provides information about Greenpasses, how they can be acquired and updates about the statutory and commercial framework relevant to them. In addition, the website offers users access to an online energy savings tool which has been available since early

## **7. MARKET AND CUSTOMERS**

2014, which provides information and raises awareness among the public about how to rationally use electricity. It also allows users to calculate their household energy consumption, while also offering tips about how to save energy and improve their home's energy rating by taking specific steps. Although no promotional measures have been taken, the initial reaction is very encouraging. According to PPC data, in 2016 alone this website had 14,359 unique hits.

In partnership with HEDNO, PPC continued its public information and awareness raising campaigns to promote energy savings and also distributed flyers on this topic. In 2016 around 1,000 flyers were distributed via PPC stores, and a banner about the matter was included in around 1,800,000 bills issued over a 9-day period.

More information for the public about how to use energy safely was also provided by HEDNO.

### **7.4 MARKETING COMMUNICATION PLANS**

The Corporation seeks to inform its stakeholders about the full range of its activities, such as tariffs, new large energy investments, renewable energy projects, and its environmental and social activities.

PPC communication plans are in compliance with the Hellenic Code of Advertising and Communication Ethics. The Code has been developed by the Advertising Self-Regulation Council, an independent, non-profit association. The aim is to implement ethical standards in all marketing communications. Following a decision of the PPC BoD, the Corporation set up a Marketing Activities Committee whose members include the current Chairman and CEO, the Corporate Affairs and Communication Department Director and the General Manager(s) whose remit is relevant to the topic being advertised or marketed. The Committee verifies that the PPC's marketing materials comply with the Hellenic Code of Advertising and Communication Ethics and the current legal and regulatory framework for energy. It is the body which gives final approval for all large-scale advertising / marketing activities. As a result of this approach, in 2015 all PPC marketing and communication measures (including advertising and marketing campaigns) were fully compliant with the Code.

In the spirit of supporting the local communities in which the Corporation operates, PPC ensures that these areas are promoted through its advertising campaigns. Special care is taken to ensure that local communities are supported directly or indirectly.

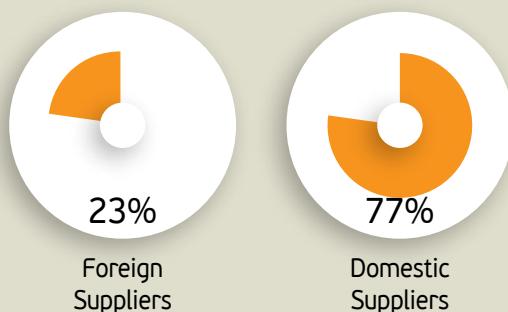
## 7.5 RESPONSIBLE PROCUREMENT

### Material aspect: Procurement and logistics management

Both PPC's management team and employees have recognised procurement and logistics management as a material aspect; a reflection of the added interest in developing transparent, effective relationships and partnerships with the Corporation's suppliers and contractors. PPC complies with Law 4412/2016 on procurement, and attaches particular importance to labour and health and safety issues in its contracts with contractors.

PPC signs contracts when purchasing materials and services to meet its needs and to carry out engineering works. Where possible, the Corporation makes agreements with local suppliers, contributing significantly to the development of the local economies.

### Invoices' value 2016



Source: Recorded invoices on SAP (SAP MM and SAP FI)

PPC's procurement procedures are governed by Law 4412/2016 (Government Gazette 147/A). The Corporation posts tenders notices for works and supplies on its website, to encourage public dialogue in a totally transparent and objective manner.

PPC keeps a register of tried-and-tested suppliers of products and services having evaluated the quality and reliability of the services and

## 7. MARKET AND CUSTOMERS

products provided by those suppliers, thereby giving them incentives to improve themselves and promoting quality in the market in general. The Corporation is in constant contact with key suppliers to exchange views about how the equipment procured is working to transfer know-how to them.

The key procurement categories include materials and spare parts, support equipment, services, projects, liquid fuels, lignite (from third parties), natural gas, and the purchase of electricity and GHG (CO<sub>2</sub>) trading allowances.

To ensure contractors and any subcontractors comply with labour and insurance law for their own staff, PPC includes a general clause in all contracts it signs according to which the contract may be terminated and the contractor may be excluded from future tender procedures in case of recurrent non-compliance. When paying contractors, PPC requests proof that the contractor has complied with its obligations to its staff, and paid its employer social security contributions. In doing so the Corporation ensures that it cooperates with contractors who adhere to labour law and have their staff insured in the manner specified by law.

### 7.6 REGULATORY AND LEGISLATIVE COMPLIANCE

Complying with applicable laws and other regulations on market, product and service issues is fundamental to what PPC does. However, some cases emerged that the Corporation had to handle in 2016.

In 2016, 6 candidates in tender procedures filed administrative appeals against PPC in the pre-contractual stage. In 4 cases the candidates dropped their administrative appeals (or the application for a stay of proceedings or application for annulment filed with the Council of State) and in the other 2 cases the Council of State issued judgments in favour of PPC, rejecting the administrative appeals.

An Athens Administrative Court of Appeal judgment from 2015 reduced a € 4.4 million fine imposed by the RAE in 2013 for PPC's breach of the regulatory framework in its dealings with industrial customers and failure to prepare tailored tariffs in good time. The fine was dropped to € 880,000, meaning that € 3,520,000 of the amount originally paid was returned to PPC. Despite that, PPC filed an application for cassation in 2016 to have the rest of the € 880,000 fine overturned.

In 2015 the Hellenic Competition Commission did not impose any fines on PPC. Other than fines, the Hellenic Competition Commission can also require a party to make commitments, which is a less severe

measure. One example is the Commission's decision from 2015 under which PPC undertook commitments to a competitor and customer as part of a complaint and investigation by the Hellenic Competition Commission into PPC's anti-competitive practices. Following those commitments, in 2016 PPC concluded a new supply agreement with that competitor and customer, which was approved by its Extraordinary General Meeting of Shareholders.

Following a 2014 final judgment from the Athens Multi-Member Court of First Instance, PPC was ordered to pay compensation of € 4,412,018.86 to a high voltage customer for violating Articles 18 and 86 of Law 146/1914 on unfair competition. PPC appealed that judgment in 2016.

In 2016 there were no complaints about customer personal data being leaked. No failure to comply with proper product and service labelling and information was recorded and there were no cases of our products or services negatively impacting on customer health and safety.



WESTERN THESSALONIKI RETAIL STORE

## 8. CONTRIBUTION TO SOCIETY



The Corporation works in partnership with its stakeholders in taking decisions on energy planning and infrastructure development

### 8.1 LOCAL COMMUNITY DEVELOPMENT PROGRAMMES

PPC attaches great importance to its relations with local communities and briefs both local communities and the authorities about any large new projects and invites them to participate in discussions on issues that could affect their activities.

The Corporation is engaged in ongoing dialogue with local communities, involving General Managers, the managers of key business units, sector managers from steam electric plants, hydroelectric power plants and mines as well as other staff from PPC.

The Corporation works in partnership with stakeholders in taking decisions on energy planning and infrastructure development:

- Local communities in areas in which PPC's power production facilities are installed are involved alongside local government authorities, representatives of various agencies and organisations and local residents.
- The regional branches of the Technical Chamber of Greece express their views to local authorities, PPC and local community bodies.
- PPC's employee trade unions and associations are involved in decision-making by consulting on the relevant legislation.

Stakeholders participate in decision-making via the procedures specified in the legal framework, such as consultation, working alongside PPC's relevant committees and representatives

of local community bodies or by attending info-events and conferences. Consultation is normally used when new projects are being licensed or when projects which already have environmental authorisation are being extended, upgraded or modified, when local communities and bodies need to express their views.

Staff from PPC's Mines Division are involved in the statutorily-mandated process of consultation on mine environmental studies when obtaining environmental authorisation for such activities. In some cases, like approval for the environmental impact study for the Ptolemaida Mines, PPC took the initiative of hosting a workshop at the Western Macedonia Lignite Centre facilities to discuss the study. Local bodies were invited to attend and had the chance to express their views and concerns about the study, before statutory consultation with the competent local government bodies commenced. Their views were taken into account as much as possible, and were included in the Environmental Impact Study which the Prefectural Council actually discussed.

Working with third parties such as universities, consultants, economic, commercial, technical and other bodies, PPC runs programmes and prepares studies to evaluate and manage the Corporation's impacts on local communities:

- Before PPC commences operations

With major new projects, PPC may prepare a social impact evaluation study for the projects, engage in ex ante evaluation and calculate potential social repercussions from the new investment (during the building and running of the projects) in the specific geographical area. The aim of such a study is to identify processes and mechanisms that could be utilised to monitor impacts while implementing the project and to proactively address and offset potential risks or negative social repercussions that the specific project could cause.

An example of one such study is the "Social Impacts Evaluation Study for the new Rhodes Thermal Electrical Plant" prepared in 2013 to identify and analyse the expected social performance of the new power plant with a total capacity of 120 MW which PPC planned to build in the Piso Kambos – Plaka Steni area, within the Kattavia Community in the southern part of Rhodes. The social impacts analysis for the new PPC power plant relied on international standards and methodologies such as the Social Return on Investment (SROI) methodology.

- While PPC activities are under way / being implemented

PPC's operations to date in the Western Macedonia region and its impact on development in the area have been recognised by the Corporation's senior management by concluding a MoU with the Prefecture of Kozani in 2007 which records the jobs created and measures taken to protect the environment and improve the quality of life of local residents.

According to data from 2012, taking into account the benefits accruing in the labour sector, PPC has calculated that the employment gain from

## 8. CONTRIBUTION TO SOCIETY

running the power plant was 1.3 while for mines it was 4.19, which gives a total employment rate for the entire Western Macedonia region of around 3.28 (which means that for each job at the mines and power plants, 3.28 jobs have been created and retained in the local labour market). In light of that estimate, PPC has made a significant contribution to supporting jobs and the local economy in Western Macedonia, contributing to more than 25% of regional GDP via its industrial lignite production processes.

PPC attaches particular importance to relations with the local communities in which it operates and performs a particularly important mission by implementing special programmes and schemes. Just some of PPC's activities are set out in this section.

### ■ After PPC's operations are over

One illustrative example is the business plan for development of the Western Macedonia facilities after lignite mining is finished. The plan relates to the Kozani and Florina Regional Units and places emphasis on the energy axis Kozani – Ptolemaida – Amynteo – Florina and is both an action plan and roadmap for transitioning to the post-lignite period.

A contract was signed by the prefectoral authorities of Kozani and Florina (now the Western Macedonia Region) and Western Macedonia Development Company (ANKO) S.A. to prepare the business plan. To implement it, a representative project team comprised of all stakeholders directly or indirectly affected by the economic growth of the local community was set up. Those stakeholders include the Regional Association of Municipalities of Western Macedonia, the Technical Chamber of Greece / Western Macedonia Branch, the Economic Chamber of Greece / Western Macedonia Branch, the Geotechnical Chamber of Greece / Western Macedonia Branch, the Kozani and Florina Chambers, the University of Western Macedonia, the Western Macedonia Technological Educational Institute, the Kozani Ecology Movement and other bodies whose input is needed.



The particular importance the plan has for the future of the area during this transitional phase for the local economy requires the highest degree of citizen and stakeholder participation possible in the consultations on the post-lignite period. To assist with this, a simple, attractive consultation portal was set up which can be accessed via the websites of the Western Macedonia Region ([www.pdm.gov.gr](http://www.pdm.gov.gr)), the Kozani Regional Unit ([www.kozani.gr](http://www.kozani.gr)), the Florina Regional Unit ([www.florina.gr](http://www.florina.gr)) and Western Macedonia Development Company (ANKO) S.A. ([www.anko.gr](http://www.anko.gr)).

To rehabilitate the wider area around the mines and preserve PPC's historical legacy in the post-lignite age, in 2016 the Corporation's Board decided to create a park to showcase Ptolemaida's lignite and industrial heritage. The following steps have been taken to prepare the park: a) buildings, mechanical equipment, production lines and the grounds of the entire former LIPTOL industrial complex have been recorded, mapped and historical documentation collected in line with international standards on how to record historical industrial facilities, b) the equipment used to generate electricity from lignite, including extractive equipment, has been catalogued, c) the LIPTOL historical archives have been collected, preserved and showcased and d) studies have been prepared in partnership with the Western Macedonia Region and the Municipality of Eordea on the establishment of the Ptolemaida Lignite / Industrial Heritage Park.

In 2016 the architectural concept competition for the project to regenerate and reuse former lignite extraction sites in the Western Macedonia region came to an end. The idea was to come up with the best idea for environmentally-friendly interventions to an area of around 190 ha at the Main Field Mine, which has already been rehabilitated, so that it can be handed over to residents from the wider area. The competition attracted the interest of 370 architects (on their own or in partnerships), and a large number of them actually visited the area and got to know it and saw the rehabilitation works that have already been completed. A total of 56 proposals were then submitted. These were judged by a panel specifically set up for that purpose by drawing lots. Panel members included experts on the list of adjudicators held by the Ministry of the Environment and Energy. Cash prizes totally € 21,800 were awarded to the winning proposals at a special prize ceremony on 4.12.2016. During the first 4 months of 2017 the proposals will be put on display and a one-day event will be held at PPC's Paleo Faliro Steam Electric Plant.

### **Compensatory/public benefit projects**

When obtaining authorisation for the environmental terms and conditions of projects it implements, PPC consults with the Ministry for Productive Recovery, the Environment & Energy and local bodies to specify what compensatory benefits/projects for local communities will be implemented. Those are then included in the Joint Ministerial Decision which approves the environmental terms and conditions for those projects.

## 8. CONTRIBUTION TO SOCIETY

The cost of public benefit projects associated with power generation for 2016, as described in the table below, amounted to € 600 thousand.

Some of the projects carried out by the Hydroelectric Production Department are listed below:

Compensatory/public benefit projects	Class	Project budget (€)	Total duration of works in years	Cost in 2016 (€)	Additional information
Payment of expenditures to the 30th Department of Prehistoric and Classical Antiquities	Contractual Obligation	10,256,495		58,520	Archaeological works around the Hilarion HPP
Flood protection study on the Tripotamos River prepared	Contractual Obligation	100,000		5,530	As part of funding for the Municipality of Veria
Municipal and country roads in the Lekfi Municipal Unit and Lithines, Pervolakia and Chrysopigi local communities	Community compensatory project for the Municipality of Sitia, Lasithi Regional Unit, Crete Region	240,951		65,360	Community compensatory project as part of construction of Phase II of the Atherinolakkos Steam Electric Plant (100 MW)
2nd MoU with 23rd Ephorate of Byzantine Antiquities	A public benefit project as part of the new Aliveri Steam Electric Plant	500,000	Around 4	130,170	
Paving, tarmac and street lighting for local roads in the District of Soroni in the Mun. of Kamiros, Rhodes	Public benefit project, Municipality of Rhodes	837,963	Around 4	288,560	
Study on installation of wireless internet in the village of Macheria (Prasonisi) in the Kattavia Community of Rhodes	As part of the 2nd Sponsorship Agreement between PPC S.A. and the Municipality of Rhodes (29/9/2015)			1,480	
Funding for the purchase of materials to build an army shed in Southern Rhodes				40,000	
<b>Total</b>				<b>589,620</b>	

- The following studies were prepared and approved for works in the wider area of the Hilarion HPP:
  - A study to create a day/leisure centre in the Agios Thanasis area in the Hasia Municipal Unit of the Municipality of Deskati.

- A study to create outdoor leisure facilities and renovate a former worksite in the Nea Gefyra area of the Panagia - Paliouria Local Community, Deskati Municipal Unit / Municipality of Deskati.
- A study to renovate existing leisure facilities in the Gavros area of the Deskati Municipal Unit / Municipality of Deskati.
- A study to create outdoor leisure facilities on the western bank of the Aliakmon River near Hilarion Dam and to regenerate the grounds of the monastery in the Kozani Regional Unit.

PPC is engaged in consultations with local Municipalities about implementing the proposals contained in all four studies.

- In 2016 tender were prepared for the project entitled "Water supply via the former Municipality of Meliti aqueduct" which will supply 11 local communities over a 1 million m<sup>3</sup> area, from the reservoir at Papadia Dam, thereby solving the area's water supply problem. The project will be implemented in the near future.
- Involvement in works to redirect the course of the Zervas tributary and restore the road and bridge between Matsouki and Raines.
- Involvement of the Ladonas HPP in the 4th Ladonas - Fengarada Festival on the Lake hosted by the Municipality of Gortynia and the Gortynia Municipal Public Benefit Enterprise as part of their summer of culture events.
- Organising a mountain triathlon (swimming, mountain biking and mountain racing) -the Ladonas 2016 X-event triathlon- held around Ladonas Reservoir on Sunday 3 July 2016 in partnership with the Municipal of Gortynia and the Ladonas HPP.

### **District Heating Schemes**

Through programmes developed with local municipalities and the relevant municipal bodies, PPC utilises the heat generated by its lignite-fuelled steam electric plants in Western Macedonia and Arcadia and provides the heat generated in the form of hot water to heat buildings to meet the town's needs in Kozani, Amynteo, Ptolemaida and Megalopolis. The cost of providing energy as part of these programmes is significantly lower than conventional heating methods.

These district heating schemes are a model for sustainable management as they generate numerous benefits for all parties involved. The most important are (a) a reduction in atmospheric pollution since hydrocarbons and wood are not burned to generate heat, and (b) the financial benefits for local communities due to reduced heating costs.

Overall, in 2016, 2.1 million GJ of energy were generated/used in district heating.

## 8. CONTRIBUTION TO SOCIETY

### Lignite levy

The lignite levy is an amount charged to promote the development of industrial areas where electricity is generated by the lignite-fuelled power plants in Florina, Kozani and Arcadia. Law 4062/2012 increased the levy from 0.4% to 0.5% of PPC turnover as of 2012. The levy is used to finance infrastructure and environmental protection projects that bolster the economy in the specific areas which are affected by lignite mining and its combustion.

Prefecture	Lignite levy in 2016 (€ '000)
Kozani	16,717
Florina	5,153
Arcadia	3,906
<b>Total</b>	<b>25,776</b>

### Relocations and compulsory purchases

If it is necessary to compulsorily purchase land or even relocate villages to build new power plants or to expand mines, PPC follows specific procedures that are fully in line with Greek law. It complies with Law 2882/2001 which contains the codified rules on compulsory purchase of land, and when expanding mines the provisions of the Mining Code contained in Legislative Decree 210/1973 are complied with.

One representative example is local community involvement in the Municipalities of Amynteo, Eordea, Kozani, Megalopolis and Florina, where important energy projects are located, in decision-making about relocating villages to allow PPC mines to be developed.

When PPC developed its mines in Western Macedonia, it was necessary to relocate the villages of Kardia, Haravgi, Exochi, Komanos and Klitos. The villages of Mavropigi and Kleidi have also been compulsorily purchased and the beneficiaries have been paid compensation. Local communities of the area are in the process of relocating.

PPC signed a MoU with the local community concerning the relocation of Pontokomi, which was agreed with all statutory bodies in the Prefecture of Kozani. The MoU sets out how the mine located next to Pontokomi will expand. Compulsorily purchase of the land at Pontokomi in the Municipality of Kozani was necessary to secure the lignite deposits which will supply fuel to the new Ptolemaida V plant which is under construction. The new village will be built within the Kozani Active Planning Zone just 18km from the site of the current one. During 2016 the village was compulsorily purchased, and the population from the village of Pontokomi is currently in the process of relocating. PPC deposited € 144 million with the Deposits and Loans Fund in October 2016 as compensation for the 862 beneficiaries. That accounts for the majority of the compensation funds required. The land prices have been set in court judgments. However, the relocation has

not yet taken place since steps which lie within the Greek State's remit still need to be completed.

The village of Pteleonas in the Municipality of Eordea in Western Macedonia is also being compulsorily purchased.

PPC is following the provisions of Article 28 of Law 3937/2011 for the village of Akrini in the Kozani Regional Unit and the village of Anargyri in the Florina Regional Unit. Compulsory purchase and relocation procedures both require the involvement of the Greek State and the relevant Presidential Decree is expected to be issued soon.

As for the development of PPC's mines in the Arcadia Regional Unit, the villages of Psathi, Marathousa and Anthohori have all been compulsorily purchased. Residents from the villages have been relocated either by establishing a new settlement or by housing residents in the town of Megalopolis. The village of Tripotamos is also being compulsorily purchased.

As part of land acquisition procedures, the Mines Division has often set up groups comprised of staff and lawyers in order to negotiate direct purchases with residents in areas around the mines. Teams like these have been set up in Megalopolis in the Arcadia region, and at Amynteo and at Kleidi in Florina.

In addition to covering the cost of compulsory purchase, PPC also supports the local residents by providing infrastructure (networks and roads, etc.), communal space as well as churches and graveyards for the new villages at a site chosen by the local communities.

#### **Creation of farmland and concession to farmers**

As part of its general environmental plans, PPC has rehabilitated certain areas as farmland which are conceded to farmers from local areas under annual leases for nominal rents so that it can be cultivated. One example is the western outer deposition site at Horemi, for which a special study was prepared so that all necessary infrastructure and technical works (roads, ponds) could be carried out with proper agricultural land management in mind, and to create flat surfaces suitable for cultivating crops or raising livestock. The fields created are considered to be 'model plots' and are leased to local farmers annually for nominal rents (see section 6.7).

## **8.2 SPONSORSHIP PROGRAMMES**

PPC recognises the needs of the various areas of the country in which it operates and responds to these needs with sensitivity. Many of our actions focus on local communities around our mining and power generation facilities. At the same time, given that our products reach all corners of Greece, we run programmes in other parts of the country as well.

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### Financial aid

In 2016, PPC provided € 853 thousand for projects in various sectors, such as the environment, sports, culture and education. These projects include:

- Financial aid for the NGO Medecins du Monde to cover the running costs of the organisation, which received € 15,000.
- Financial aid for the Prespeia 2016 Festival organisation, which received € 10,000.
- Financial aid for the “Actor’s House” Foundation to stage a performance at the Odeon of Herodes Atticus Theatre on 10.9.2016 entitled ‘Rembetiko Mystirio’ which received € 25,000.

Sector sponsorship/donation relates to	Size of sponsorship/donation in 2016 (€)
Energy	19,059
Society	79,710
Education	61,856
Environment	687,050
Culture	5,253
<b>Total</b>	<b>852,928</b>

PPC was exclusive sponsor of the ‘Health, Hygiene and Safety at Work’ summer course run at the University of Western Macedonia’s facilities in June and July 2016.

For the sixth consecutive year PPC supported the free pre-symptomatic check-up scheme to raise awareness and provide information to women in the Western Macedonia region about the value of prevention and early diagnosis of breast cancer. This scheme was run in cooperation with the Alma Zois charity for women with breast cancer in the Prefecture of Thessaloniki.

As part of PPC’s MoU with the Eastern Attica Regional Unit, the Corporation contributed to construction of the Lavrio crèche, covering the Municipality of Lavreotiki’s costs, and also helped restore the Drosopoulos Family house, which is a listed neoclassical building in Keratea.

PPC supports major sporting events in areas which are intimately associated with power generation activities and contributes to the development of sport and industrial tourism, generating financial benefits for local businesses while also showcasing the infrastructure, natural beauty and potential for growth those areas have.

The 4th international “Greece Off Road Rally” was held in June 2016 in Florina with 47 teams from Greece, Cyprus, France, Italy, Serbia, Bulgaria, Israel and Turkey. The rally featured special routes through landscapes

of outstanding natural beauty, mountain roads in Western Macedonia's mountains which passed nearby the PPC's power stations and mines.

In June 2016 PPC supported the Women's National Handball Team which participated in the 2016 European Women's Handball Championships at the Megalopolis Indoor Stadium. PPC also supported the Men's National Handball Team at the 2016 World Men's Handball championships which were held at the Lefkovrysi Indoor Stadium in Kozani.

As in previous years, in 2016 PPC did not provide any donations, sponsorships or financial aid to any political party or politician.

### **Donations in kind**

In addition to cash sponsorship, PPC also offers donations in kind to support local communities in the areas where it operates. PPC responded positively to request for organisations which perform a social function. For example, it provided free electronic equipment to healthcare units in the national primary healthcare network, namely 6 computers and 1 printer to the Patissia Healthcare Clinic, 2 computers to the Healthcare Unit for PPC personnel run by the Macedonia 3rd Healthcare region and 7 computers and 4 printers to the TAYTEKO Fund.

In direct response to requests from residents in villages where PPC operates, the Corporation has provided extensive support via the Mines Division and has been actively involved in addressing the impact of natural disasters in the prefecture of Kozani, Florina and Arcadia. It is also involved in snow clearance and firefighting teams in those regional units, offering machinery and personnel. In 2016 earthworks machinery was made available to municipalities which neighbour the lignite mines to carry out various works (to create, clean and maintain country roads, to form fire protection zones within forests, provision of water tanks, etc.).

The Western Macedonia Lignite Centre offered the entire harvest from its orchards located on rehabilitated land on the Main Field deposition sites to ecclesiastical, educational and charitable bodies in the local community. 8.5 tons of fruit (1.15 tons of pears, 5.79 tons of apples, 375 kg of cherries, 930 kg of peaches and 200 kg of grapes) were offered to various foundations, local bodies and employees. These included the Analipsi Monastery in Kozani, the Good Samaritan Association in Ptolemaida, the Ptolemaida Diocese, the Ptolemaida Special Workshop, the Florina Old People's Home, the Old People's Home run by the Grevena Holy Metropolis, the Kozani Old People's Home, Grevena Hospital, Ardassa Monastery, and the Eordea Large Families Association, to name a few.

In September 2011 PPC signed a MoU with the Finance Management Fund for Archaeological Projects. PPC's cultural sponsorship is publicised via the non-profit association DIAZOMA which helps protect and showcase Greece's ancient theatres and raises awareness among organisations and citizens about this topic. In June 2016 a team from PPC from Western Macedonia arrived in Megalopolis to make a 3D map of the Megalopolis

## 8. CONTRIBUTION TO SOCIETY

Ancient Theatre, thereby making a real contribution to the restoration works which are being carried out at that archaeological site. The PPC brought a suitable 3D scanner with it for this purpose, which has been used in the past by various partner universities for research purposes to provide maps with the highest degree of resolution.

At the 81st Thessaloniki International Fair, instead of another corporate presentation, PPC set up a clinic which it turned over to «Medecins du Monde» to provide free primary care medical tests. A specially designed area hosted 5 clinics: internal medicine, ophthalmology, paediatrics, dentistry and gynaecology. A total of 1,101 people visited the clinics.

In 2016 for yet another year, PPC's employees showed their solidarity and support for the refugees who arrive in Greece every day, offering milk and bread to them. Staff Associations were also involved in efforts to collect units of blood.

### 8.3 PARTNERSHIP WITH ARCHAEOLOGICAL SERVICES

The provisions of the archaeology law (Law 3028/2002 on protection of antiquities and the cultural heritage in general) and the circular from the General Secretariat of the Ministry of Culture and Tourism about rescue digs on third party technical works state that PPC is obliged to protect archaeological finds discovered while it is mining for lignite.

The Corporation is obliged to finance the local archaeological service as it carries out rescue digs. After the rescue digs are completed the Archaeological Service will then hand the area back to PPC and allow it to continue mining provided that mining work is carried out under the Archaeological Service's supervision.



In this context, rescue digs have been carried out at more than 20 archaeological sites at PPC lignite mines over the last decade, financed by PPC at a total cost of over € 40 million. In 2016 € 3.5 million was spent on rescue digs at the Ptolemaida mines and € 5 million on rescue digs at the Amynteo mines.

A preliminary study on the protection and showcasing of Orchomeni, a classical period Arcadian city has been in preparation since 2015. The city is located close to the Kyparissia mines at Megalopolis, and the study is expected to be approved by the Central Archaeological Council during 2017.

## **8.4 EMPLOYEE VOLUNTEER INITIATIVES**

With the support of its employees, PPC organises volunteer initiatives every year and gives something back to society. In 2016, continuing a tradition that now stretches back many years, PPC employees organised voluntary blood donation rallies through their trade unions. More specifically, employee associations such as the Panhellenic Employee Association (PASYP), the Association of Technicians (ETE), the Association of Administrative and Financial Employees (EDOP) and the SPARTACUS Association in Western Macedonia organised rallies and collected 1,173 units of blood in 2016.

## **8.5 OTHER INITIATIVES**

In addition to the above, PPC has included other initiatives in its work of giving something back to society.

### **PPC Central Library**

PPC's Central Library has 74 branches nationwide, and is a major resource centre containing around 10,000 book titles, 150 periodical titles, newspapers and rare studies dating back to the very foundation of PPC. The Library lends material to PPC staff and is open to the rest of the public (researchers, students, academics, etc.) so that they study the material in the reading room of the library and photocopy any information needed. The recently renovated, suitably designed central library premises can also be used for committee meetings, presentations and training courses / seminars.

Thanks to its participation in the Greek National Documentation Centre's Network of Libraries, the PPC Central Library enables network members to order photocopies of articles from journals that the Library has in its collection online and simultaneously request photocopies of articles from the collections of other libraries that are members of the aforementioned network.

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### PPC Historical Archives

The PPC Historical Archives collect, preserve and develop the Corporation's very own rich archival materials. The archives provide information about PPC being transformed into a nationwide corporation and public body, about major projects (mines, power stations, dams, Transmission and Distribution Networks), about the creation of a single national network and overall about the huge contribution PPC made to post-war economic growth in Greece.

In 2016 the majority of the general management archive from 1951 to 1967 was classified and a catalogue is expected to be published soon. The oral testimony archive was enriched for yet another year, with talks by former Corporation executives and employees.

Moreover in 2016 various measures were taken to publicise PPC's Historical Archives in collaboration with archival and other bodies:

- Archival materials were provided for an exhibition hosted by the Institute of Mediterranean Studies - FORTH, in the main reading room of the Greek National Library (January 2016), in which a large number of organisations participated such as the State General Archives, the ERT Archives, the Technical Chamber of Greece, the National Gallery, the Historical Library of the National Technical University of Athens, the Library of the University of Crete, the National Bank Cultural Centre / Greek Literary and Historical Archive, the Benaki Museum Historical Archives, the EYDAP Historical Archives, the Piraeus Port Authority Historical Archives, the Piraeus Group Cultural Foundation Historical Archives, the ISAP Museum and the American School of Classical Studies - Gennadius Library.
- 2 major exhibitions were organised and hosted at the Neo Faliro Steam Electric Plant's historical facilities in March 2016. The first exhibition looked at Greece's Industrial Heritage 1980 - 2015: Rescue - Research - Education, and was presented in partnership with the National Technical University of Athens and the Greek branches of the International Committee for the Conservation of Industrial Heritage (TICCIH) and the International Council on Monuments and Sites (ICOMOS). The second was a tribute to PPC and its history. Thanks to these exhibitions PPC opened up one of its most emblematic industrial monuments to a wider audience: the Neo Faliro Steam Electric Plant, which was declared a listed historical monument in 1986.
- An educational course entitled 'PPC sheds light on its history' was organised as part of these two exhibitions to celebrate 2016 World Museum Day. A large number primary school children took part in the course.
- PPC staff member Alexandra Korfiati hosted an art exhibition entitled 'Colourful wanderings' in Building T at the historical Neo Faliro Steam Electric Plant.

- PPC also participated in the international conference on ‘Cultural Heritage as an economic value: economic benefits, social opportunities and cultural heritage challenges for sustainable development’ hosted as part of the ERASMUS-INHERIT programme by the Department of Economics of the National and Capodistrian University of Athens and the Maniatakeion Foundation.
- PPC was also represented on the Board of the Greek Branch of the International Committee for the Conservation of Industrial Heritage (TICCIH).
- It also continued its partnership with the National and Capodistrian University of Athens in relation to the postgraduate courses it runs.
- Information and archival materials were provided to researchers from various disciplines and of various ranks at the National Technical University of Athens, the National and Capodistrian University of Athens, and the National Research Institute.

### **Development of the old Faliro Steam Electric Plant**

To develop and utilise the old Faliro Steam Electric Plant as a monument of Greece’s industrial heritage, as a cultural and educational centre and electricity historical archive, in 2016 PPC completed a study on full renovation of the shell and roof of the main building and obtained all permits required in early 2017. This proposal to showcase and manage the site will allow the PPC to open dialogue and in the long run develop a comprehensive cultural-education centre and museum.

### **PPC Employee Choir**

The choir was founded in 1978 and has been in continuous operation since then, actively supported by the Corporation, comprised of staff members, retirees, children of employees and professionals from the sector who have no ties to PPC.

From time to time it has collaborated with leading Greek composers, famous performers and singers. Just some of them include Mikis Theodorakis, Stavros Xarchakos, Vangelis Papathanasiou and Giannis Markopoulos. It has also made appearances at some of Greece’s most important theatres such as the Odeon of Herodes Atticus Theatre, the Athens and Thessaloniki Concert Halls, the Panathenaic Stadium, the Ancient Stadium of Delphi and the Greek National Opera. Its rich repertoire consists of works from various eras.

The employees’ choir has also taken part in major sporting events such as the Opening and Closing Ceremonies of the Athens 2004 Olympic and Paralympic Games, as well as the ceremony to mark the arrival of the Olympic flame for the Rio 2016 Olympic Games.

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During 2016 the choir was involved in the following events:

- The ceremony to mark the arrival of the Olympic flame for the Rio 2016 Olympic Games attended by the President of the Hellenic Republic, the President of the International Olympic Committee and other VIPs, broadcast live around the world from Ancient Olympia on 21.4.2016.
- The Ecumenical Synod of Orthodox Churches, along side Maria Farandouri, performing works by Mikis Theodorakis, in the presence of the Ecumenical Patriarch Bartholomew and a number of ecclesiastical figures. The event took place at Kissamos near Hania on 20.6.2016.
- The 2016 Rhodes Choir Meeting organised by the Rhodes Municipal Cultural & Sports Organisation, attended by local dignitaries. The event was held in the Grand Master's Palace on 2.7.2016.
- An event in honour of Alexandros Papadimantis at Agii Anargyri Church in Psyrra, held under the aegis of the Municipality of Athens on 21.10.2016.
- An event to mark 60 years of the mines, conducted by composer Giannis Markopoulos and featuring performers like Lakis Halkias, Kostas Makedonas, Dimos Anastasiadis, attended by the company's management team, representatives of local authorities, employees and a large crowd. The event was held at the Kozani indoor hall on 3.12.2016.
- The choir also took part in the choir meeting hosted by the Spartacus Trade Union, featuring choirs from the Ptolemaida and Siatista musical schools. The event was held in Kozani on 16.12.2016.

### Internships

PPC allows students of universities and technical educational institutes, as well as students of Hellenic Manpower Employment Agency programmes, to complete their internships at the Corporation's plants and units. In 2016 PPC employed 55 university students as part of its life-long learning programme financed by the National Strategic Reference Framework (NSRF), 121 students from technological educational institutes under a programme financed by the Hellenic Manpower Employment Agency, and 101 students from the Hellenic Manpower Employment Agency's Vocational Apprenticeship Schools.

### Pilot apprenticeship scheme

The pilot apprenticeship scheme was devised by the Ministries of Education, Research & Religious Affairs and Labour, Social Security & Social Solidarity, in partnership with the Hellenic Manpower Employment Agency. The CEO decided to approve PPC's involvement in the pilot apprenticeship scheme for the 2016-2017 school year, by employing 15 school pupils from the Koropi Vocational Lyceum majoring in electrical installations as part of a hands-on training / workplace apprenticeship scheme. 9 school pupils did

their internship at various PPC units at the Keratea - Lavrio Steam Electric Plant, 3 at the Accommodation Services Division and 3 at the Testing, Research and Standards Centre.

The scheme's primary objective is to introduce apprenticeships ensuring quality in all stages of the scheme and in the results. The scheme also seeks to enable young people who have graduated in recent school years from vocational lyceums who are not in continuing education, training or work to acquire their first contact with the labour market.

The scheme lasts 9 months and includes intensive lab studies for 200 hours, and on-the-job training / apprenticeship for 28 hours a week.

The contracts students signed with PPC for 9 months started on 1.8.2016 and expired on 30.4.2017.

As it was required to do by law, PPC made arrangements with officials from the Ministry of Education to ensure that before starting in the workplace apprentices attended a 2-week training course (1/8/2016 – 4/8/2016 and 8/8/2016 – 11/8/2016) to learn about the activities, tasks and various departments within the Corporation, to enable them to integrate seamlessly into the work environment.

### **Career guidance for young people in the Kozani and Eordea areas**

In 2015 PPC began offer career guidance to more than 100 students in year 2 of senior high schools in the Kozani and Eordea areas. This was designed to help young people get to know themselves, their own interests and abilities better, and to enable them to take decisions about their studies and careers. Career guidance is a process which looks at skills, professional interests, professional personality and work values. The action was completed in February 2016.



## ABBREVIATIONS

PTOLEMAIDA STEAM ELECTRIC PLANT UNIT V

<b>IPTO</b>	Independent Power Transmission Operator S.A.
<b>SEP</b>	Steam electric plant
<b>DisP</b>	Disabled people
<b>RES</b>	Renewable energy sources
<b>APP</b>	Autonomous power plant
<b>GHG</b>	Greenhouse Gases
<b>GM</b>	General Meeting
<b>HEDNO</b>	Hellenic Electricity Distribution Network Operator (DEDDIE in Greek)
<b>MU</b>	Municipal unit
<b>IAD</b>	PPC's Internal Audit Department
<b>BoD</b>	Board of Directors
<b>HSWD</b>	PPC's Health and Safety at Work Department
<b>CSR</b>	Corporate Social Responsibility
<b>TPP</b>	Thermoelectrical power plant
<b>TCSC</b>	Tests, Control and Standards Centre
<b>SRT</b>	Social Residential Tariff
<b>SHPP</b>	Small hydroelectric power plant
<b>RAE</b>	Regulatory Authority for Energy
<b>MB</b>	Management Board
<b>EU ETS</b>	EU Emissions Trading Scheme
<b>LC</b>	Local community
<b>LPP</b>	Local power plant
<b>HEP</b>	Hydroelectric project
<b>HPP</b>	Hydroelectric power plant
<b>MEE</b>	Ministry of the Environment and Energy
<b>EURELECTRIC</b>	European Union of the Electricity Industry
<b>GRI</b>	Global Reporting Initiative



ALIGNMENT WITH  
PRINCIPLES AND  
STANDARDS

ILARION HYDROELECTRIC PLANT - ALIAKMON RIVER

## 10.1 GRI GUIDELINES

The following table links the contents of the 2016 PPC Corporate Social Responsibility and Sustainability Report with the GRI - G4 indicators and with the supplement on the energy sector (GRI- EUSS).

### GRI INDEX

General Standard Disclosures	Description	Section	Comments / references
	<b>Strategy and Analysis</b>		
<b>G4-1</b>	Statement from the Chairman and CEO	1	
	<b>Organisational Profile</b>		
<b>G4-3</b>	Corporate name	2	
<b>G4-4</b>	Primary brands, products, and/or services	3.1, 7.1	
<b>G4-5</b>	Organisation's HQ	3.1	
<b>G4-6</b>	Number of countries the organisation operates in	3.1	
<b>G4-7</b>	Nature of ownership and legal form	3.1, 3.2	
<b>G4-8</b>	Markets served	3.1, 7.1	
<b>G4-9</b>	Scale of the reporting organisation	3.12, 4.7, 5.1	
<b>G4-10</b>	Total workforce by employment type, employment contract, and region, broken down by gender	5.1	The total number of employees of contractors / subcontractors engaged by PPC in 2016 is not available to PPC.
<b>G4-11</b>	Percentage of employees covered by collective labour agreements	5.1	The relevant data on contractor employees is not available to PPC.
<b>G4-12</b>	Organisation's supply chain	7.5	
<b>G4-13</b>	Significant changes during the reporting period	3.1, 3.5, 3.6	
<b>G4-14</b>	Application of the preventative principle	3.9, 5.5, 6.3, 6.5	Sustainable development policy
<b>G4-15</b>	Externally developed charters, principles or other initiatives to which the organisation subscribes or endorses	2, 4.5, 10	
<b>G4-16</b>	Memberships in associations and organisations	4.5	
<b>EU1</b>	Installed capacity, broken down by primary energy source and by regulatory regime	3.1	
<b>EU2</b>	Net energy output broken down by primary energy source and by regulatory regime	3.1	
<b>EU3</b>	Number of residential, industrial, institutional and commercial customer accounts	3.1	

## 10. ALIGNMENT WITH PRINCIPLES AND STANDARDS

General Standard Disclosures	Description	Section	Comments / references			
EU4	Length of above and underground transmission and distribution lines by regulatory regime	3.1	Interconnected network			
				Length (km)		
				Overhead	Underground	Offshore
			High voltage (150 kV)	Low voltage (0.4 kV)	95,063	13,893
			Medium voltage (15-20 kV)	86,372	9,889	507
			0	205.2	0	
				180,764	23,761.3	509.4
			Non-Interconnected Network			
				Overhead	Underground	Offshore
			High voltage (150 kV)	Low voltage (0.4 kV)	15,944	896
			Medium voltage (15-20 kV)	13,367	930	494
			704.7	5.2	0	
				30,015.7	1,831.2	494
EU5	Allocation of emissions allowances, broken down by carbon trading framework	6.4				

General Standard Disclosures	Description	Section	Comments / references
	<b>Identified Material Aspects and Boundaries</b>		
G4-17	Operational structure of the organisation	3.1, 3.3, 3.5	
G4-18	Process for defining report content	2, 4.3	
G4-19	Material aspects	4.3	
G4-20	Boundaries of material aspects within the organisation	4.3	
G4-21	Boundaries of material aspects outside the organisation	4.3	
G4-22	Re-statements of information	2, 4.7	
G4-23	Major changes compared to previous reports (in scope, boundaries)	2, 3.1	
	<b>Stakeholder Engagement</b>		
G4-24	List of stakeholder groups engaged by the organisation	4.4	
G4-25	Basis for identification and selection of stakeholders with whom to engage	4.4	
G4-26	Approaches to stakeholder engagement	4.4	
G4-27	Key topics and concerns that have been raised through stakeholder engagement	4.4	
	<b>Profile Disclosure</b>		
G4-28	Reporting period	2	
G4-29	Date of most recent previous report	2	
G4-30	Reporting cycle	2	
G4-31	Contact point	2	
G4-32	Table identifying the location of the Standard Disclosures in the report	10.1	
G4-33	Policy and current practice with regard to seeking external assurance for the report	2, 11	
	<b>Governance</b>		
G4-34	Governance structure	3.4-3.6, 4.2	
	<b>Ethics and integrity</b>		
G4-56	Internally developed statements of mission or values, codes of conduct	3.4, 4.1	Sustainable development policy

## 10. ALIGNMENT WITH PRINCIPLES AND STANDARDS

Disclosures on Management Approach and Indicators	Description	Section	Comments / references
	<b>Economy</b>		
	<b>Material aspect: Economic performance</b>		
G4-DMA	Disclosure of management approach	3.12, 4.1, 4.7	Sustainable development policy
G4-EC1	Direct economic value generated and distributed	3.12	
G4-EC2	Financial implications and other risks and opportunities for the organisation's activities due to climate change	3.9, 4.1, 4.7, 6.4	2016 Annual Report, pp. 35-36, 47-48 and 110.
G4-EC3	Coverage of the organisation's defined benefit plan obligations		2016 Annual Report, pages 134 and 148.
G4-EC4	Significant financial assistance received from government	3.2, 3.12	
	<b>Material aspect: System efficiency</b>		
G4-DMA	Disclosure of management approach	4.1, 6.4	
EU11	Average generation efficiency of thermal plants by energy source and by regulatory regime	3.1	
EU12	Transmission and distribution losses as a percentage of total energy		This indicator is not relevant to PPC's operations. This data is the responsibility of IPTO and HEDNO.
	<b>Environment</b>		
	<b>Material aspect: Emissions</b>		
G4-DMA	Disclosure of management approach	6.1, 6.3	Sustainable development policy
G4-EN15	Direct Greenhouse Gas Emissions (scope 1)	6.3	
G4-EN16	Energy indirect greenhouse gas emissions (scope 2)	6.3	
G4-EN17	Other indirect Greenhouse Gas Emissions (scope 3)	6.3	
G4-EN18	Greenhouse gas emissions intensity	6.3	
G4-EN19	Reduction of greenhouse gas emissions	6.3, 6.4	
G4-EN20	Emissions of ozone-depleting substances	6.3	
G4-EN21	NO <sub>x</sub> , SO <sub>x</sub> , and other significant air emissions	6.3	

Disclosures on Management Approach and Indicators	Description	Section	Comments / references
	<b>Labour practices</b>		
	<b>Material aspect: Employment</b>		
<b>G4-DMA</b>	Disclosure of management approach	5.1	Sustainable development policy
<b>G4-LA1</b>	Total number and rate of new employee hires and employee turnover by age group, gender, and region	5.1	
<b>G4-LA3</b>	Return to work and retention rates after parental leave, by gender	5.1	
<b>EU14</b>	Programmes and processes to ensure the availability of a skilled workforce	5.2, 8.5	
<b>EU15</b>	Employees eligible to retire in the next 5 and 10 years	5.1	
	<b>Material aspect: Supplier work practices evaluation</b>		
<b>G4-DMA</b>	Disclosure of management approach	7.5	
<b>G4-LA15</b>	Significant impacts for labour practices in the supply chain	5.5, 7.5	
	<b>Society</b>		
	<b>Material aspect: Public policy</b>		
<b>G4-DMA</b>	Disclosure of management approach	3.10	
<b>SO6</b>	Total value of financial and in-kind contributions to political parties, politicians, and related institutions	5.1, 8.2	

## 10. ALIGNMENT WITH PRINCIPLES AND STANDARDS

### 10.2 THE AA1000 ACCOUNTABILITY STANDARD

The Corporation follows the principles in the AS1000 APS Accountability Standard (2008) in identifying, prioritising and responding to sustainability issues. These principles are:

- Inclusivity: Stakeholders are involved in developing a responsible, strategic approach to sustainability and corporate responsibility.
- Materiality: The relative materiality of each topic is determined to identify how it is to be managed by the Corporation and to determine the content of the PPC's Corporate Social Responsibility and Sustainability Reports.
- Responsiveness: Material aspects and the challenges they present are managed and responded to with the participation of all the Corporation's organisational units.

The table below shows how the content of the PPC's 2016 Corporate Social Responsibility & Sustainability Report matches the principles of the AA1000 standard.

Principle	Section of the Report
Inclusivity	4.3-4.4
Materiality	4.3-4.4
Responsiveness	4-8

### 10.3 GREEK SUSTAINABILITY CODE - DECLARATION OF CONFORMITY

PPC supports the Greek Sustainability Code and complies with the 20 criteria listed in the Code. The table below sets out the sections of the Report where the Corporation's activities relevant to each criterion are presented.

Pillar	Criterion	Relevant section of Report
Strategy	1. Strategic Analysis & Action	4.1 Management Approach
	2. Materiality	4.3 Materiality Analysis
	3. Targeting	4.8 Commitments - Goals
	4. Value chain management	5.5 Health and Safety 7.5 Responsible Procurement
Management Procedure	5. Responsibility	3.6 Governance Structure 4.2 Governance for Sustainable Development Issues
	6. Rules and procedures	3.4 Corporate Governance Framework 4.1 Management Approach
	7. Recording and monitoring	4.7 Key Corporate Social Responsibility Performance Data 11. External Assurance Statement
	8. Remuneration policy & incentives for sustainable development	5.3 Employee evaluation and benefits
	9. Stakeholder engagement	4.4 Stakeholders
	10. Product responsibility & innovation	6.4 Actions to reduce greenhouse gas emissions 7.1 Products and Services 7.3 Responsible and safe energy use

Pillar	Criterion	Relevant section of Report
Environment	11. Use of natural resources	6.2 Consumption of Raw Materials, Fuels and Energy 6.5 Water Management
	12. Resources management	6.6 Waste Management - Use of By-Products
	13. Emissions and Climate Change	6.3 Greenhouse Gas and Other Gas Emissions 6.4 Actions to reduce greenhouse gas emissions
Society	14. Emission rights	5.1 Human Resources Data 5.4 Equal Opportunities and Respect for human rights 7.5 Responsible Procurement
	15. Equal opportunities	5.1 Human Resources Data 5.3 Employee evaluation and benefits 5.4 Equal Opportunities and Respect for human rights 5.5 Health and Safety
	16. Employment	5.1 Human Resources Data 5.2 Training and development 5.3 Employee evaluation and benefits 5.4 Equal Opportunities and Respect for human rights 5.5 Health and Safety
	17. Human rights and the supply chain	5.5 Health and Safety 7.5. Responsible Procurement
	18. Supporting local communities	8.1 Local community development programmes 8.2 Sponsorship programmes 8.3 Partnership with Archaeological Services 8.5 Other initiatives
	19. Participation in initiatives and political influence	3.10 Energy market operations and public policy 4.5 Membership of associations and organisations
	20. Prevention and combating of corruption	3.8 Audits 5.7 Regulatory and legislative compliance



# EXTERNAL ASSURANCE STATEMENT

PTOLEMAIDA STEAM ELECTRIC PLANT UNIT V

## INDEPENDENT LIMITED ASSURANCE REPORT TO PUBLIC POWER CORPORATION S.A.

We were engaged by the Board of Directors of Public Power Corporation S.A. (referred to as “the Company”) to provide limited assurance on section 4.7 titled “Key CSR Performance Data” of the Greek version of the sustainability report titled “2016 Corporate Social Responsibility and Sustainability Report” (referred to as “the Report”) of the Company for the reporting period 1 January 2016 - 31 December 2016.

Management is responsible for the preparation and presentation of the Report in accordance with the Sustainability Reporting Guidelines (G4) of the GRI as described in the Report and relevant internal guidelines as well, and the information and assertions contained within it; for determining the Company’s objectives in respect of sustainable development performance and reporting, including the identification of stakeholders and material issues; and for establishing and maintaining appropriate performance management and internal control systems from which the reported performance information is derived.

Our responsibility is to carry out a limited assurance engagement and to express a conclusion based on the work performed for the agreed assurance scope, as described above. We conducted our engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000<sup>1</sup>. That Standard requires that we comply with applicable ethical requirements, including independence requirements and that we plan and perform the engagement to obtain limited assurance about whether the section “Key CSR Performance Data” of the Report, referring to the period 1 January 2016 - 31 December 2016, is free from material misstatement. KPMG applies ISQC 1<sup>2</sup> and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements. We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants (IESBA), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

A limited assurance engagement on a sustainability report consists of making inquiries, primarily of persons responsible for the preparation of information presented in the sustainability report, and applying analytical and other evidence gathering procedures, as appropriate. These procedures included:

1. International Standard on Assurance Engagements (ISAE) 3000: Assurance Engagements other than Audits or reviews of Historical Financial Information, issued by the International Auditing and Accounting Standards Board.

2. International Standard on Quality Control 1 (ISQC 1): Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements, issued by the International Auditing and Assurance Standards Board.

## 11. EXTERNAL ASSURANCE STATEMENT

- Inquiries of management to gain an understanding of the Company's processes, on a sample basis, for determining the material issues for its key stakeholder groups.
- Interviews with relevant managerial staff on a sample basis, at Company level concerning sustainability strategy and policies for material issues, and the implementation of these across the business.
- Interviews, on a sample basis, with relevant Company staff responsible for providing the information in the section "Key CSR Performance Data" of the Report, during which we were informed about the systems and reviewed, on a sample basis, the processes for information management, internal control and processing of the qualitative and quantitative information, at Company level. In this context, we tested on sample basis, the reliability of selected quantitative and/ or qualitative information (data and/ or text) of the section "Key CSR Performance Data" of the Report.
- Visits to the central offices of the Company in Athens, where we reviewed on a sample basis, the procedures of developing and managing the content of the section "Key CSR Performance Data" of the Report, as well as the current structure of the Corporate Governance in sustainability issues.
- Comparing the information presented in the section "Key CSR Performance Data" of the Report within our agreed assurance scope to corresponding information in the relevant underlying sources to determine on a sample basis, whether the relevant information contained in such underlying sources has been included in the section "Key CSR Performance Data" of the Report.
- Reading the information presented in the section "Key CSR Performance Data" of the Report within our agreed assurance scope to determine on a sample basis, whether it is in line with our overall knowledge of, and experience with, the sustainability performance of the Company.

It is noted that for the financial indicators and data reported in the section "Key CSR Performance Data" of the Report and specifically for the "turnover", the "total liabilities and equity", the "liabilities", the "equity", the "financial income", the "payroll cost including employee benefits and employer's social security contribution", the "dividend payments", the "earnings (losses) before taxes", the "long-term borrowings", the "short-term borrowings" and the "emission allowances (CO2)", KPMG's work was limited to the reliability check of the transfer of these data from the published / approved "Financial report 2016" or the "Annual report 2016" of the Company, to the section "Key CSR Performance Data" of the Report. To obtain a thorough understanding of the Company's financial results and financial position, the 2016 audited Financial Statements should be consulted. In addition, the scope of our work did not include the review / testing of the operational effectiveness of the information systems used to collect and aggregate data in the section "Key CSR Performance Data"

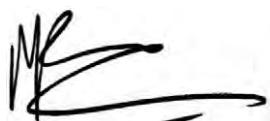
of the Report. Finally, our work for the above assurance scope concerned the operations and activities of the Company (excluding its subsidiaries) in Greece and we have not been engaged to provide assurance over any prior reporting period data or information presented in the Report.

The extent of evidence gathering procedures performed in a limited assurance engagement is less than that for a reasonable assurance engagement, and therefore a lower level of assurance is provided.

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the section 4.7 titled "Key CSR Performance Data" of the Report of Public Power Corporation S.A. for the period 1 January 2016 - 31 December 2016 is not, presented fairly, in all material respects.

Our assurance report is made solely to the Company in accordance with the terms of our engagement. Our work has been undertaken so that we might state to the Company those matters we have been engaged to state in this assurance report and for no other purpose. We do not accept or assume responsibility to anyone other than Public Power Corporation S.A. for our work, for this assurance report, or for the conclusions we have reached.

**KPMG Advisors A.E.**



**George Raounas**

Partner

Athens, 28 September 2017



## 12. FEEDBACK FORM

What readers think of this Report is very important to us. We welcome your comments, questions, and any queries, clarifications or proposals for improvement that you may have. By filling in and sending this questionnaire, you will be actively contributing to our attempt to improve our performance and the annual PPC Corporate Responsibility and Sustainability Report.

**Which PPC stakeholder group do you belong to?**

- |  |  |
|--|--|
| <input type="checkbox"/> Employee              | <input type="checkbox"/> Associate/Supplier                                |
| <input type="checkbox"/> Shareholder/Investor  | <input type="checkbox"/> Competitor  |
| <input type="checkbox"/> Public/Statutory body | <input type="checkbox"/> Region/Local Government Authority/Local Community |
| <input type="checkbox"/> Customer              | <input type="checkbox"/> Non-governmental organisation                     |
| <input type="checkbox"/> Other: .....          |  |

**What is your overall impression of this Report?**

	Very Good	Good	Average	Poor
It covers key issues relating to the Corporation's activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The quantitative data are comprehensive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The texts are comprehensive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Images and graphics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The various sections are well-balanced	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**What is your opinion on the following sections of the Report?**

	Very Good	Good	Average	Poor
About the Report	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PPC Profile	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sustainable Development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Market and customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Contribution to Society	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Are there sections which in your view should be longer?**

.....

.....

.....

**Are there any comments or proposals for improvement you would like to make?**

.....

.....

.....

**Personal details (optional):**

Name-surname:.....

Organisation/Corporation:.....

Address:.....

Tel./Fax:.....

E-mail:.....

**Please fill in and forward the questionnaire to the address below:**

Corporate Social Responsibility Section  
 Strategy Department  
 Public Power Corporation S.A.  
 22 Halkokondyli St., Athens GR-10432  
 Tel.: 210 5292379, Fax: 210 5292389  
 Email: e.sarikaki@dei.com.gr

All feedback data collected from the present feedback form will be used for internal evaluation purposes only. Personal data is protected in the manner laid down by the privacy legislation.



## CREDITS

The 2016 Corporate Social Responsibility and Sustainability Report was prepared by PPC's Corporate Social Responsibility Section, with the assistance of the CSR team.

The photos come from the PPC photography archives and were taken by Dimitris Rizos.

### Advisory Services



### Translation



### Layout and Design



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