

As part of the SwitchMed programme, UNIDO supports industries in the Southern Mediterranean through the transfer of environmental sound technologies (MED TEST II) to become more resource efficient and to generate savings for improved competitiveness and environmental performance.

Palestine

Siniora Food Industries Co.

Food and beverage sector

Context

Number of employees:	220
Key products:	Luncheon meat, cold cut meat, premium beef and turkey products, sliced products
Main markets:	Local 75%, regional and international 25%
Management standards:	FSSC22000, ISO 22000, ISO 9001:2015, ISO 14001, OHSAS 18001

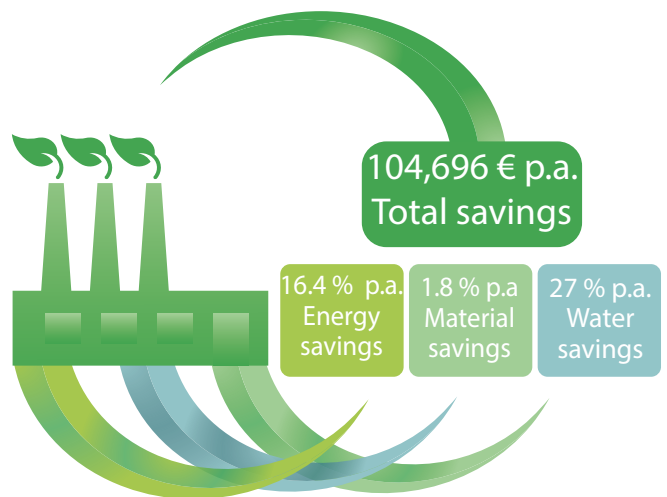
Siniora Food Processing Company was founded in Jerusalem in late 1920. The company is a modern meat processing facility producing in accordance with the best quality and safety standards a range of products such as; cold cuts, luncheon slices of premium turkey and beef, sold to national and regional markets.

The company participated in the MED TEST II project to improve energy efficiency. The production engineers received training on the RECP concept and tools and then trained the rest of the employees on best management practices for a resource efficient production.

“Our ambition for the project is to reduce our energy and raw materials losses and water consumption to expand our international market. We soon realized that the production practices and technologies presented to us will bring environmental and financial benefits.”

Eng. Majdi Alshareef
CEO

Benefits



Graphic: UNIDO

The MED TEST II project identified total annual savings of 104,696 euros in energy, water and raw materials with an estimated investment of 72,370 euros. The average payback period of these investments is just 0.7 years. Out of a total of 12 identified measures, approximately 80% were accepted for implementation by the company's senior management, and 60% of the measures in the savings catalogue have already been implemented in 2017.

Energy consumption will be reduced by approximately 16% of the total consumption. This is equivalent to a reduction of 395 t/year of CO₂ equivalent. In addition, reduction of solid waste is calculated at 7.8 % of total solid waste produced. Actual water consumption is reduced by 27 % per year.

The company issued its EMS policy statement and was provided with guidelines to establish RECP, integrating an EMS system to upgrade its ISO 14001:2004 to the ISO 14001:2015 version.

Saving opportunities¹

Action	Economic key figures			Resource savings & environmental impacts per year		
	Investment euros	Savings euros / yr.	PBP years	Water and raw materials	Energy MWh	Pollution reduction
More efficient lighting	12,220	11,250	1.1	-	95	391 t of CO ₂ 16.8 t of solid waste
Energy conservation	9,720	58,971	0.2	-	183	
Water efficient product cooling	2,210	14,475	0.2	12,285 m ³ of water	-	
Introducing reusable plastic boxes	48,220	20,000	2.4	16.8 t of packaging	-	
TOTAL	72,370	104,696	0.7	12,285 m³ water 16.8 t raw materials	278 MWh	

¹ Numbers based on production value from 2016

More efficient lighting

Inefficient fluorescent lamps are being replaced by energy efficient LED tube lamps saving approximately 94.5 MWh per year. In 2017, 40% of the total florescent light fixtures were replaced, and the company plans to replace the remaining lights by mid-2018. This measure will save around 11,000 euros per year, with a calculated payback of one year.

Energy conservation measures

Several low-cost or no-cost energy conservation measures were implemented. Their benefits got verified with the instalment of sub-meters, which now are part of an information system monitoring resource efficiency. Measures include, for example, adjusting the defrosting time to the weather conditions and insulating equipment.

Water efficient product cooling

The company uses water showers for cooling the cooked products, and it was found through a company-wide assessment that water usage within this process amounts to 55% of the total water consumption. The company started modifying the cooling process by introducing new resource-efficient techniques that have delivered savings of around 60% compared to the total water consumed in the old cooling process and a total of 27% savings in the total consumption of water. Water savings were verified by installing a sub-meter.

Introducing reusable plastic boxes

The company replaced single use carton packaging with reusable plastic boxes to transport finished products. This change in packaging reduced the costs of packaging material by 20,000 euros per year/y and reduced the annual solid waste generated by third parties by 16.8 t.

“Applying the TEST methodology in our company helped us to see our hidden costs and to move towards significant saving opportunities. We have applied most of the savings options, reducing raw materials losses and water and energy consumption.”

Eng. Majdi Alshareef
CEO

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