

MED TEST III Lebanon

Transfer of Environmentally Sound Technologies

Printing and service activities related to printing *Arab Printing Press (APP)*

Company overview

Number of employees:

120 Full-time employees

Key products: APP produces a wide variety of books and school books in addition to a vast range of commercial printed items including packaging and labels

Main markets: Local (60%) International (40%)

Standards & certifications before MED TEST III:

ISO 9001:2015, ISO 14001:2015; ISO 45001: 2018, FSC Certification, Sedex audit Certification (Sedex Members Ethical Trade Audit), Ecovadis, ESG certificate of commitment.

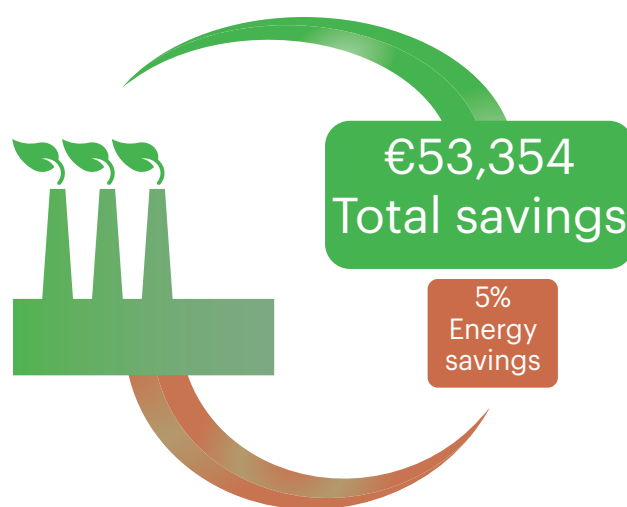
Established in 1968, the Arab Printing Press (APP) has half a century of experience in the printing industry serving clients in Europe, the Middle East and Africa. With its team of 120 professionals, APP produces a wide variety of books, magazines as well as a vast range of commercial printed items including packaging and self-adhesive labels.

APP's vision is to continue the growth and success of the last half century while staying at the forefront of innovation, and the continued development of an environmental and socially responsible culture that encourages both employee and customer loyalty.

Benefits

The MED TEST III project identified total annual savings of 53,354 Euro* related to energy with an estimated investment of 11,676 Euro*. The average pay back period is less than three months as most options have almost immediate recovery. Hence, the totality of the seven identified measures has been accepted by the top management for implementation and 71% have already been implemented, while the remaining 29% are planned for implementation by the end of 2023. As electricity is generated in situ, the RECP action plan will result in a reduction of 10% of the overall fuel consumption which includes improved efficiency of the generator, and 4% of the electricity consumed directly in the process. Additionally, a reduction of 173 tons of CO₂-eq. per year is expected from the implementation of identified options.

Identified annual savings



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At APP, we believe in the importance of environmental and safety factors and the well-being of the community when making all commercial decisions. Accordingly, we strive to continuously improve our practices to stay in line with our values while offering a better product quality to our consumers. We have joined the MED TEST III project to benefit from UNIDO's expertise in meeting our goals.

Elie Raphael
Chairman and General Manager

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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.

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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
Improving the performance of the air conditioning system	4,307	6,460	0.7	-	23	Total 173 tons of CO ₂ -eq.
Increasing the efficiency of the compressed air system	191	2,393	0.1	-	8	
Optimizing the performance of the PV system	1,914	15,312	0.1	-	55	
Enhancing the efficiency of the electricity generator	4,785	27,754	0.2	-	327	
Reducing electricity consumption in the binding line	479	1,436	0.3	-	5	
TOTAL	11,676	53,354	0.2	-	418	

* Using average exchange rate February 2022-February 2023 1 USD=0.957 Euro

**Production value: December 2021-September 2022

Improving the performance of the air conditioning system

The performance of the air conditioning (AC) system has been improved through several energy saving measures consisting of combing the condenser coils of all AC machines, providing shading for the sun exposed condensers, insulating refrigerant liquid lines and cleaning the filters of indoor AC units.

Increasing the efficiency of the compressed air system

The efficiency of the compressed air system has been increased by fixing leaks in the air compressor and distribution lines. With a payback period of one month only, this low cost measure is expected to increase the output of the air compressor by 10-20% and achieve energy savings of 8 MWh/Yr.

Optimizing the performance of the PV system

The performance of the Photo Voltaic (PV) system has been improved through rehabilitation and periodic maintenance. In this regard, synchronization was implemented between the PV system and the electricity generators through a fuel saver, a measure that increases the load factor of the generators and avoids shutting down the PV system when the electricity load is at a minimum. On the other hand, the inverters of the PV system have been replaced for better options and monthly cleaning of the collectors is being carried out to increase the production from the system.

Improving combustion efficiency for generators

The presence of excess air in the exhaust stack of electricity generators is detrimental to combustion efficiency. Each 1% decrease in combustion efficiency below normal operation leads to practically 1% increase in fuel consumption. The combustion efficiency of APP's electricity generators will be

improved by 5% by reducing the percentage excess air in the generators exhaust stack, a fact that will decrease the CO concentration and lower soot formation in the exhaust gas.

Reducing electricity consumption in the binding line

The blower serving the Wohlenberg bending line which conveys clip cuttings to the dump shaft has a relatively long discharge ductwork (70 meters) which results in very large pressure drops, thus higher electricity consumption. The blower discharge ducting will be thus shortened to just 20 meters and directed to the nearest external wall where an externally mounted duct will channel the clip-pings by gravity to a collection bin on ground floor. A variable speed drive needs to be installed for this blower in order to reduce the blower speed to adapt it to the modified pressure drop requirements.

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The SwitchMed MED TEST III project identified a number of energy efficiency measures that enabled APP to reduce both the carbon footprint and energy costs, which is aligned with our values and continuous search for reducing our environmental impacts while remaining efficient

Elie Raphael

Chairman and General Manager

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