

Rooftop solar, heat exchanger to deliver on Supermarket chain's sustainability ambitions

Introduction

Alfa-Beta (AB) Vassilopoulos S.A. is a supermarket chain based in Greece. Their value proposition is to provide a great shopping experience that meets consumers' changing needs and builds loyalty, all provided with 24-hour technical support.

They aim to inspire customers to make healthier choices, increase product transparency, and eliminate waste. Part of AB Vassilopoulos's goal is to target smarter and more efficient operations.

Given the staff's time constraints and the fact that an energy audit was not legally required at the warehouse in focus, participating in the Multiple Benefits project offered a unique opportunity to investigate energy saving opportunities and additional benefits.



“Our cooperation with the National Technical University of Athens in the ‘Multiple Benefits’ project provided us with the opportunity to learn the methodology. Now we have the right tools to support our management decisions and implement energy efficient measures.”

Georgios Karampatos – Energy and New Technologies Supervisor

Company overview

Firm name

Alfa-Beta (AB) Vassilopoulos S.A.

Location

Inofyta, Viotia, Greece

Sector

Food Retail Company

Size (turnover)

230 employees

Customers

Retail customers

Value proposition

Provide a great shopping experience that meets consumers' changing needs and builds loyalty.

Impacts on operations

Security

- Reduction of energy demand.

Quality

- Better quality of energy services.

Impact on costs

- Reduction of energy and maintenance costs.

Impact on time

- Not impacted.



Project summary

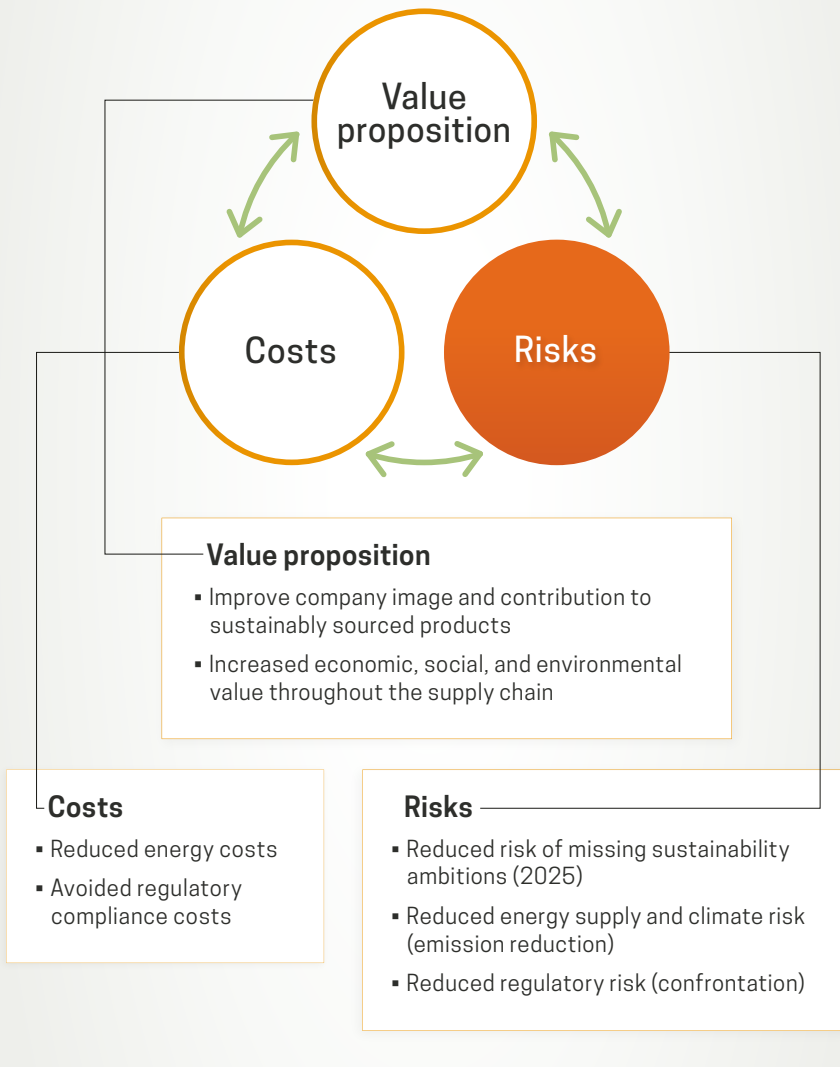
- **Sector:**
Retail (warehouse for grocery chain)
- **Energy carrier impacted:**
Electricity
- **Energy services impacted:**
Electricity supply (PV), HVAC (heat exchanger)
- **Scope:** Install rooftop PV system (measure #1), install heat exchanger (measure #2)
- **Accepted/implemented?**
Under consideration

Energy insights
– 2,2 % reduction of energy demand (heat exchanger)

The energy audit identified the following savings measures:

- Good opportunity for rooftop PV system
- Heat exchanger

Strategic analysis



Financial analysis

Investment duration

(NPV, IRR): 10 years

Note: The non-energy benefits quantified in the financial analysis include:

- Increased economic, social, and environmental value throughout the supply chain
- Avoided regulatory compliance costs
- Emissions reduction
- Reduced regulatory risk

Rooftop Solar PV. CAPEX: 797 538 €

	All benefits	Energy-only benefits
Net present value (NPV)	291 408 €	18 314 €
Internal rate of return (IRR)	17,03 %	10,45 %
Simple payback	3,56 years	4,79 years

Heat Exchanger. CAPEX 58 828 €

	All benefits	Energy-only benefits
Net present value (NPV)	48 575 €	29 662 €
Internal rate of return (IRR)	28,27 %	21,59 %
Simple payback	2,81 years	3,09 years

Lessons learned

Key challenges?

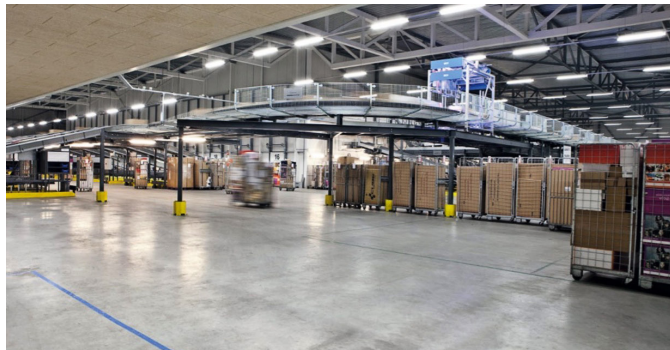
The main challenge was the company's staff time constraints for a theme (non-energy benefits) that was not anticipated/scheduled. We overcame it by pointing out that the Multiple Benefits team offers a "free" consultancy on energy investment opportunities.

Strategic benefits?

The Multiple Benefits analysis has strategic significance in that it allows multiple (non-energy) benefits to become tangible. It seems likely that the investment decision will be expedited, in particular for the heat exchanger measure that has a much smaller CAPEX.

Does the company plan to change its investment behaviour?

To be decided in the future.



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