

MED TEST III Palestine

Transfer of Environmentally Sound Technologies

Pharmaceutical sector

Beit Jala Pharmaceutical Company - BJP

Company overview

Number of employees:

250 full-time employees

Key products:

Tablets, Capsules, Powder, Syrup, Solutions, Oral Drops, Suspensions, Cream, Gel, Lotion, Medicated shampoo, Ointment, Suppositories, Drops, Ointment

Main markets:

Palestine 80%, Export 20%

Standards & certifications before MED TEST III:

ISO 9001:2015 – ISO 14001:2015

Beit Jala Pharmaceutical Company (BJP) is one of the four big pharmaceutical companies in Palestine. The company was founded in 1969, and was formerly operating as Jordan Chemical Laboratory. With a commitment to the constant development of pure, safe, and effective drug pharmaceutical products, the company currently produces hundreds of pharmaceutical products.

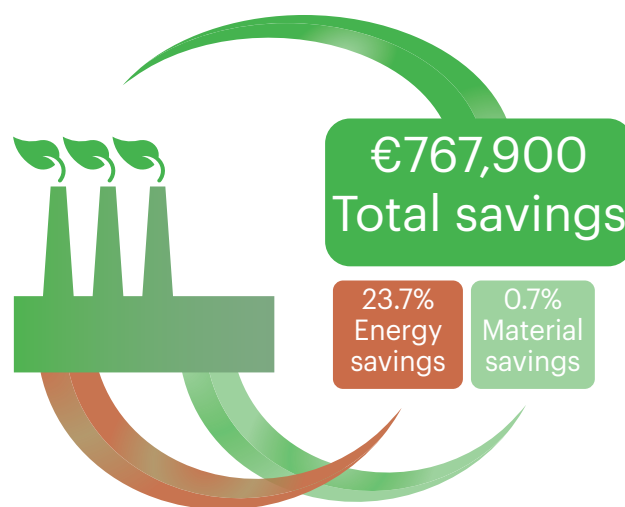
Benefits

The MED TEST III project introduced an information system on resource efficiency, which helped the company to better control significant materials and energy flows, identifying losses and related causes. A total annual savings of 767,900 Euro* (2,833,554 ILS) in energy and raw materials with an estimated investment of 1,576,336 Euro* (5,816,680 ILS) was defined.

The average payback period for the actions is 2 years, and 90% of the identified 24 measures were accepted by the top management for implementation, out of which 25% of them are already implemented or under implementation at the end of the project. The achievements and progress made were aligned with the board of director's strategic directions and the company could appreciate already during the project's duration, a reduction of the energy bill due to the implemented savings measures.

By implementing the accepted measures, the material consumption will be reduced by 0.7% and energy costs will be reduced by approximately 50% as the saving measures of replacing diesel by LPG and tariff optimization further increase cost savings related to implementing energy efficiency solutions. The renewable energy production will cover 77% of existing electricity consumption. In addition, the CO₂ emission are expected to reduce by 2,856 tons CO₂ per year and solid hazardous waste by 3,200 kg/year. The reduction of hazardous waste includes not only the lost raw material but also the waste from dry cleaning or dust filters and related packaging and transport material.

Identified annual savings



“

It was a very good idea to have somebody from outside to help us to review our production processes. We like this study, and we are gradually implementing the identified measures. It is a very fruitful project from our point of view

Waled Kamel
General Manager

”



Visit SwitchMed.eu

As part of the EU-funded SwitchMed programme, UNIDO demonstrates in the MED TEST III project pathways for industries in the Southern Mediterranean to become more resource efficient and to generate savings for improved competitiveness and environmental performance.

This publication has been produced with the financial assistance of the European Union (EU) and SwitchMed co-funding partners. The contents of this publication are the sole responsibility of UNIDO and can in no way be taken to reflect the views of the EU.

SwitchMed is co-funded by:

Saving opportunities**

Actions	Economic key figures			Resource savings & Environmental impacts		
	Investment Euro*	Savings Euro* per year	Payback period years	Water & Materials per year	Energy MWh per year	Environmental impact per year
Electrical and thermal energy conservation	297,745	341,009	0.9	-	992	2,856 tons CO ₂ reduction
Renewable energy production	1,176,152	379,466	3.1	-	2,546	
Saving in material and reduction of solid waste	26,558	13,550	2	50 kg	-	3,2 tons hazardous waste reduction
Upgrading of machines	75,881	33,875	2.2	96 kg	-	
TOTAL	1,576,336	767,900	2	146 kg	3,538	

*Exchange rate as 1 Euro = 3.69 NIS (New Israeli Shekel)

** Numbers based on production value from 2021

Electrical and thermal energy conservation

BJP depends largely on electricity from the national electricity provider JDECO. Some of its energy needs come from the use of Diesel / LPG imported to the company.

The following energy saving measures were identified:

- Optimization control and operation of the cooling pumps and air compressors to match the production with demand.
- Installing small split chiller and small air compressor to be used for the water system.
- Regular maintenance and optimization of air compressors control's system.
- Lighting system upgrading and replacement.
- Performance improvement for Split AC units.
- Insulate condensate pipes and feed tank for the steam system.
- Upgrading the building energy management system (BMS).
- Use LPG instead of diesel for boilers.
- Change the electricity tariff system from medium voltage to high voltage.

Renewable energy production

- Expanding the existing photovoltaic renewable energy system installed on the roof by installing an additional 150 kW. This project is already approved by the company board.
- Installing a large scale PV system of 1.4 MWh. The company is looking for a suitable land for renting or buying. BJP is a shareholding company that is financing its projects through combination of own capital, bank loans and in this case also subsidies.

Saving in material and reducing solid waste

BJP solid form products were identified having the highest materials wastage based on production data. Raw materials are active and non-active materials and related solid waste is considered hazardous waste which needs treatment by specialized waste management companies.

For more information contact:



UNITED NATIONS
INDUSTRIAL DEVELOPMENT ORGANIZATION

United Nations Industrial Development Organization
Ms. Ulvinur Müge Dolun
Division of Circular Economy and Environmental Protection
Circular Economy and Resource Efficiency Unit
Vienna International Centre, P.O. Box 300, 1400 Vienna, Austria
E-mail: u.dolun@unido.org Web: www.unido.org

The following saving measures were recommended to reduce raw material losses and waste generation:

- Install vacuum transport in Huttlin machine - fluid bed dryer.
- Pneumatic transport of products during the process.

Upgrading of machines

Upgrading the production process will result in a competitive advantage for the company increasing the productivity and quality; the following measures were recommended:

- Install a new fast tableting machine.
- Installation of weight self-regulation systems on tableting machines.
- Installation of multi check instrument in every pressing room.
- Installation of punch automatic cleaning machine.

“

We saw potential for positive improvements already during the early stages of the project and we implemented the energy measures immediately. Regarding the other measures related to products and materials, some of them need more time to be implemented and are part within our long-term plans due to pharmaceutical industry's regulatory issues. A great thank you to the TEST experts and their efforts. We highly recommend that this project and tool to be enhanced in other industrial companies.

Eng. Salah AlQam
Project manager

”