

DWEEN Cold

x OSM w Kole

CASE STUDY

Full return of investment during 7 months of operation!

How OSM w Kole has cut their energy bills with Dween

Find out how much you can save →

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CONTEXT

OSM w Kole is among the biggest milk processing establishments in Poland with a strong position in milk powder, sourcream and butter production. Production is reliant on supply of huge amount of iced water.

PROBLEM

Refrigeration system operates under constant set-points, producing ice during the night and decreasing operation power during electricity price peak times. Refrigeration system does not adopt to varying production loads or ambient conditions.

SOLUTION

Automated intelligent control enabled stable and efficient operation of refrigeration system, stabilized iced water supply temperature, reduced overall load of the system and electricity consumption.

TECHNICAL DETAILS

MACHINERY ROOM

JCi Sabroe 151 compressors with Jci Unisab III controllers

Installed capacity:
4x160kW electric
4x600kW refrigeration

AMMONIA TANK

8t of ammonia
Min. temperature -8°C

ICED WATER TANKS

2x70t water capacity
8x3.7MW storage capacity

DIGITAL TWIN

CONTINUOUS MONITORING

Compressor station load and status
Electricity consumption
Refrigeration energy consumption

AUTONOMOUS CONTROL

Iced water supply temperature
Ammonia level
Heat exchanger

RESULTS

3.5%↑ 8%↓ 232 MWh

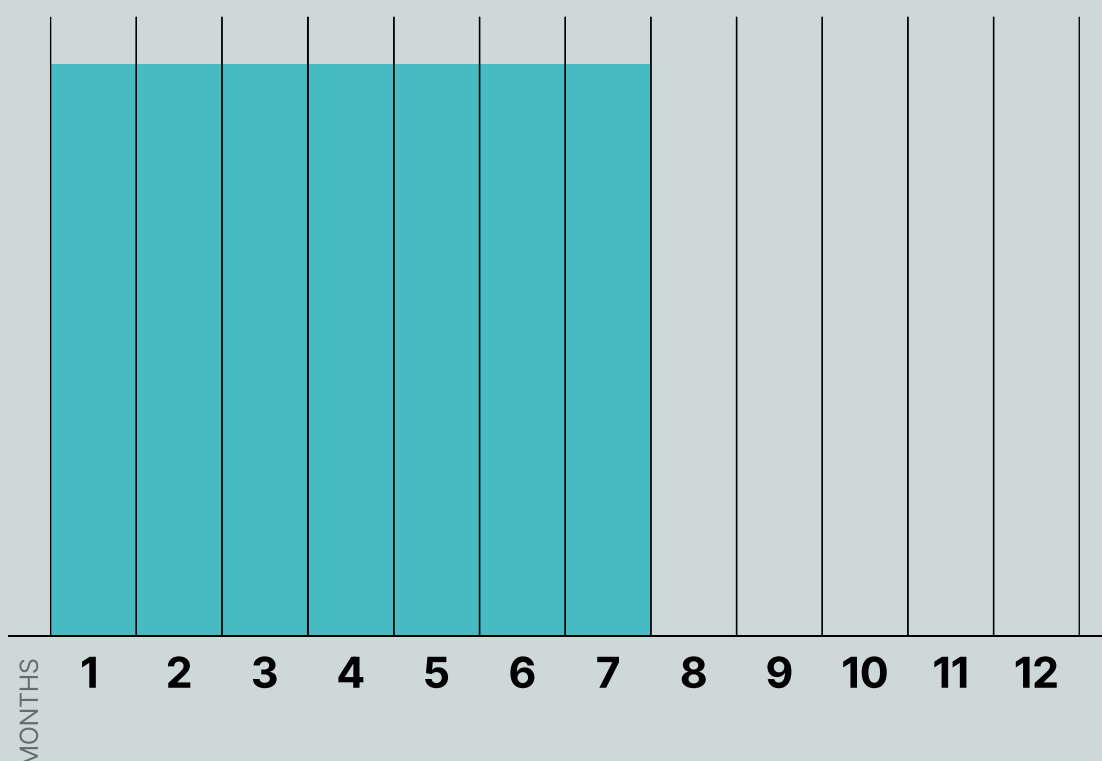
Production increase

Electric energy consumption decrease

Reduction of electric energy consumption during first year of operation (2024.09-2025.08)

ROI TIMELINE

Full return of investment in 7 months:



SET UP TIME

Without ceasing operations

4 months



P. Krzysztof Turlej

HEAD OF THE TECHNICAL DEPARTMENT AT OSM KOŁO

I am not an expert of artificial intelligence, but I can see the results. The system works reliably, maintains a stable temperature, and allows us to save energy. I am glad we decided on this solution - it was a good decision.