

Success Story

Company name: Lordos United Plastics Public Ltd

Country: Cyprus



1) Description of the company and energy consumption:

Lordos Plastics was founded in 1959. It is a leading supplier of plastics, providing a wide range of products such as pipes and fittings, films and bags, bottles and containers, household and industrial items, garden furniture and packaging solutions. The main activities of Lordos Plastics Company, is the production of anything concerning plastic and by achieving an enormous growth, they position their selves as the market leader in Cyprus. The company consists of 5 buildings and about 178 employees. The company's philosophy is to ensure continuous satisfaction of its customers and maintain high product reliability. Its excellent reputation makes the name LORDOS the best guarantee of quality in the island.

The pipes and fittings division of Lordos United Plastics is an ISO 9002 registered company and it also holds the product certification standard CYS106.

The table below indicates the Annual Electricity Consumption in MWh **before** the PINE audit :

<i>Electricity consumption</i>	<i>Gas/fuel/heat consumption (specify the type)</i>
5.693 MWh	-

The reason we have chosen to include this company among the success stories, was due to the large amount of electricity savings succeeded from the replacement of the regular lamps with LED lamps. We believe that this is a very strong example about the huge waste of energy concerning lighting, and it is clearly shown that just with the replacement of the LED, we can succeed to reach enormous savings. It is a very good example for our project and also an advertisement, because one of the most common and important things concerning electricity consumption, includes the lighting.

Concerning the company's willingness, the manager was very excited to hear about our proposal for implementing the project PINE to his company. Apart from his will to cooperate and provide us with all information requested, he looked so eager to consider our suggestions and act accordingly.

As members of the PINE project, we made it clear that there is always a potential for reducing the energy consumption, even if they have already been very active in reducing the energy consumption in the past.

2) Description of the activities carried out with the company and the suggested energy savings measures:

During the audit phase, we have visited the Lordos plastics factory for the collection of data.

We explained them exactly what the PINE project is, and we received all necessary information from the technical manager of the company. We had to make a "walk" through the factory to record every machine and lamps of the factory, so we could be able to suggest them solutions in every field (e.g the possible replacement of old machines with new energy efficiency machines. We also had to know everything concerning the factory and the way it works, so that we could suggest them more ways of energy saving in their occasion.

After collecting all data (technical manager cooperated and helped as a lot with the provided documents), we concluded to the results shown in the table below:

Type	Power Consumption	Percentage
Lighting	327.940 kWh	4,85%
Compressed Air	846.540 kWh	12,51%
Ventilation	0 kWh	0,00%
Pumps	151.200 kWh	2,23%
Drives	0 kWh	0,00%
Air-Coolers	1.092.720 kWh	16,15%
Electric Heating	0 kWh	0,00%
Offices	0 kWh	0,00%
Other	4.349.730 kWh	64,27%
Total	6.768.130 kWh	100,00%

We had a lot of recommendations for improvement, such as:

1. Lighting

- Periodical switching off the lighting when not necessary (especially the outside lighting)
- Installation of photovoltaic cell
- Reduce the brightness levels wherever possible (installation of lower wattage bulbs)
- Replacement of their existing lamps with corresponding LED technology
- Replacement of magnetic ballast with electronic ballast

2. Compressed air

- Elimination of leaks on the air circuit of the compressor
- Closing the compressor when there is no load for a long time
- In applications where high pressures are not necessary, they can use other equipment such as dryers, blowers, fans or less horsepower compressors.
- Frequent compressor maintenance

3. Pumps

- Choose the correct size of pumps
- Installation of conventional pumps with variable speed pumps

4. Air-coolers

- Frequent maintenance of cooling systems
- Installation of controllers with PC for optimal operation of refrigeration systems

- Heating recovery:
 - Using condenser heat for water heating
 - With good insulation of cooling area / air conditioning
- 5. Electric Heating
 - The electric heater have to be on for as long as needed and not continuously (e.g until the temperature reaches the required level)
- 6. Offices
 - Use of devices stand by killers to eliminate extra consumption resulting from the operation of the machine being in standby mode.
- 7. Boiler
 - Steam network pipe insulation

Mr. Antonis Avgousti (technical manager of Lordos Plastics Company), mentioned about the services offered by PINE project:

“It was really exciting to cooperate with people dealing with energy saving. The project was enlightening and helped us understand our consumptions (and of course all percentages). We received a lot of suggestions and solutions for energy saving, and we now have variable options for investing in the future and save energy. The research for the replacement of the lighting with LED was extremely helpful, and we succeeded to save a lot of energy and money.”

3) The savings:

The company has already implemented the installation of a transformer, and after our suggestions they proceed to the replacement of their lamps with LED. The results were obvious and they were truly satisfied. They couldn't believe that they could achieve such a great reduction.

Concerning their plans for the next 3 years, the only thing mentioned for the future plans, was the installation of power factor corrector system.



According to our calculations, the lighting holds the 4.85% of the factory's energy consumption, and with the replacement of the lamps with LED, they succeeded to reach the 15% saving.



Energy savings achieved after the implementation of the measures proposed by the PINE auditor:

	<i>Electricity savings</i>	<i>Gas/fuel/ heat savings (specify the type)</i>
<i>Actual saving</i>	<i>50.6 KWh</i>	-
<i>Future saving (in 3 years)</i>	<i>151.8 KWh</i>	-