

ΔΙΕΘΝΗΣ ΑΕΡΟΛΙΜΕΝΑΣ ΠΑΦΟΥ

ENERGY & CARBON MANAGEMENT LARNAKA & PAFOS AIRPORTS

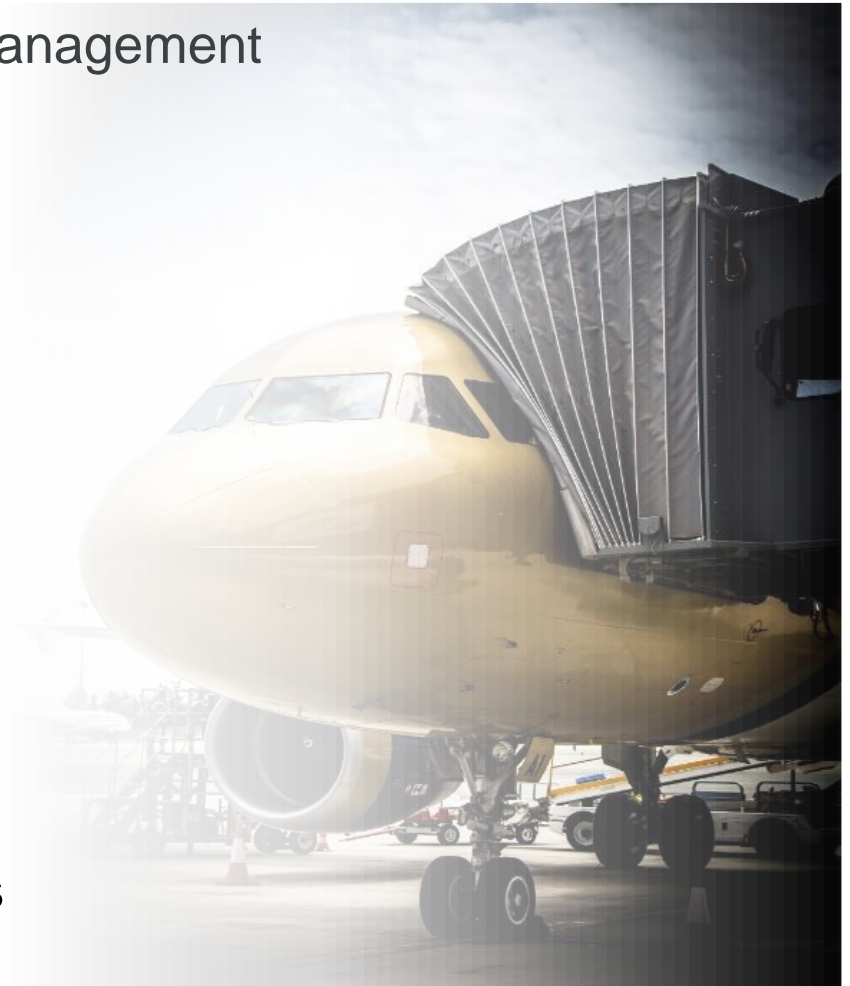
MARCH 2019

LARNAKA INTERNATIONAL AIRPORT

Agenda

Energy, Carbon and Environmental Management

- | Policy, Strategy and Direction
- | Energy Usage
- | Energy Actions & Projects
- | Certifications
- | Airport Carbon Accreditation
- | Energy Management
- | Certifications
- | Cultivation
- | Water Management
- | Waste Management
- | Solar Power Generation Projects



Energy Policy & Strategy

Hermes Airports Ltd Energy Policy



Hermes Airports Ltd is committed to excel in Energy management. Our primary objective is to use energy in the most efficient, cost-effective and environmentally responsible manner possible. Energy management will play a key role in Hermes' business.

Efforts to practise energy efficiency, reduce energy and minimize pollution will support our commitment towards our employees, our stakeholders, the environment and our community.

Hermes in its efforts to achieve continuous improvement of energy performance will:

- Implement energy efficient investments and use energy efficient systems / equipment
- Build and refurbish facilities incorporating energy efficient designs and materials
- Adopt measures to conserve energy and reduce carbon emissions and environmental impact of airports' operations
- Maintain and operate systems to use energy efficiently
- Avoid unnecessary expenditure on energy and use energy in the most efficient way practicable
- Increase awareness of energy issues and achieve engagement within airports' community. Train and educate our people in support of this initiative
- Where practical and cost effective promote use of energy from renewable sources
- Increase asset value by actively and responsibly managing energy consumption
- Commit organisational and financial resources to energy management
- Follow legislation and utilise market available standards in achieving this objective
- Monitor gains and use trends in order to improve
- Promote, where it can be financially justified throughout the lifecycle, the purchase of energy-efficient products and services

Energy Management is an integral part of Hermes Airports Ltd business strategy.


Endorsed by Hermes Airports CEO
November 2016

Hermes Energy Policy – “Commit to excel in Energy Management”:

- | Use energy in the most efficient, cost-effective and environmentally friendly manner
- | Optimization of Airport facilities and systems
- | Implement energy efficient investments
- | Promote use of energy from renewable energy sources
- | Increase awareness and achieve engagement
- | Follow legislation and available standards

Energy Policy & Strategy

Energy Strategy 2015-2020

Vision: To be identified as a leading airport within its category (LKA ACI Group 1; PFO ACI Group 2) in the implementation of energy conservation measures

Strategic Objectives:

- | 10% energy usage reduction and corresponding CO₂e emissions by 2020 compared to 2014 (baseline)
- | Optimize and sustain performance of facilities and systems
- | Update and invest in energy efficient and low carbon infrastructure / RES
- | Energy Monitoring and Data Management



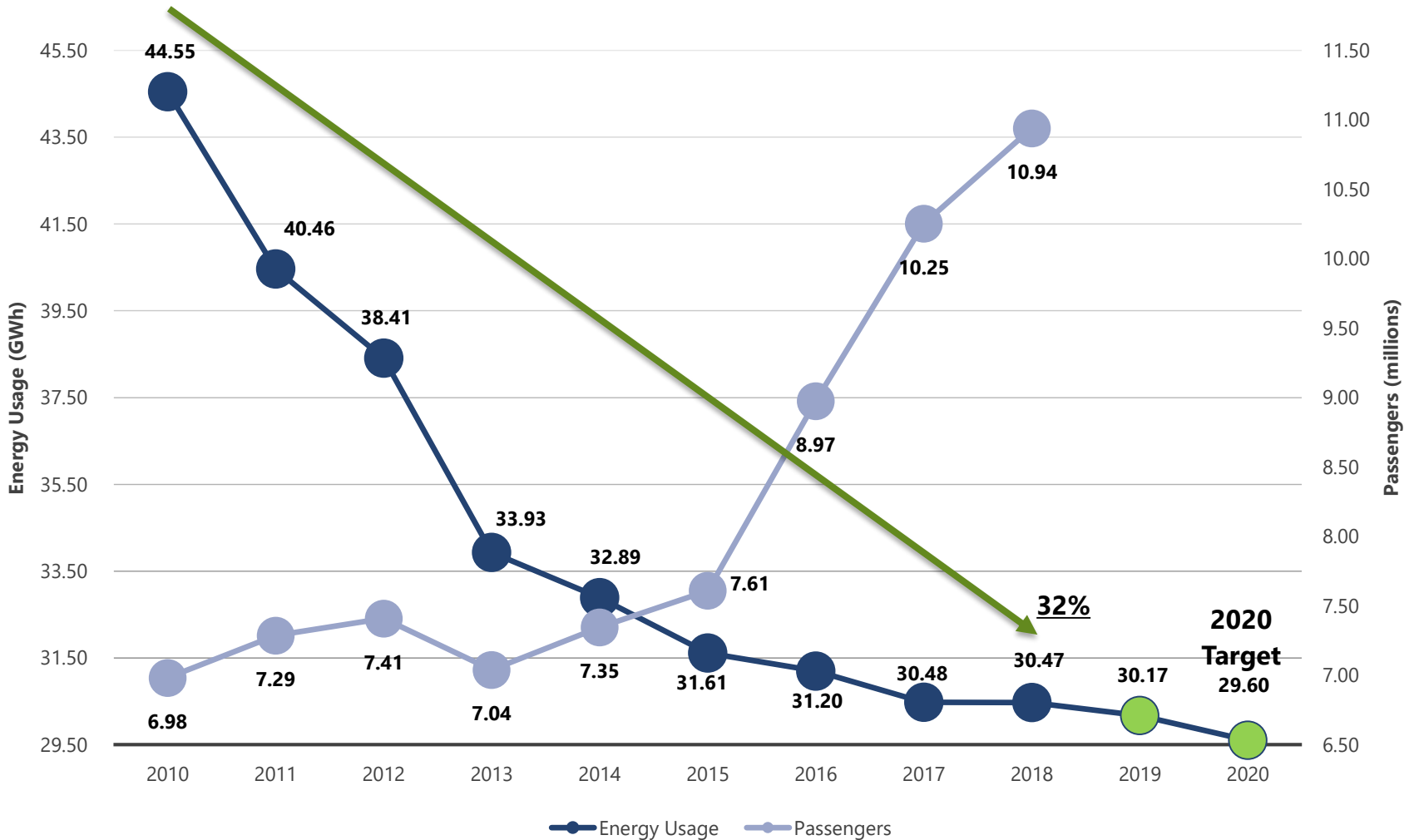
Environmental Policy and Direction

Hermes Environmental Direction – **“Actively reduce the impact of our operations on the environment”**



- | Greener airports is part of Hermes’ social responsibility
- | Develop Green Energy Solutions in the best economic interest of both airports, stakeholders and users
- | Meet all applicable laws and regulations
- | Adopt measure to conserve energy and reduce carbon emissions



Hermes' Energy Usage & Target



Hermes' Energy Usage & Target

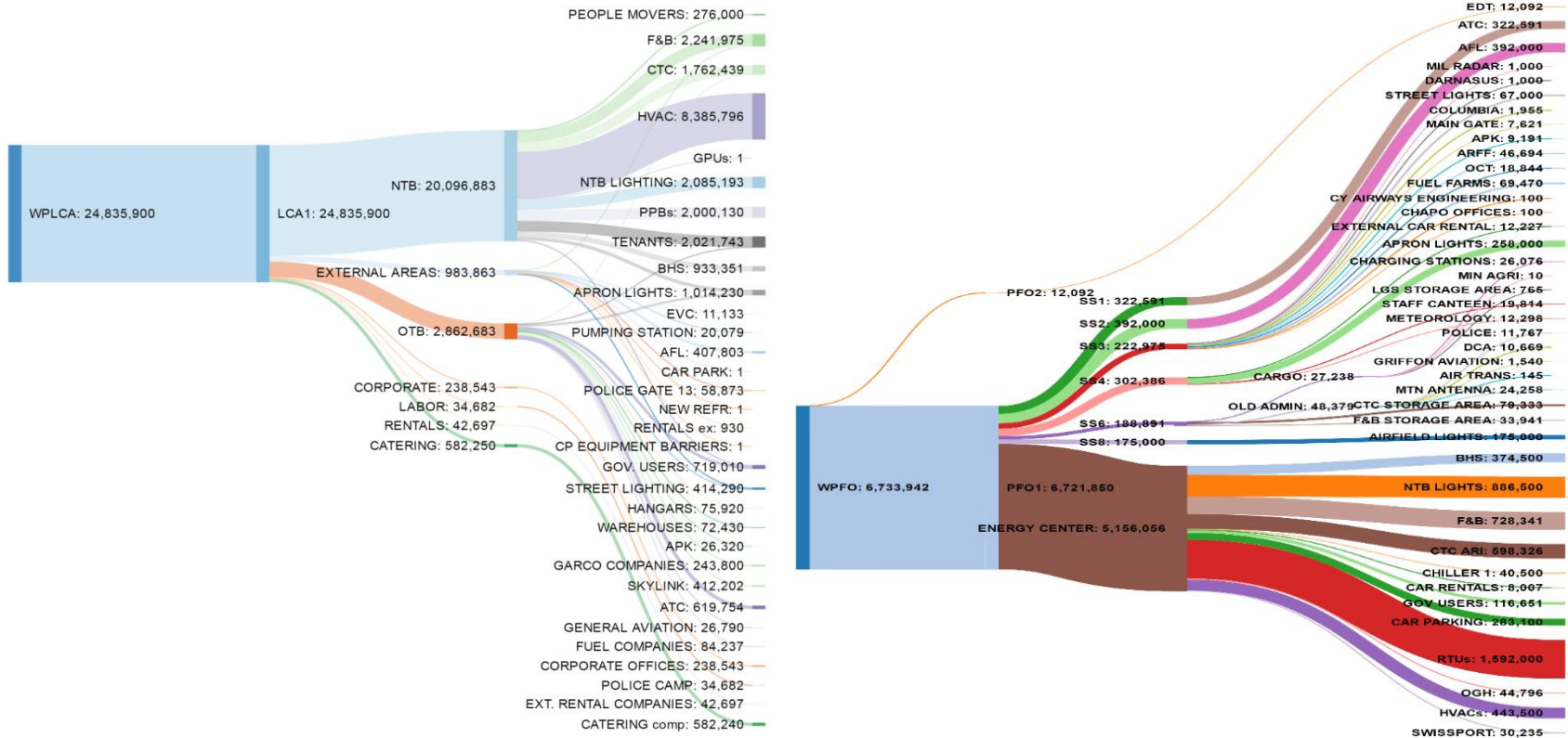
Larnaka Airport 2017: 23.81 GWh  3970 houses
Pafos Airport 2017: 6.67 GWh  1110 houses

2020 Target:

Reduction Energy Usage by **10%** compared to 2014

Reduction of Carbon Emissions by **10%** compared to 2014

Hermes' Energy Usage



Larnaka Airport
 Hermes Airports: 60%
 Others: 40%

Pafos Airport
 Hermes Airports: 65%
 Others: 35%

Energy Actions & Projects

Since 2010 more than:

| **90** Energy Saving Projects implemented

LED Lights



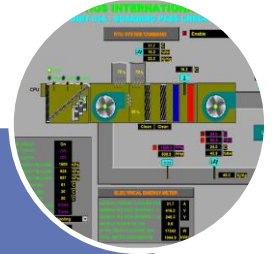
Solar Windows Film



HVAC and Lighting System Scheduling



BMS



Saving Mode on People Movers



Inverters on HVAC



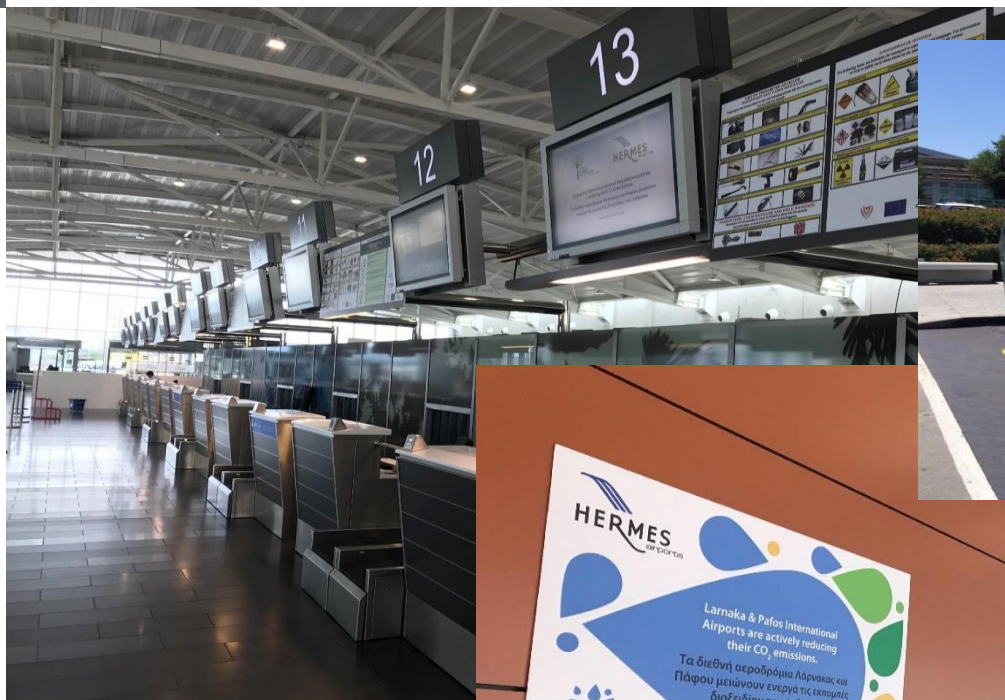
HVAC System Optimization



Energy Monitoring and Management



Energy Actions & Projects

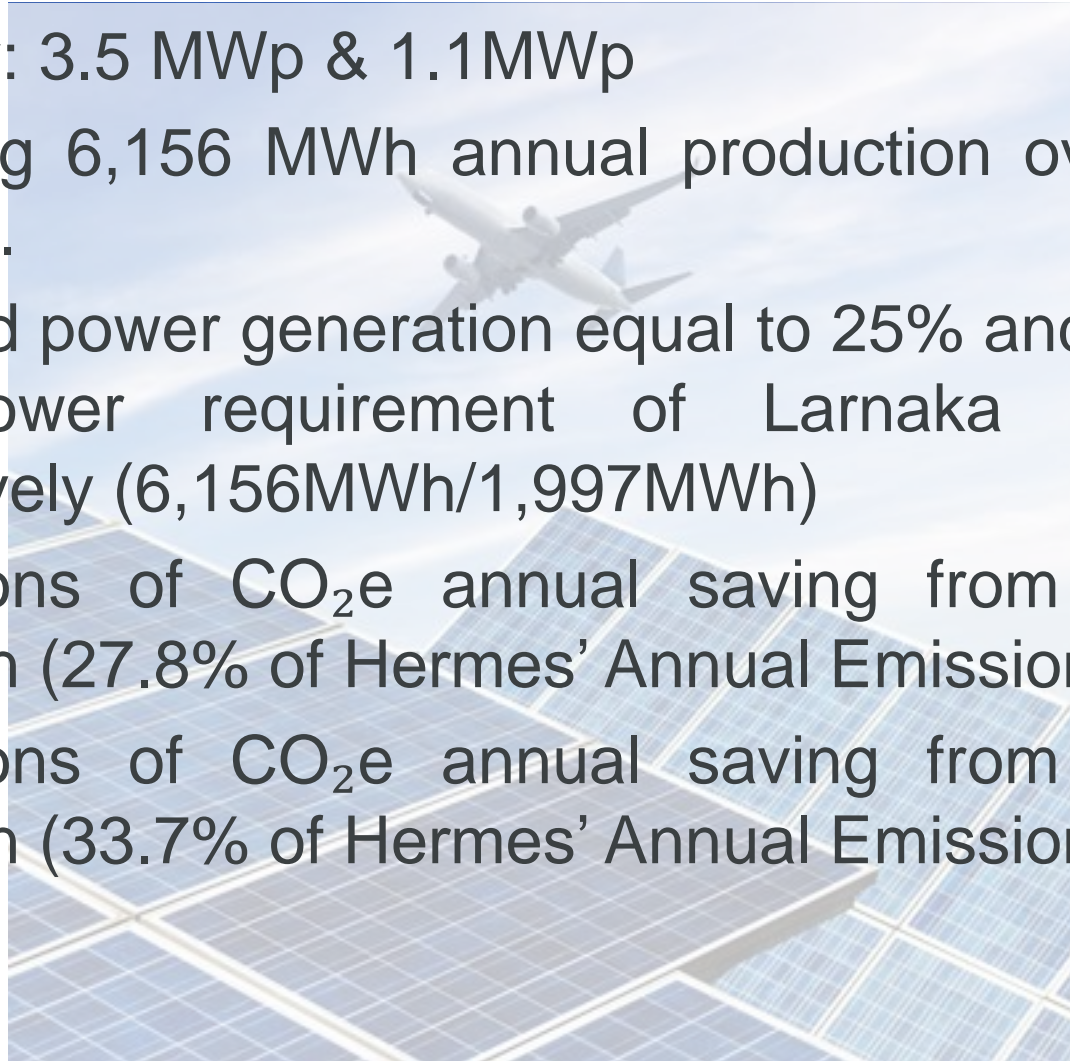


2018-20 Direction

- | Staff awareness campaigns
- | Engagement of airport community
- | Review Energy Strategy
- | Completion of small energy saving projects
- | Implementation of Energy Management Software Tool
- | Systems' operational parameters review
- | Solar Power Generation Projects

Solar Power Generation Projects Larnaka & Pafos Airports

- Capacity: 3.5 MWp & 1.1MWp
- Expecting 6,156 MWh annual production over the next 13 years.
- Expected power generation equal to 25% and 30% of the total power requirement of Larnaka and Pafos respectively (6,156MWh/1,997MWh)
- 4,391 tons of CO₂e annual saving from the airport operation (27.8% of Hermes' Annual Emissions)
- 1,424 tons of CO₂e annual saving from the airport operation (33.7% of Hermes' Annual Emissions)



Certifications

13

CERTIFICATE | ΠΙΣΤΟΠΟΙΗΤΙΚΟ | CERTIFICA | 304 | 304 | CERTIFICAT

CERTIFICATE



Management System as per
ISO 50001 : 2011

In accordance with TÜV AUSTRIA procedures, it is hereby certified that

HERMES AIRPORTS LTD

- Larnaka International Airport, 6650 Larnaka, Republic of Cyprus
- Pafos International Airport, 8063 Pafos, Republic of Cyprus

Applies an Energy Management System in line with the above Standard for the following Scope

AIRPORTS OPERATION AND MANAGEMENT.

Certificate Registration No.: 0116314062663

Valid until: 2019-11-21

Hrisiobos Ageloudis
Head of Management Systems & Products Certification Division
Certification Body
at TÜV AUSTRIA

Athens, 2016-11-22

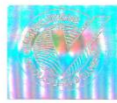
This certification was conducted in accordance with TÜV AUSTRIA auditing and certification procedures and is subject to regular surveillance audits.

TÜV AUSTRIA HELLAS
426, Mesogeion Ave.
GR-153 43 Athens, Greece
www.tuvaustriahellas.gr



CERTIFIKAT

Headquarters in Athens bear the responsibility of the Certification decision

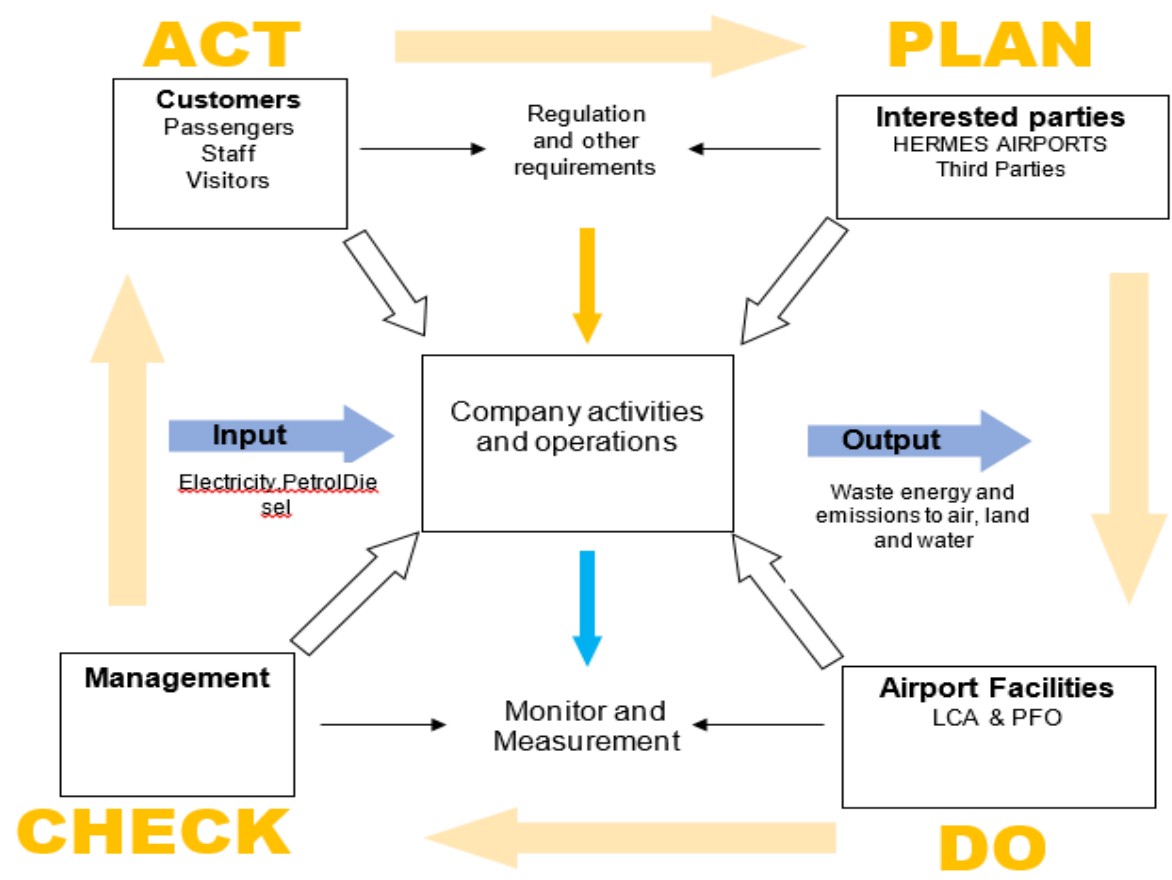


TÜV AUSTRIA
GROUP

Hermes Energy Management

- | ISO 50001:2011 Energy Management System for the operation and management of Larnaka and Pafos Airport
- | Energy Audits covering all premises of Larnaka and Pafos Airports
- | Energy Strategy 2015-20
- | Energy and Carbon Management Action Plan
- | Airport Community Engagement Plan

ISO-50001:2011 Energy Management System



Airport Council International: Airport Carbon Accreditation



Larnaka and Pafos International Airports are actively reducing their CO₂ emissions with the engagement of the airport stakeholders.

Τα Διεθνή Αεροδρόμια Λάρνακας και Πάφου μειώνουν ενεργά τις εκπομπές διοξειδίου του άνθρακα με την ενεργή συμμετοχή όλων των φορέων των αεροδρομίων.



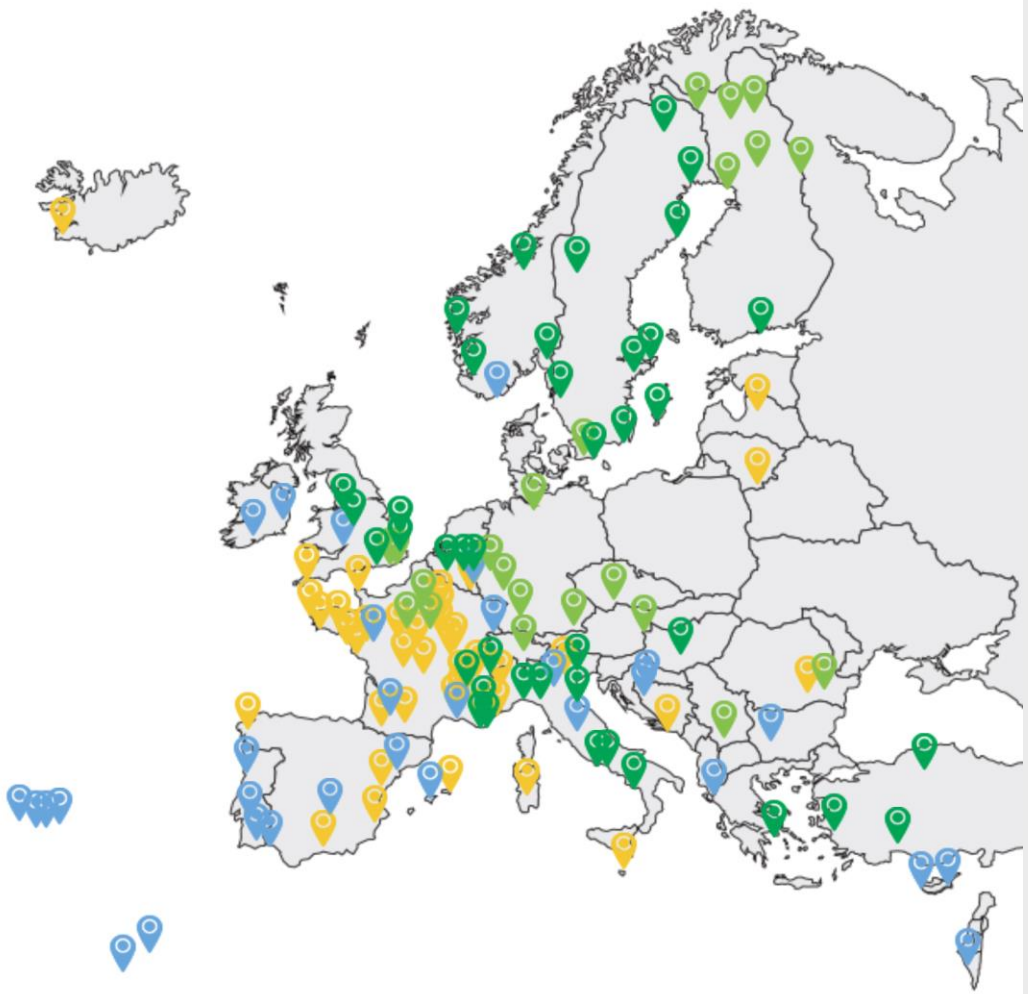
 @AirportCO2
www.airportCO2.org

Airport Carbon Accreditation is an independent programme administered by WSP, an international consultancy appointed by ACI EUROPE to enforce the accreditation criteria for airports on an annual basis. The administration of the programme is overseen by an Advisory Board.

There are four levels of accreditation:

- | Level 1: Mapping
- | Level 2: Reduction
- | Level 3: Optimisation
- | Level 3+: Neutrality

Airport Carbon Accreditation Map



34 in North America	133 in Europe
16 in Latin America & Caribbean	10 in Africa

 237 accredited airports	 48 new accreditations	 25% Growth since the previous year
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Airport Carbon Accreditation

Carbon Dioxide Equivalent Emissions

Larnaka Airport: 185,000 tons CO₂e

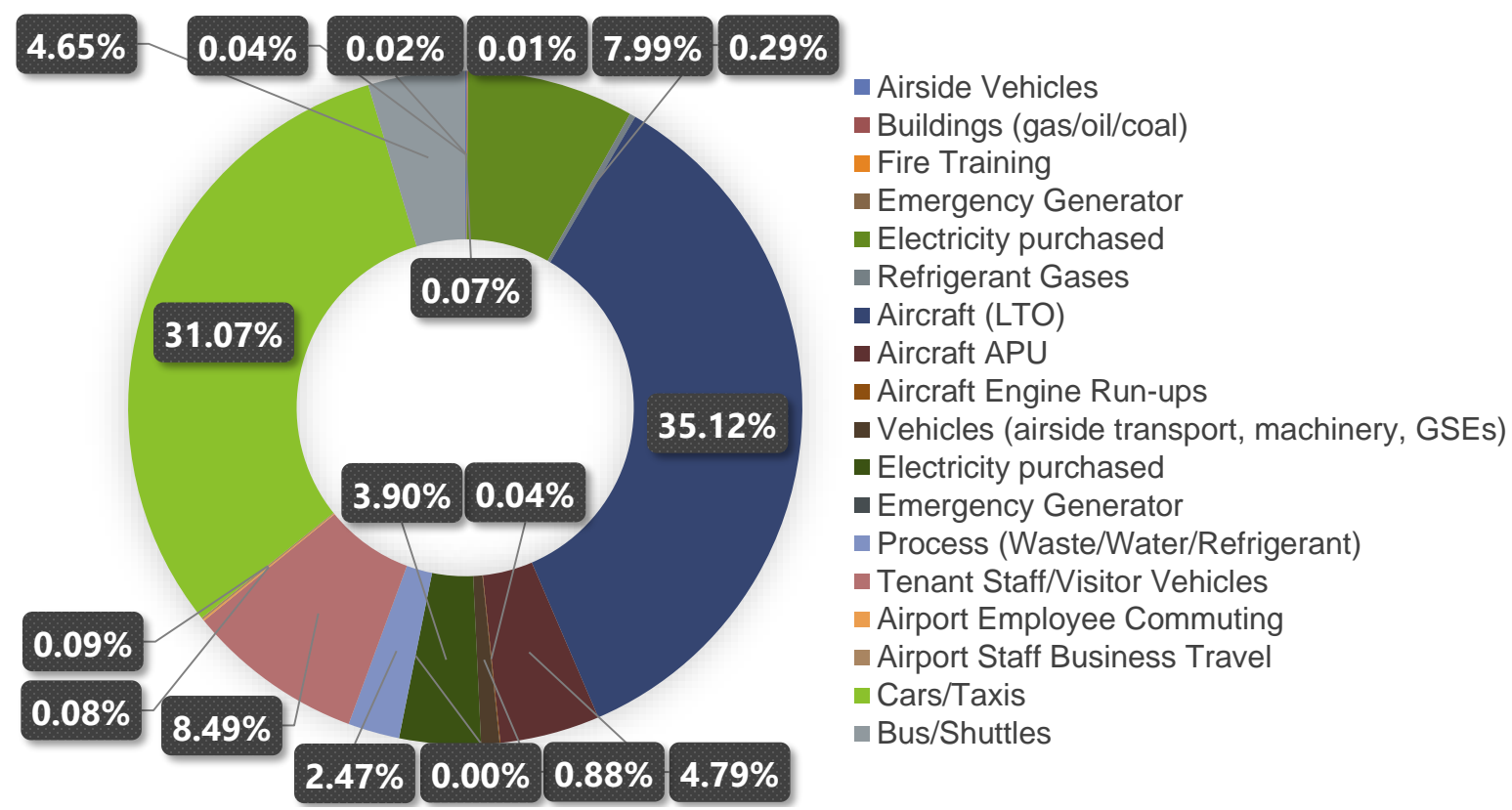
Hermes: 15,805 tons CO₂e - 8.5%

Hermes Electricity 95% of Hermes' emissions

Pafos Airport: 49,000 tons CO₂e

Hermes: 4,120 tons CO₂e – 8.5%

Hermes Electricity 90% of Hermes' emissions



Airport Carbon Accreditation

Hermes Airports achieved **Level 3 “Optimization”** accreditation for Larnaka and Pafos Airports in 2018.

The target is to have both airports accredited at **Level 3+ “Neutrality”** in 2019.

CERTIFICATE of ACCREDITATION

Valid until the 13th December 2019

This is to certify that **Airport Carbon Accreditation**, under the administration of WSP, confirms that the carbon management processes at

LARNAKA INTERNATIONAL AIRPORT
implemented by Hermes Airports Ltd

have earned the accreditation level of **OPTIMISATION**, in recognition of the airport's exemplary work in managing and reducing its CO₂ emissions and engaging other stakeholders to do the same, as part of the Global airport industry's response to the challenge of Climate Change.



[Signature]
Olivier Jankovec
Director General
ACI EUROPE

[Signature]
Simon Clouston
Director
WSP



CERTIFICATE of ACCREDITATION

Valid until the 13th December 2019

This is to certify that **Airport Carbon Accreditation**, under the administration of WSP, confirms that the carbon management processes at

PAFOS INTERNATIONAL AIRPORT
implemented by Hermes Airports Ltd

have earned the accreditation level of **OPTIMISATION**, in recognition of the airport's exemplary work in managing and reducing its CO₂ emissions and engaging other stakeholders to do the same, as part of the Global airport industry's response to the challenge of Climate Change.



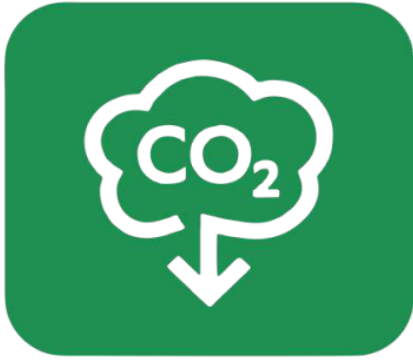
[Signature]
Olivier Jankovec
Director General
ACI EUROPE

[Signature]
Simon Clouston
Director
WSP



Energy Management in numbers

Hermes Airports leads the way



We reduced **CO₂** emissions caused by electricity consumption by **10,130 tons** the last 7 years



We reduced electricity consumed by **30%** the last 7 years



We installed 200 hand dryers saving **20,000,000 hand towels** and **700 trees** every year

Reduce | Recycle | Maintain | Sustain

Energy Management in numbers

Hermes Airports leads the way



We replaced more than **8,000** lights with LEDs



7,855 less barrels of oil used for electricity production the last 7 years
(1,248,850 litres of oil)



26% of our waste recycled in 2016

Reduce | Recycle | Maintain | Sustain

Environmental Certifications



**ΚΥΠΡΙΑΚΗ ΕΤΑΙΡΕΙΑ ΠΙΣΤΟΠΟΙΗΣΗΣ
CYPRUS CERTIFICATION COMPANY**

**ENVIRONMENTAL VERIFIER'S DECLARATION OF VERIFICATION
AND VALIDATION ACTIVITIES**

No. EMAS.17.002

Cyprus Certification Company (CCC), with EMAS environmental verifier registration number EMAS EL-V-0009 (AP. 549), accredited for the scope number 52.23 NACE CODE, declares to have verified the **whole organisation** as indicated in the **updated environmental statement** for the year 2017 of the organization:

HERMES AIRPORTS LTD

with registration number: CY 000089

meet all requirements of the Regulation

REGULATION (EC) 1221/2009 (EMAS)

of the European Parliament and of the Council of 25 November 2009, on the voluntary participation by organizations in a Community eco – management and audit scheme (EMAS):

By signing this declaration, I declare that:

- the verification and validation has been carried out in full compliance with the requirements of Regulation (EC) no 1221/2009
- the outcome of the verification and validation confirms that there is no evidence for non – compliance with applicable legal requirements relating to the environment
- the data and information of **updated environmental statement of the whole organisation** reflect a reliable, credible and correct image of the **whole organisation** activities, within the scope mentioned in the environmental statement

This document is not equivalent to EMAS registration. EMAS registration can be only granted by a Competent Body under the Regulation (EC) No 1221/2009. This document shall not be used as a stand-alone piece of public communication.

Issuing Date: 05/10/2018



Vassos Vassiliou
Director of Certification



Αρ. Πρωτ. 549



PARTNER OF:



Υπηρεσία Εργασιακού Συστήματος ΣΥΣΤΗΜΑΤΟΣ ΕΠΙΧΕΙΡΗΣΗΣ SIR 2014

30, Costa Anaxagora Str., CY – 2014 Strovolos – Nicosia – Cyprus
Κόστα Αναξαγόρα 30, CY – 2014 Στρόβολος – Λευκωσία – Κύπρος



**ΚΥΠΡΙΑΚΗ ΕΤΑΙΡΕΙΑ ΠΙΣΤΟΠΟΙΗΣΗΣ
CYPRUS CERTIFICATION COMPANY**

**ENVIRONMENTAL MANAGEMENT SYSTEM
CERTIFICATE OF CONFORMITY**

No. ES.17.006

The Cyprus Certification Company certifies that the Environmental Management System of the Enterprise:

HERMES AIRPORTS LTD

concerning the following activities:

Operation of Larnaca and Paphos International Airports.

carried out at the following locations:

**Larnaca International Airport: Larnaca, Cyprus.
Paphos International Airport: Paphos, Cyprus.**

has been assessed and found to be in conformity with the requirements of the Standard:

CYS EN ISO 14001:2015

The present certificate is granted in accordance to the CCC General Rules and Procedures for the Assessment and Certification of Environmental Management Systems, is ruled by the terms of the relevant contract between CCC and the enterprise and is valid until: **16/03/2020**

Nicosia, 05/10/2018



Vassos Vassiliou
Director of Certification

Initial Issue: 16/03/2017




Πιστοποίηση Σ.Δ. Αρ. Πρωτ. 282



PARTNER OF:



Υπηρεσία Εργασιακού Συστήματος ΣΥΣΤΗΜΑΤΟΣ ΕΠΙΧΕΙΡΗΣΗΣ SIR 2014

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Κόστα Αναξαγόρα 30, CY – 2014 Στρόβολος – Λευκωσία – Κύπρος

Green Public Procurement Awards

- | General Policy
- | Internal Lighting
- | Energy Performance of Building Facilities

**ΠΙΣΤΟΠΟΙΗΤΙΚΟ
CY GPP AWARDS 2017**

Απονέμεται στην επιχείρηση
 *Hermes Airports Ltd.*

ΒΡΑΒΕΙΟ

για τη συμμετοχή της στο διαγωνισμό CY GPP AWARDS 2017, στην κατηγορία
 *Γενική Ποιοτική*

Τα βραβεία συνδιοργανώθηκαν από το Τμήμα Περιβάλλοντος και το Ενεργειακό Γραφείο Κυπρίων Πολιτών

Κώστας Χατζηπαναγιώτου Σάββας Βλάχος

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CY GPP AWARDS 2017**

Απονέμεται στην επιχείρηση
 *Hermes Airports Ltd.*

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 *Εσωτερικός Διατάχτες*

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Κώστας Χατζηπαναγιώτου Διευθυντής Σάββας Βλάχος Διευθυντής

Δεκέμβριος 2017

Τυπώθηκε σε χαρτί, στο οποίο έχει αποτυπωθεί το Ευρωπαϊκό σήμα EU EcoLabel

**ΠΙΣΤΟΠΟΙΗΤΙΚΟ
CY GPP AWARDS 2017**

Απονέμεται στην επιχείρηση
 *Hermes Airports Ltd.*

ΒΡΑΒΕΙΟ

για τη συμμετοχή της στο διαγωνισμό CY GPP AWARDS 2017, στην κατηγορία
 *Κτηριακός Κλιμακωτός / Ενσωματωμένη Απόδοση*

Τα βραβεία συνδιοργανώθηκαν από το Τμήμα Περιβάλλοντος και το Ενεργειακό Γραφείο Κυπρίων Πολιτών

Κώστας Χατζηπαναγιώτου Διευθυντής Σάββας Βλάχος Διευθυντής

Δεκέμβριος 2017

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THANK YOU!



marios.constantinou@hermesairports.com

Contact Number: +357 24742192

