

Case Study Retail & Supermarkets **SUPERSPAR**



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SUPERSPAR 

1 building

SUPERSPAR Despatch is a supermarket that is part of the SPAR group, which is one of the largest retailers across Southern Africa.

SUPERSPAR Despatch is based in Despatch, in the Eastern Cape province and **has 2,030 m2 total floor size**.

93.476 €
saved

This supermarket operates **13 hours/ day, 7days/w from 7am to 8pm**.

Project implemented by:



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DEXMA Software not only has great analytical tools, but also the visual tools necessary to be able to convey precise energy savings in financial terms.



TIM WHITAKER
Technical Director, IDM Solutions

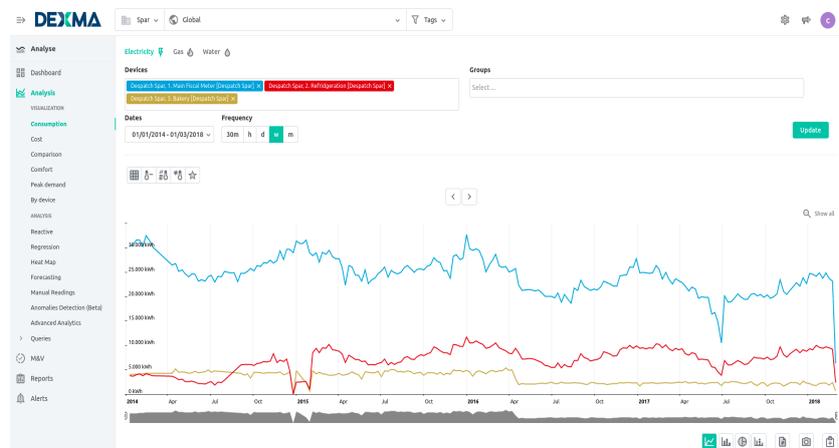
The energy challenge at SUPERSPAR Despatch

The owners of the supermarket were **concerned about their rising energy bills**, specifically with reference to their electricity bill. They wanted to cut costs and reduce carbon emissions.

The store **operates 7 days a week** and has significant high energy usage equipment, for example, HVAC, bakery and freezers. The energy challenge was to **reduce costs and energy emissions without reducing productivity**.

With the help of the expert advisors from **IDM Solutions**, SUPERSPAR Despatch created a compelling energy management plan that delivered fast and important results.

Detail of the consumption screen from the SUPERSPAR Despatch project. The brown line is the bakery consumption, with an important decrease. The blue line is the general fiscal meter, where the trend is also decreasing to lower consumption in general



IDM Solutions for SUPERSPAR Despatch

The first measure taken was a **Baseline Energy Audit** based on historical utility accounts. Further analysis of available data allowed for low and no cost energy saving opportunities to be identified and implemented. **Tariff optimisation** allowed load shifting to be implemented, resulting in **energy cost savings of 8%**.

Sub meters were installed to quantify specific energy usage of the HVAC, bakery, lights and butchery.

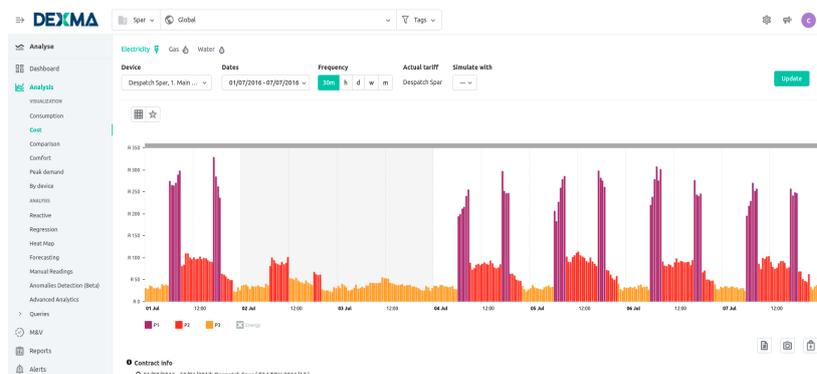
Through comprehensive and **real time monitoring** of the store's status using the DEXMA Platform, an **energy balance** was completed. It was identified that some equipment was not optimal and energy efficiency opportunities existed.

Feasibility studies were conducted, quantified and qualified. Projects with a **payback of less than 3 years** were considered for phase one. They included installing skylights to take advantage of daylight harvesting, LED lights were installed and bakery ovens were replaced with more efficient equipment.

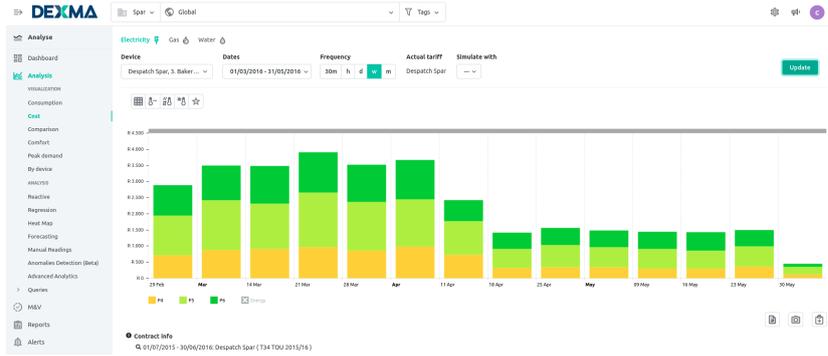
SUPERSPAR Despatch **monitored and tracked the resulting energy usage and savings using the DEXMA Platform.**

SUPERSPAR Despatch also signed a power purchase agreement (PPA) to purchase Green Power to reduce their carbon emissions further. Carbon emissions can be tracked and calculated using the DEXMA Platform and sustainability reports can be created to comply with legislation.

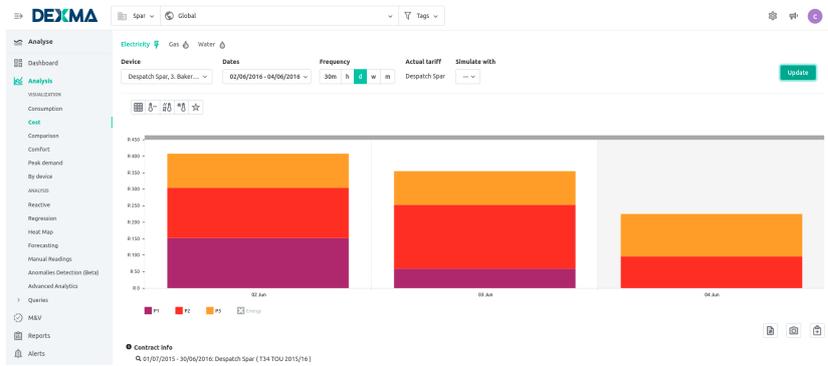
With the cost screen, you can simulate tariffs and scenarios, like this one based on the consumption from SUPERSPAR Despatch.



You can clearly see the weekly bakery cost reduction. The cost analysis screen in DEXMA is fully customisable to follow up any energy reduction measures undertaken in the project.



Detail of the tariff distribution from the bakery meter. And, of course, the decrease in all tariffs.



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The sub-metered energy data enabled us to get a clear understanding of the energy usage and costs of our energy-intensive processes. That allowed us, along with life cycle costing of new purchases, to upgrade our facility with energy efficient equipment. The results speak for themselves.

PAUL BARNES

Owner, SUPERSPAR Despatch

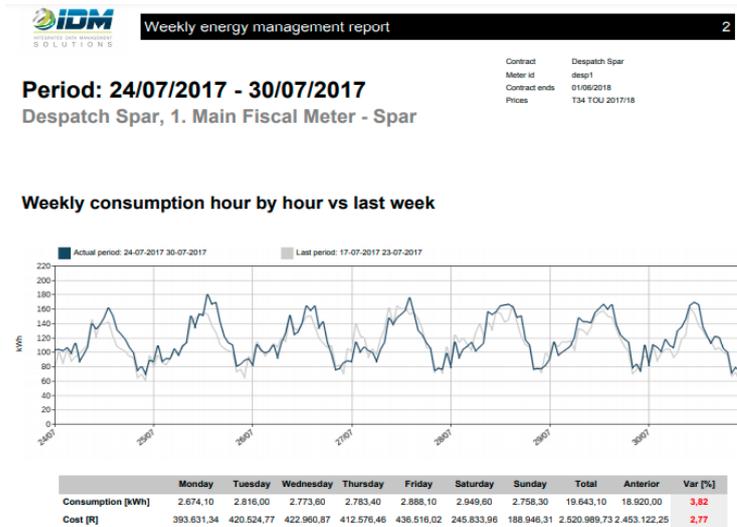
The Results of the Project

SUPERSPAR Despatch is a **great example of combining traditional energy reduction measures** such as reducing peak energy usage **and innovation** with renewable energy sources installed on-site.

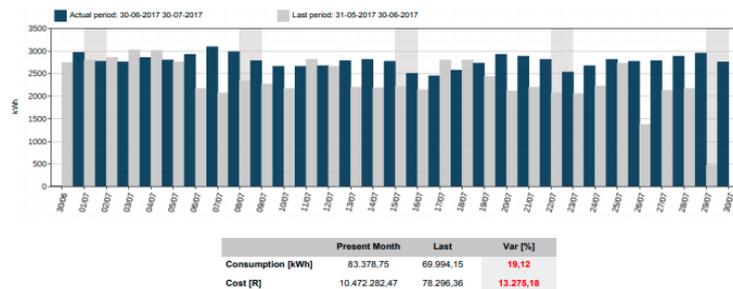
Supermarkets and retail stores can **take advantage of renewables** to decrease their energy cost and carbon emissions. This impacts on the business bottom-line and could even lead to increased margins. It also helps with compliance to regulations.

After implementation of new equipment and generated power from wind turbines, there has been **a 46% reduction in CO2 emissions and 24% reduction in overall cost**. The change in bakery equipment **resulted in a 50% kWh reduction and a 57% cost reduction** compared to their old bakery equipment.

An example report built by IDM with the DEXMA Platform to track cost and consumption.



Monthly consumption daily vs. previous month



Advantages of the DEXMA Platform used in this project

- 1. Grows with your project:** The DEXMA Platform allows you to start by monitoring, move to the analysis stage and then move to optimisation.
- 2. Hardware neutral:** No matter which meters you have in your supermarkets, you will be able to have your data in the DEXMA Platform, thanks to our open API.
- 3. Renewables:** The DEXMA Platform is renewable-ready! You can monitor and track with the IPMVP protocol any investment in renewables and use our special microgrid tools to track generation, usage and storage.
- 4. Multi-source power:** The DEXMA Platform goes far beyond electricity monitoring. Just like SUPERSPAR Despatch, you can also manage multiple sources, including water, gas, fuel tanks.



IDM Solutions assists clients to reduce their energy costs and carbon emissions through independent effective information analysis and verification. We offer independent, objective analysis along with creative solutions.

CONTACT:

<https://www.idmsolutions.co.za/>

1.255.985 kWh

Annual Energy Consumption

85.687 €

Annual Energy Cost

25%

Consolidated Savings

93.476 €

Total Saved with the Project



DEXMA offers energy analysis technologies that help energy managers understand and reduce energy cost and consumption. [Contact us](#) if you need help with your projects or take a free look at the [DEXMA Platform](#) today!



Carrer de Nàpols 189, Bajos D

08013 Barcelona

+34 93 181 01 95

marketing@dexma.com

www.dexma.com