

CASE STUDY

MOUSTADAMA'S DEMONSTRATION PROJECT

ACCELERATING INDUSTRIAL SUSTAINABLE ENERGY

AI-AMOUR FACTORY

In Palestinian industry, around 40% of the production costs are energy related. This case study examines the potential energy savings resulting from the completed and detailed ISO 50002 industrial energy audit at Al-Amour factory. The study shows that the energy efficiency (EE) saving within the manufacturing plant are approximately 41.8 MWh (30,600 NIS) per annum at an investment cost of 5,200 NIS. The study also shows that the renewable energy (RE) potential within the factory is 353MWh (229,524 NIS) per year at an investment cost of 831,642 NIS.

Al-Amour Company Snapshot

Industry: Steel industry

Location: Biddya, Salfit, Palestine

Products: Steel Structure, steel tubes and profiles, galvanized roll forming, corrugated sheets, agriculture water tanks

Industrial area: 5,300 sqm

Baseline electricity consumption: 395 MWh (2021)

Total energy expenditure: ~266,750 NIS per year

Interventions

Typology: Energy Efficiency Savings and Solar PV System integration

Period of implementation: 2022 - 2023

Implementation cost: 831,642 NIS

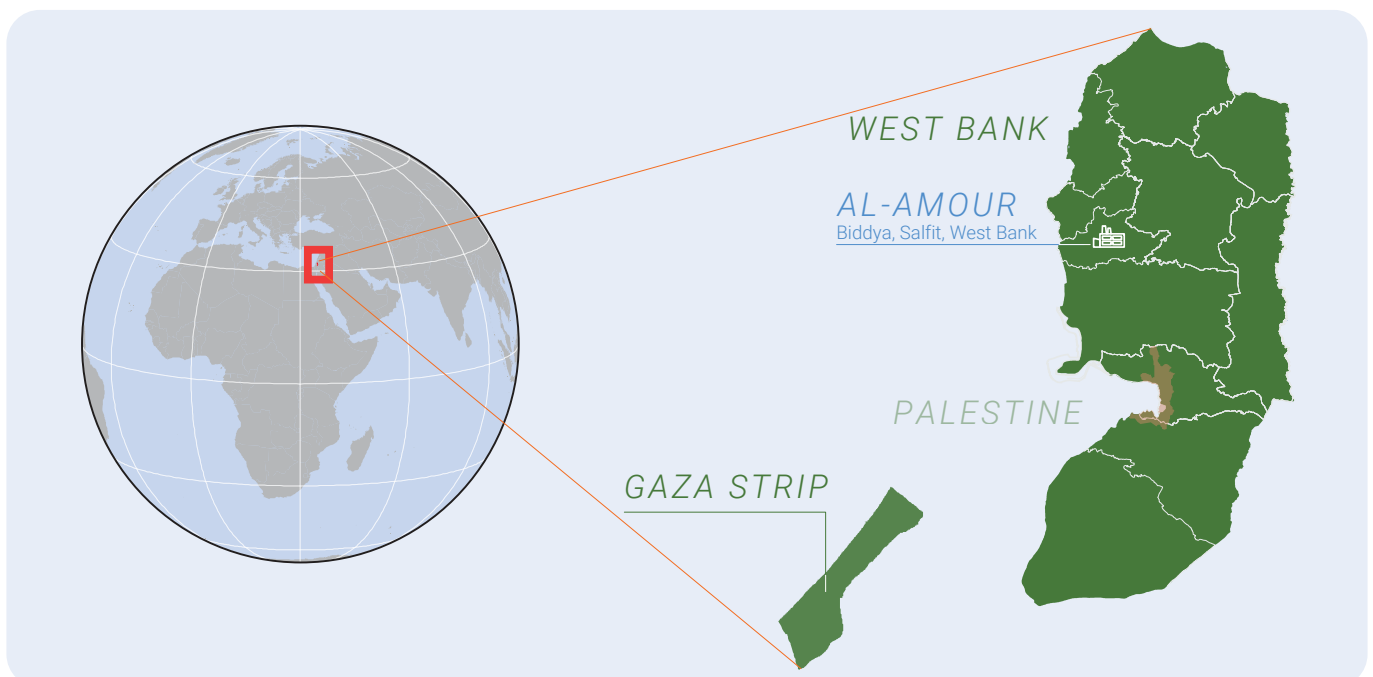
Annual energy savings: 395,003 kWh/year

Financial savings: 259,552 NIS/year

GHG reduction: ~ 264 tCO2/year

Overall payback: 3.55 years

SDGs: 9, 5, 8, 7, 13



UNIDO's approach to implementing the Demonstration Projects

Al-Amour engaged with the MOUSTADAMA Programme to reduce its energy consumption and increase its competitiveness. Following the EE-first approach, UNIDO's experts carried out a detailed **industrial energy audit**, developed in compliance with **ISO 50002**. Al-Amour's energy consumption was assessed, areas of inefficiency were identified, and economically viable technical solutions were developed focusing on **significant energy users** with the highest potential for EE improvement.

The most **advanced energy measurement tools** - including but not limited to energy and combustion gas analyzers, compressed air leaks detectors, thermal imagers, lux meters – were used for data collection. As a result, the detailed energy audit report was integrated with **implementation plans for the EE and RE measures**, and a detailed **business plan** to facilitate access to finance was elaborated. These actions, which pave the way for the Energy Management Systems' certification, complement MOUSTADAMA's efforts to promote ISO 50001 among Palestinian industries.

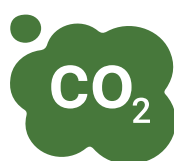
Summary of the EE and RE measures

Energy Saving Measures (ESM)	Annual Saving (NIS)	Implementation Cost (NIS)	Status
Reduce Factory Compressed Air Leaks	15,888	200	Completed
Reduce Ventilation Fan Speed 20%	9,126	5000	Ongoing
Modify Air Compressor Pressure Settings	4,026	0	Completed
AC Split Set Point Adjustment	958	0	Completed
Installation of Solar System	229,524	816,442	Detailed Plan – prepared and linked to finance

Achievements 2022 - 2023



390 MWh
Annual Energy
Reduction by RE/EE



264 CO2
Annual Reduction in
Tonnes



260,000 NIS
Annual Reduction in
Energy Costs

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This publication has been produced with the assistance of the European Union under the MOUSTADAMA Programme. The content of this publication is the sole responsibility of MOUSTADAMA and can in no way be taken to reflect the views of the European Union.


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This Project is Funded by

EUROPEAN UNION


Ministry of National Economy