

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.

Israel

Tempo Beverages Ltd.

Food and beverage sector

Context

Number of employees: 1000

Key products: Beer, carbonated/non-carbonated soft drinks, purified water

Main markets: Domestic and export

Management standards: ISO 14001

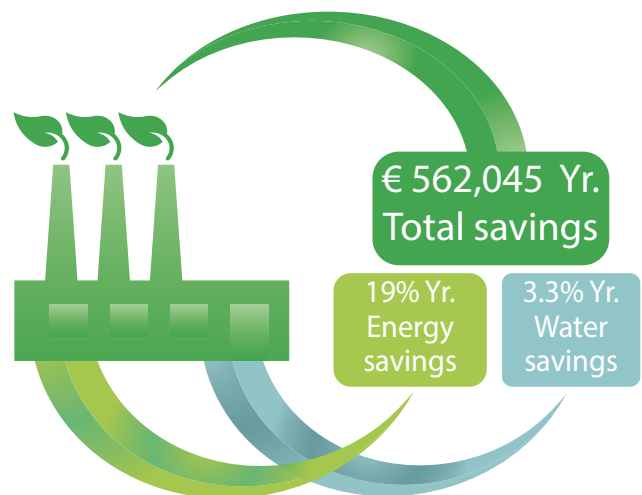
Tempo, founded in 1952 is partially owned by Heineken. It employs 1000 employees. The project was performed at the main plant in Netanya. The plant Produces Beer, soft drinks (Carbonated and still) and bottled water (Carbonated and still) mostly for the domestic market. Among which are global brands such as PepsiCo's brands and Heineken that are being produced under license. The plant's annual output production is in the range of 2-2.5 million hectoliters.

The plant was motivated to join MED TEST II to in order to find ways to improve its environmental footprint while benefiting its costs. The promise of reducing its environmental impact by applying methods of a more efficient material management was attractive.

“We were aware that our plant had substantial potential for financial and environmental improvement. The problem was figuring out where this potential was hiding in the process. The MED TEST II project and methodology helped us discover how to allocate the existing data in a way that that will be most cost effective.”

Oren Avrashi,
CSR manager

Benefits



Graphic: UNIDO

The MED TEST II project identified annual saving potential of up to 562,045 euros, with an estimated investment of 965,122 euros. Some of the measures have excellent return on investment with an average payback period of 1.7 years.

13 out of 18 measures identified were accepted and are planned to be implemented during 2017-2018. If all 18 measures were to be implemented, the total energy costs would have been reduced by 19% through applying measures on the steam boilers, brew house, air compressors and bottles drying. These would be translated to a reduction of 26% in CO₂ equivalent emissions in energy consumption, 5% reduction in solid waste for landfill and 3.3% in water consumption.

At project start, Tempo was under a certification procedure for ISO 14001. The identified RECP measures throughout the MED TEST II project were fully integrated into the management system during its design, which will ensure continuous improvement of the environmental and energy performance of the company

Saving opportunities^{1,*}

Action	Economic key figures			Resource savings & Environmental impacts per year		
	Investment euro	Savings euro / Yr.	PBP Yr.	Water & Materials	Energy MWh	Pollution reduction
Filling lines productivity	25,750	53,570	0.5	32 m ³ Water 560 kg raw materials	500	Total: 1,325 t CO ₂ 0.5 t waste 13,627 m ³ waste water
Water reuse in rinser	7,500	40,000	0.2	16,000 m ³ Water	-	
Efficient compressed air system and cooling towers	237,500	€88,750	2.7	-	916	
Improved procedures for steam boilers	37,500	46,000	0.8	-	1,408	
TOTAL	€308,250	€228,320	1.3	16,032 m³ water 560 kg raw materials	2,824 MWh	

¹ Numbers based on production value from 2014
*The projects listed above are only part of those identified throughout the project.

Filling lines productivity

This measure requires installation of a comb blower to dry bottles before reaching the HEUFT testing machine on the bottles line. Blowing the bottles with air causes water to center on the cap area and an additional comb blower is needed to dry the caps and counteract this problem. In addition electric blow dryers will be installed on all lines replacing compressed air for drying bottles and cans exiting the filler that are wet from the pasteurization tunnel. This will bring a 500MWh energy consumption saving for the process.

Water reuse for rinsing

For technical reasons fresh water has been used to rinse products at one of the filling lines and then disposed of in the sewer system. Moreover, the rinser works non-stop, resulting in high water consumption. Water recirculation and reuse will now be introduced together with an automatic water shut-off stopping waste when are no cans in the filler to reduce water consumption.

Efficient compressed air system and cooling towers

The plant will integrate a small screw compressor unit that will be in use when high volumes of compressed air are not needed. Additionally, an orderly system operation outline will be put in place for the new compressed air system to improve the load factor with the compressors switching on and off due to demand from many independent consumers. Finally operation methods for the cooling towers will be adjusted and an efficiency test will be carried out to identify corrective maintenance procedures.

Improved procedures for steam boilers

This measure includes preparation of an orderly system operation outline for the new steam-boilers control system in order to improve efficiency in the heat generation process.

For more information, contact:



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