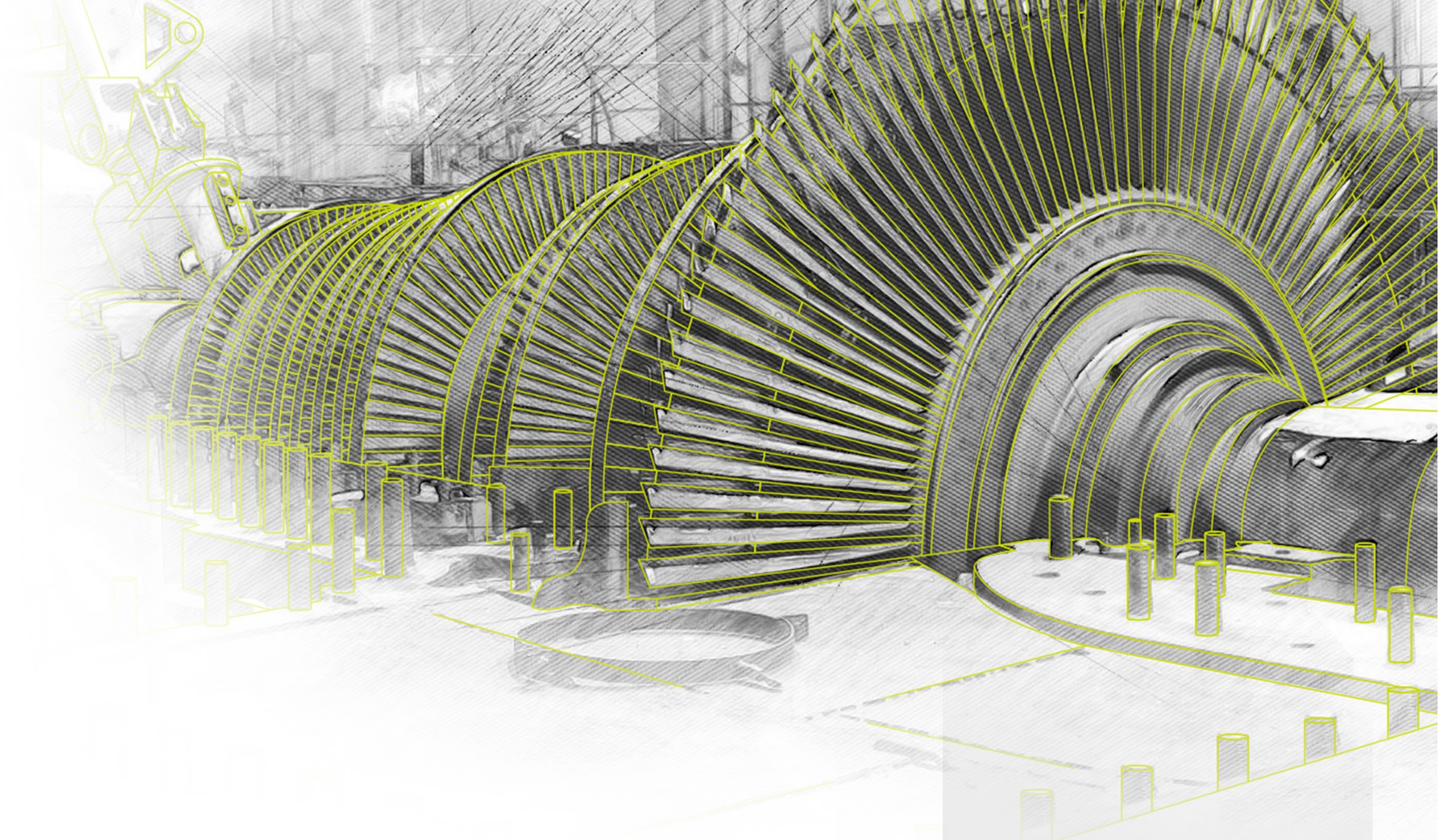


**DB ENERGY**

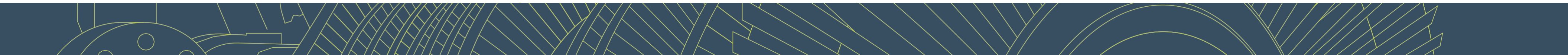
**Zero-emission** industry



# **DB Energy**

**Zero-emission strategies and energy efficiency for the industry -  
from an idea to implementation**

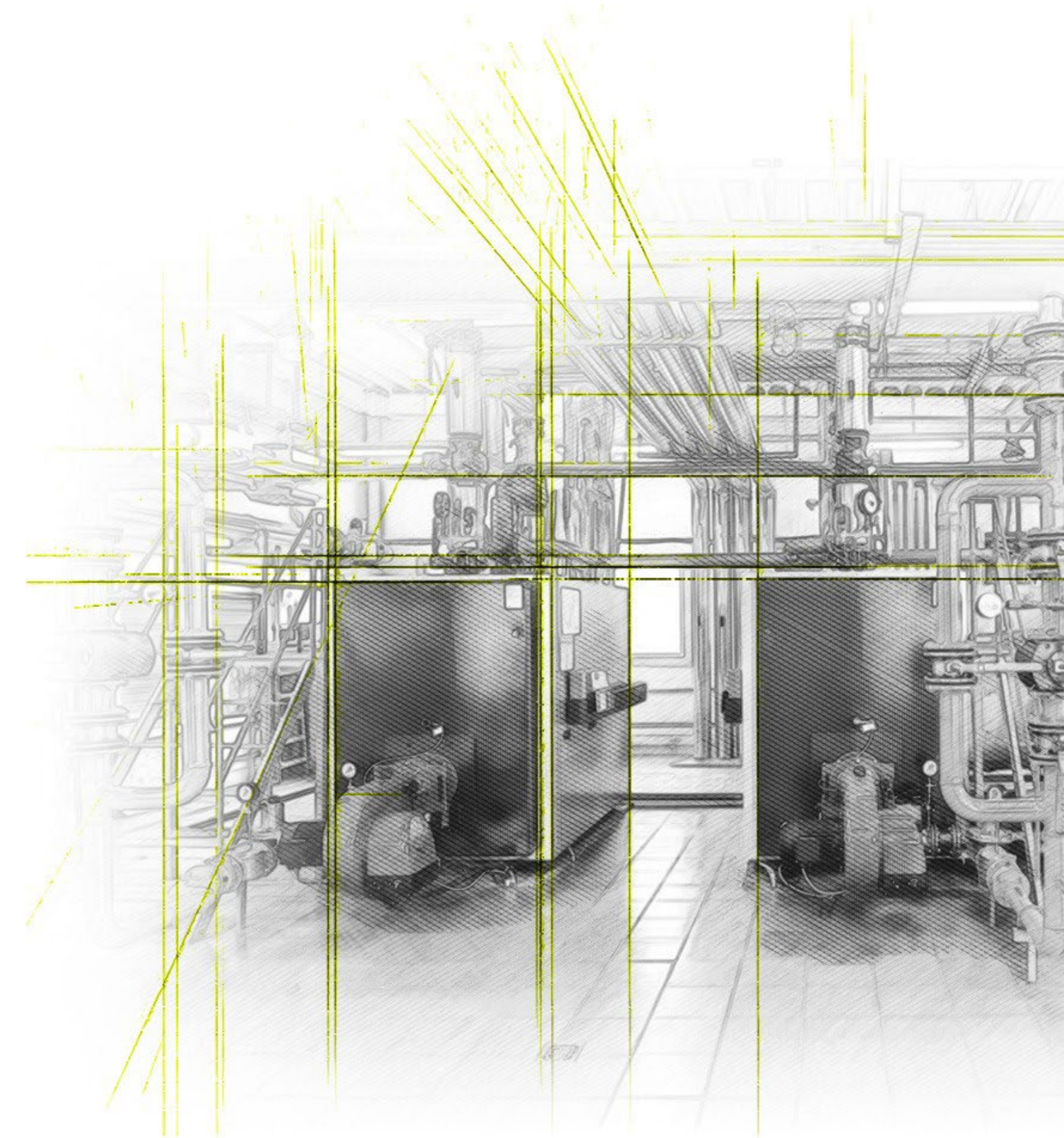
Wrocław, 2022





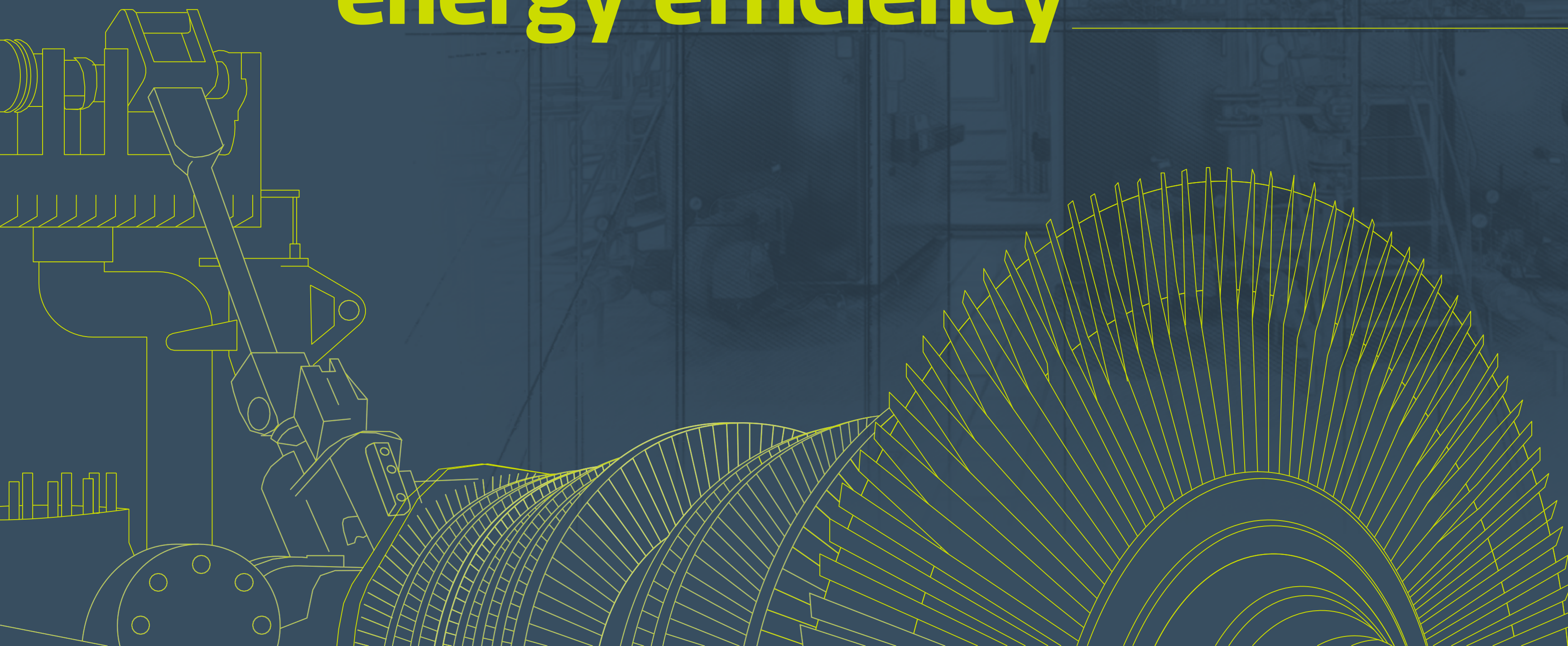
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# Zero-emission strategies and energy efficiency



# We support energy efficiency and build the zero-emission industry in Poland

## WE PROVIDE FOR SUSTAINABLE DEVELOPMENT



### We protect the climate by

- reducing industrial emissions
- reducing electricity consumption
- reducing thermal energy and cooling consumption
- reducing water consumption
- implementing RES solutions



### We increase companies competitiveness by

- increasing their profitability
- reducing production costs
- reducing energy and emissions costs
- boosting work safety
- ensuring uninterrupted power supply



# DB Energy leader of change





**YEARS** **12**  
**OF EXPERIENCE**  
**IN THE INDUSTRY**

**1,200**

**EUR 1.1 bn**

**EUR 400 ml**

**8.3 TWh**

**EUR 133 ml**

\_\_\_\_\_ industrial audits

\_\_\_\_\_ value of energy-saving investments

\_\_\_\_\_ annual savings generated by the designed investments

\_\_\_\_\_ annual energy savings thanks to designed investments

\_\_\_\_\_ value of the requested White Certificates



# We reduce annual energy consumption **IN ALL INDUSTRIES**



Mining  
industry

**28%**



Food  
industry

**20%**



Wood, paper  
and chemical  
industry

**26%**



Building  
industry and  
infrastructure

**24%**



Metal  
industry

**22%**



# Performance

---





# Key areas of DB ENERGY PERFORMANCE



## Consultancy

comprehensive analysis of receiving installations which is necessary to develop an optimal concept aimed at improving energy efficiency



## Investments

a professionally managed investment process **guarantees the effect to be maximized** – investment financing and implementation in the ESCO or the General Contractor model



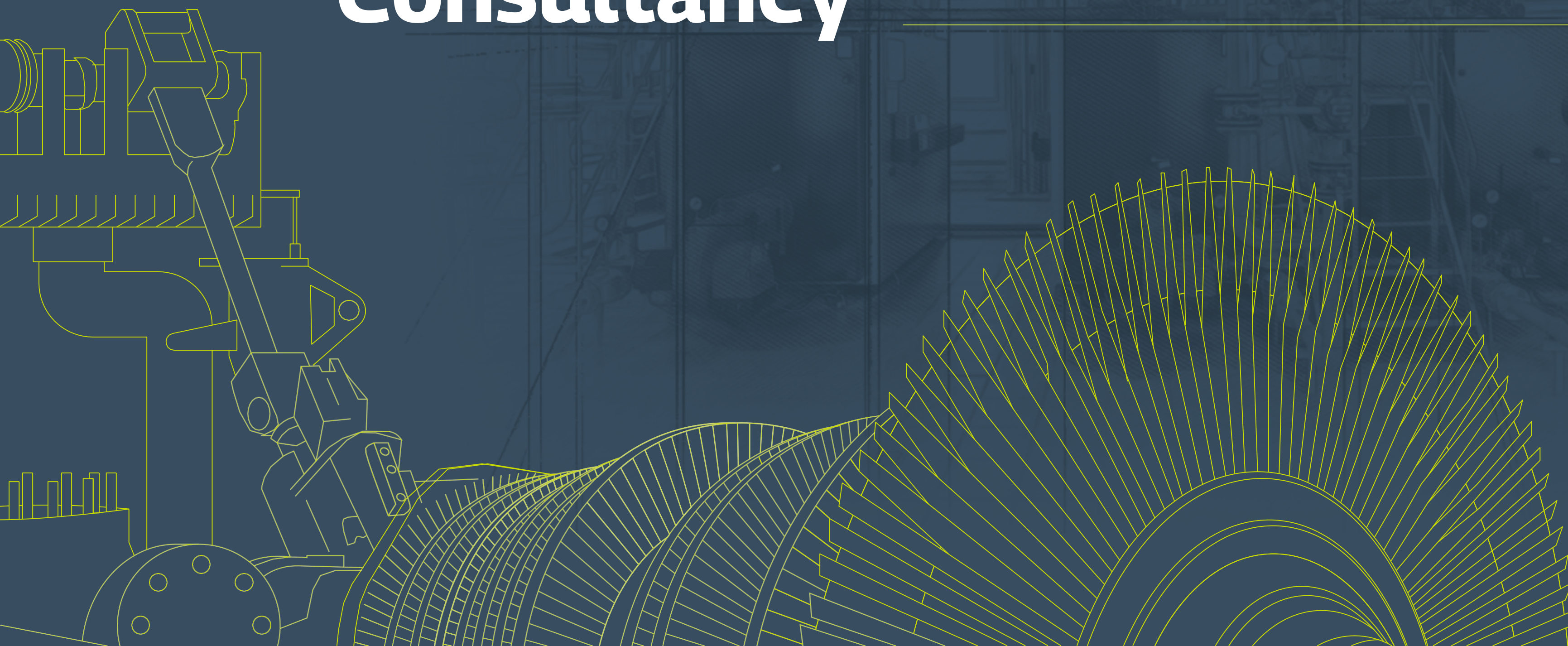
## Diagnostics

control of installations efficiency and their energy consumption, continuous attempts to identify potential for further energy efficiency improvements



# Consultancy

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# Comprehensive CONSULTING

Complex support for our client while developing energy-saving investments.



## Audit Walk Through

we identify the potential for energy-saving investments



## Company Audit

an obligatory audit for large companies, we develop a long-term energy efficiency improvement plan



## Energy Efficiency Audit

we provide a complete concept of an energy-saving investment



## Zero-emission strategies

plant's zero-emissions due to reducing CO<sub>2</sub> emission



## Concepts and projects

feasibility studies, technical implementation concepts and construction projects for energy-saving investments



## The obligation

# TO HAVE AN ENERGY AUDIT PERFORMED



**3,200 large companies in Poland, approx. 12,000 in Germany and over 45,000 in the entire EU undergo an obligation to be audited.**

They are required to have an audit performed every 4 years.

**The EU plans a compulsory audit for 236,000 medium-sized companies.**

If conducted regularly, energy audits allow it to design and evaluate the results of energy-saving investments.





# We pursue zero-emission strategy **IN THE INDUSTRY**

## Zero-emission strategy implementation



it brings real savings



it reduces energy consumption



it reduces the emission of greenhouse gases





# Investments





# Energy saving investments

## FINANCING AND IMPLEMENTATION

**DB Energy manages the entire process aimed at energy efficiency improvement in the industry and implements zero-emission strategies:**

---

we implement projects in the General Contractor model

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---

we finance and implement projects in the ESCO\* model

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\* **ESCO** (Energy Saving Contract) is a form to finance and implement a project in which entire financial outlays and partial technical risk is borne by DB Energy. Once the project is implemented, the parties divide savings in a given period. When the contract terminates, the investment becomes the property of the client.

## Benefits

---

maximized savings and reduction of energy consumption

---

---

immediate savings with no outlays to incur (in the ESCO model)

---

---

technical and financial risk is borne by DB Energy (in the ESCO model)

---

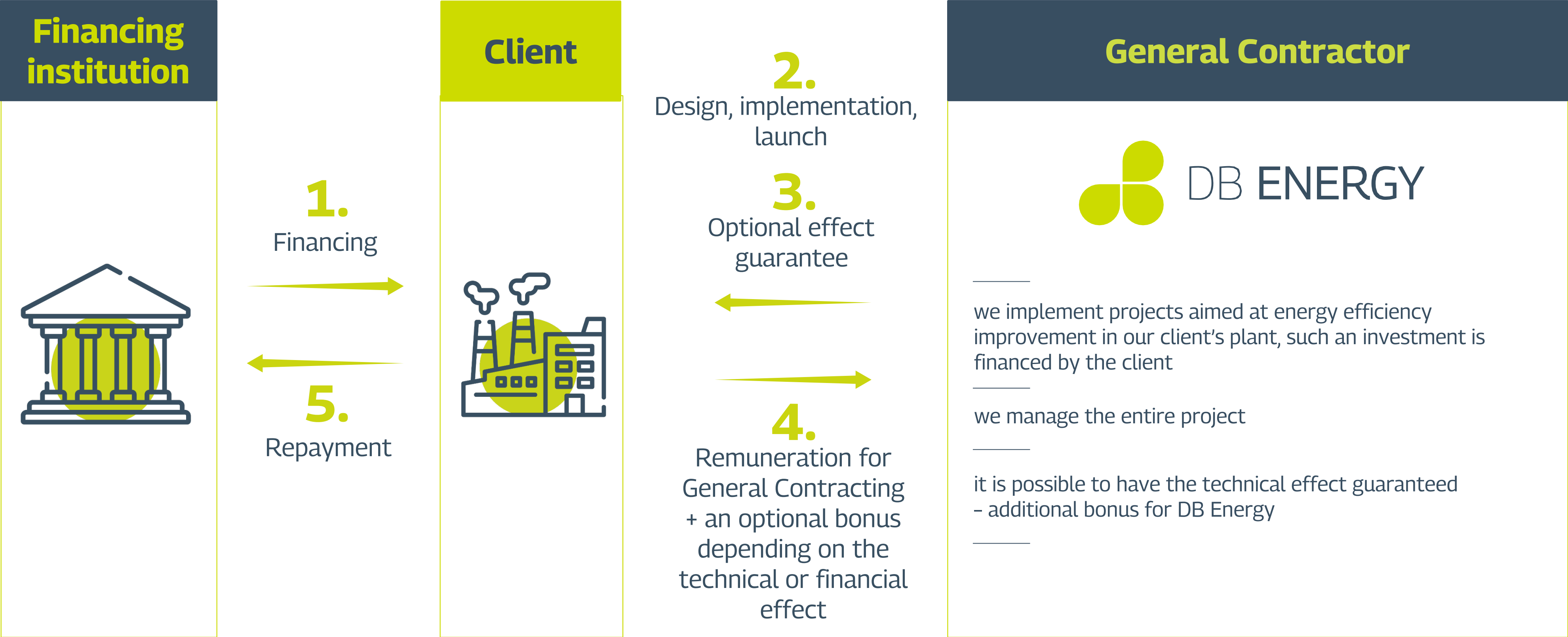
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off-balance investment (in the ESCO model)



# THE GENERAL CONTRACTOR MODEL:

## Project implementation - DB Energy Financing and risk - Client





# THE ESCO MODEL:

## Financing, project implementation and risk - DB Energy





# Value of implemented **PROJECTS**

## Portfolio of ongoing **ESCO projects**

Capital expenditure

The total value of the implemented  
ESCO projects:

# EUR 7 million

EUR 600 thousand Simoldes Plasticos

EUR 6.4 million Soufflet

## Portfolio of ongoing General **Contractor projects**

Value of a contract

The total value of implemented General  
Contractor projects:

# EUR 17 million

EUR 755 thousand ZGH Bolesław

EUR 2.3 million Ciech

EUR 6.1 million BWI Group

EUR 7.8 million Schumacher Packaging



# Diagnostics

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# INNOVATIONS

---

we conduct energy efficiency research for technological processes

---

we apply artificial intelligence in measurement systems for the industry

---

we develop a predictive diagnostics system (DiagSys system)

---

we build a system to assess the efficiency of operating devices

---



# DiagSys

## WHAT IS IT AND HOW DOES IT WORK?

### Remote diagnostics for drives and their efficiency testing

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based on electrical signals, the system detects early an automatic fault

---

it reduces operating costs

---

it assesses the efficiency of devices in motion

---

it reduces significantly energy consumption

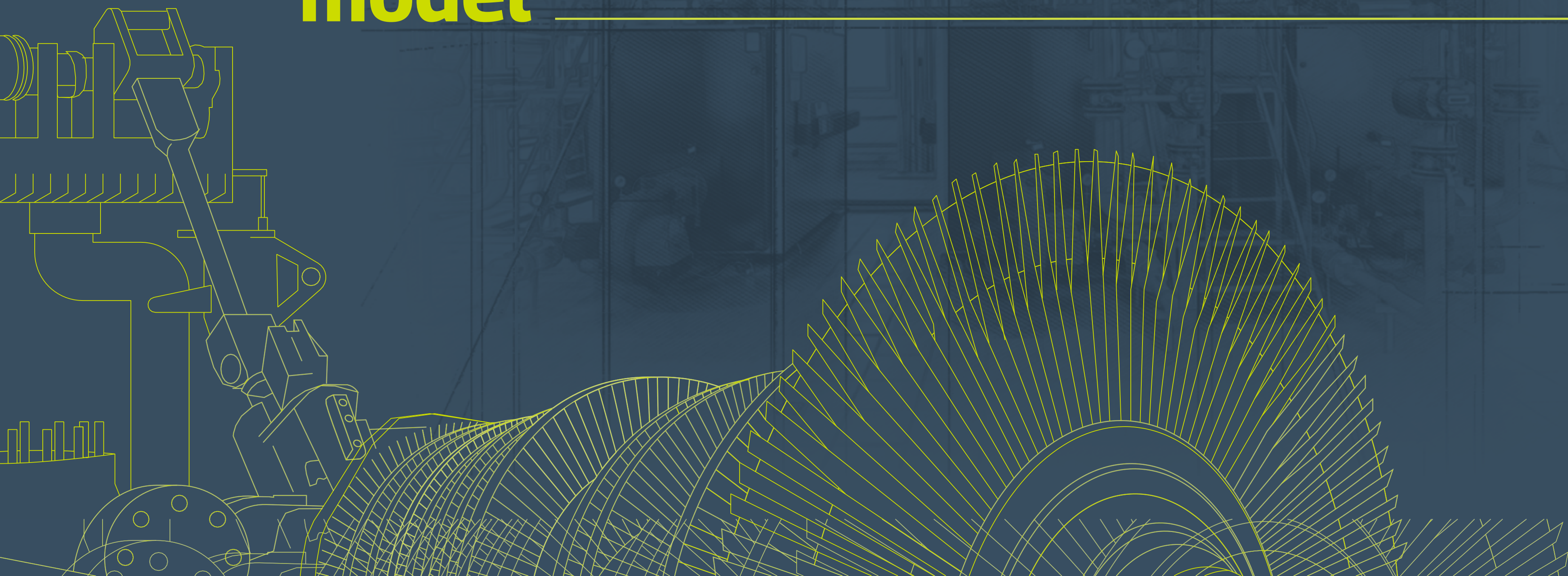
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The project is co-financed by the National Centre for Research and Development.



# The unique business model

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# Comprehensive support for the process to improve **ENERGY EFFICIENCY**

**we manage extensively the entire process to improve energy efficiency**

**benefits and savings are maximized for a client**



## SAVINGS ARE IDENTIFIED

**Audits:**

- Walk Through
- energy efficiency audits
- zero-emission strategies



## PROJECT CONCEPTS

- detailed analysis of particular energy saving investments
- guidelines for designers essential to maximize benefits and savings
- construction projects



## FINANCING AND IMPLEMENTATION

- DB Energy finances a project in the ESCO model
- DB Energy develops a project in the General Contracting model
- benefits and savings are maximized



## DIAGNOSTICS AND MONITORING

- We control and diagnose in an ongoing manner energy consumption and operating efficiency of machines and devices
- We identify continuously space for further energy efficiency improvement
  - We provide long term management over implementing zero-emission strategies





# They have **trusted us**

---





# Some CLIENTS







**The management board** consists of the founders and, at the same time, main shareholders **who build the value of the company on a daily basis**





## **Krzysztof PIONTEK, PhD (habilitated)**

**Associate professor of Wrocław  
University of Economics and Business**

**President of the DB Energy Management Board**

Founder (26.07% of DB Energy shares), habilitated doctor in economics, since 2001 at the Department of Financial Investments and Risk Management at the Wrocław University of Economics and Business, graduate of the Faculty of Electronics and Telecommunications of the Wrocław University of Technology.

**He specializes in the application  
of quantitative methods for data analysis.**





## **Dominik** **BRACH, PhD**

Vice President of the DB Energy Management Board

Founder (26.00% of DB Energy shares), PhD in economics. As an employee of Wrocław University of Economics and Business, he conducted scientific research studies in finance.

**He specializes in finance, risk and real estate management.**





## **Piotr DANIELSKI, PhD ENGINEER**

Vice President of the DB Energy Management Board

Founder (30.50% of DB Energy shares), PhD of technical sciences. A graduate of doctoral studies at the Department of Industrial Power Engineering at the Faculty of Electrical Engineering of the Wrocław University of Technology.

**An expert in energy efficiency and industrial power generation, specializes in energy consumption of industrial energy recipients.**





## Łukasz **FELDMAN**

Financial Director of DB Energy

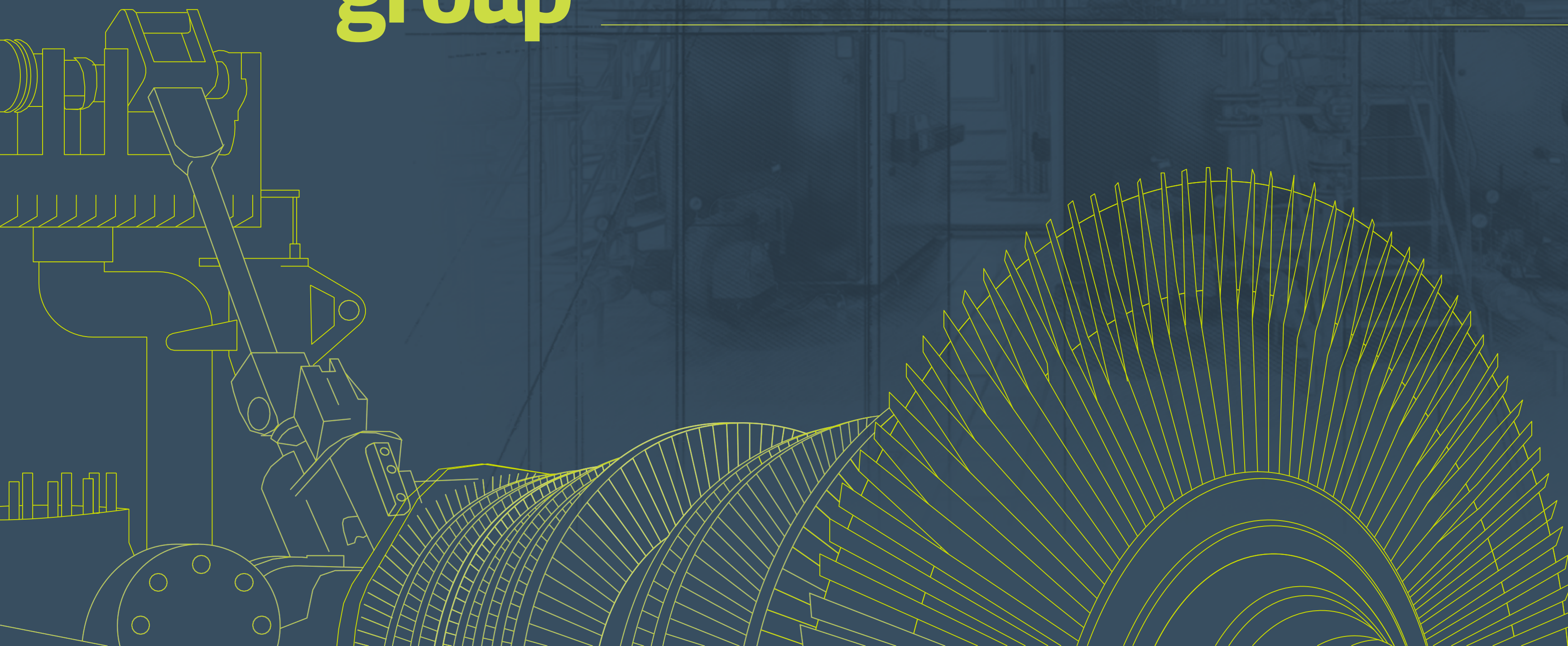
In the company since 2019, a doctoral student at the Wrocław University of Economics and Business, a securities broker, a specialist in corporate finance management and funding acquisition.

**He specializes in introducing and publishing companies on the stock market.**



# DB Energy corporate group

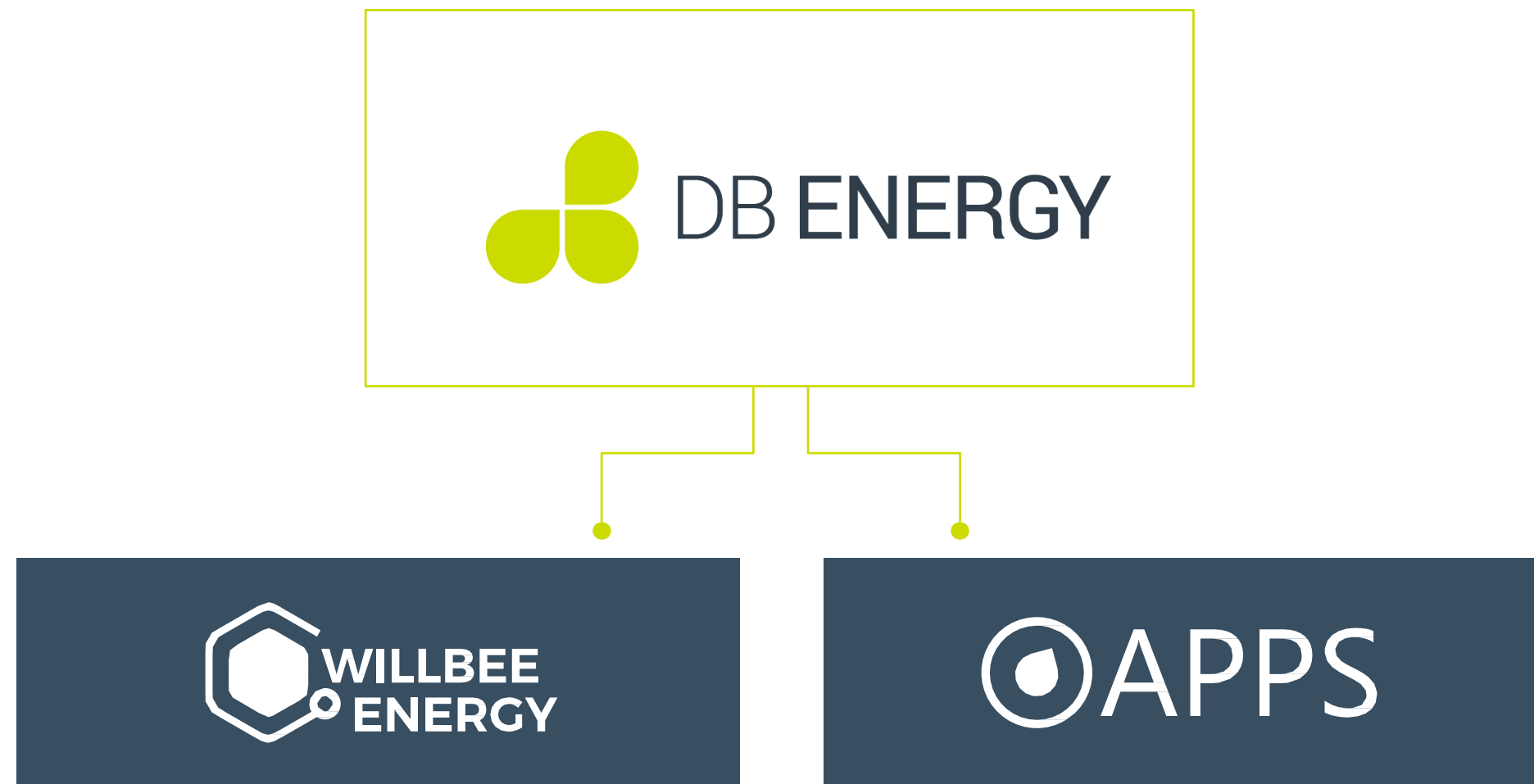
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# DB Energy corporate group

## WE ARE PRESENT IN POLAND AND THE EU



### We elaborate zero-emission strategies and ensure energy efficiency in the industry:

we identify energy-saving investments

we design improvements

we finance and develop projects in the ESCO or General Contractor model

we provide predictive diagnostics and test efficiency of operating devices – DiagSys

### We monitor the industry:

we measure parameters of an industrial infrastructure in place

we monitor and diagnose technical installations

we develop DiagSys with an intent to introduce the system on the market



# 2009

**DB Energy commences energy efficiency activities in the industry**

**2010**

**2013**

**2015**

**2016**

**2018**

**APPS**

**The R&D department is established, the measuring device APPS1 is developed**

**APPS sp. z o. o. is established** – it provides measurement services for the industry, and, in the future, it intends to introduce the achievements of the R&D department on the market

**The first ESCO contract of EUR 600,000**  
(Simoldes Plasticos sp. z o.o.)

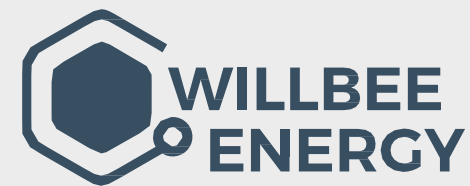
**The funding of EUR 822,000 is received from the National Centre for Research and Development for the R&D projects**

**We are the leaders of White Certificates acquisition in Poland**



# 2019

**DB Energy  
debuts on  
the New  
Connect  
stock  
market**



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**Willbee Energy GmbH is established**

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EUR 733,000 is acquired as a part of a private placement

---

DB Energy concludes a contract of EUR 2.2 million with Ciech Soda Polska

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DB Energy enters into cooperation with EFESO Consulting GmbH



# 2020

**DB Energy concludes a contract with SUSI PARTNERS for the ESCO financing of EUR 20 million for industrial projects**



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DB Energy concludes a contract of EUR 6.11 million annually with BWI Group to manage a cogeneration unit

---

DB Energy sells the White Certificates of more than EUR 2 million

---

DB Energy concludes an ESCO contract of EUR 6.5 million with Soufflet

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DB Energy concludes a contract in the General Contractor model of approximately EUR 4 million with Schumacher Packaging

---

DB Energy concludes a contract of more than EUR 1 million with Zamer

---

DB Energy concludes a contract of EUR 700,000 with OMEGA SA

---



# 2021

**DB Energy aims  
at the Warsaw  
Stock  
Exchange  
market**



---

we purchase another two cogeneration units 2x1MWe

---

we complete the boilers retrofit for Schumacher Packaging in Myszków

---

we extend the contract with Schumacher Packaging in Myszków with a complete heat and power plant retrofit. The project amounts to EUR 7.8 million

---

we are awarded AS – the award of the Council of Employer's Organization of Polish Copper for its 25<sup>th</sup> anniversary

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we are nominated in the 18<sup>th</sup> edition of Dolnośląski Gryf – the most prestigious economic and business competition in the region of Lower Silesia

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Willbee Energy fulfils its first order on the European market (Germany, Italy, Austria, the Czech Republic, Ireland and Croatia)



# Case studies

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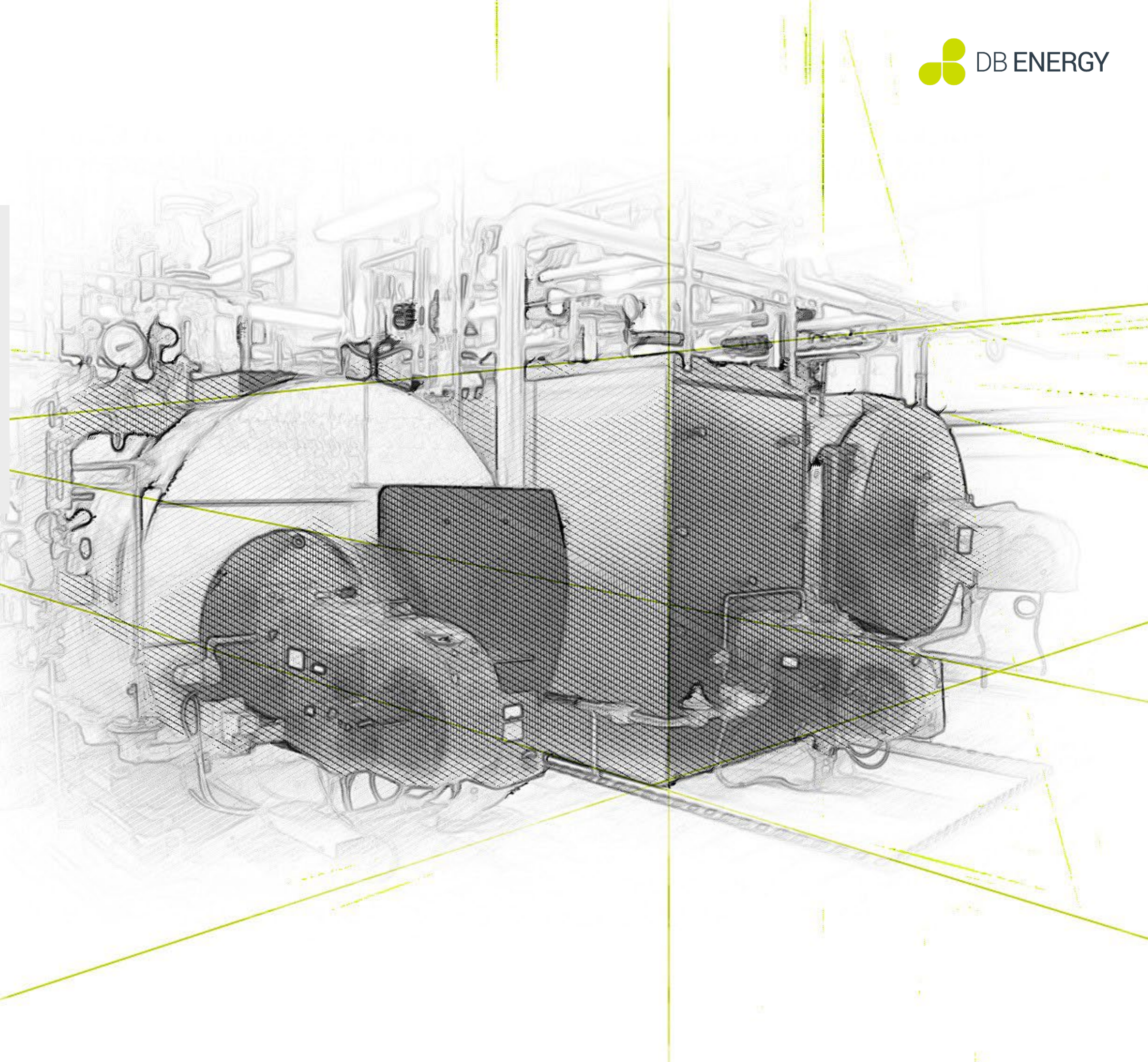




# SŁODOWNIA SOUFFLET POLSKA

world leader in malt production

The power supply system  
improvement with an application of  
waste heat and a cogeneration unit,  
**developed in the ESCO model**





# SŁODOWNIA SOUFFLET POLSKA

world leader in malt production

investment value of **EUR 6.4 million**  
fully covered by DB Energy

## Projects key elements

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thermal energy recovery

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---

new refrigeration system

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new cogeneration system to generate electricity and thermal energy

---

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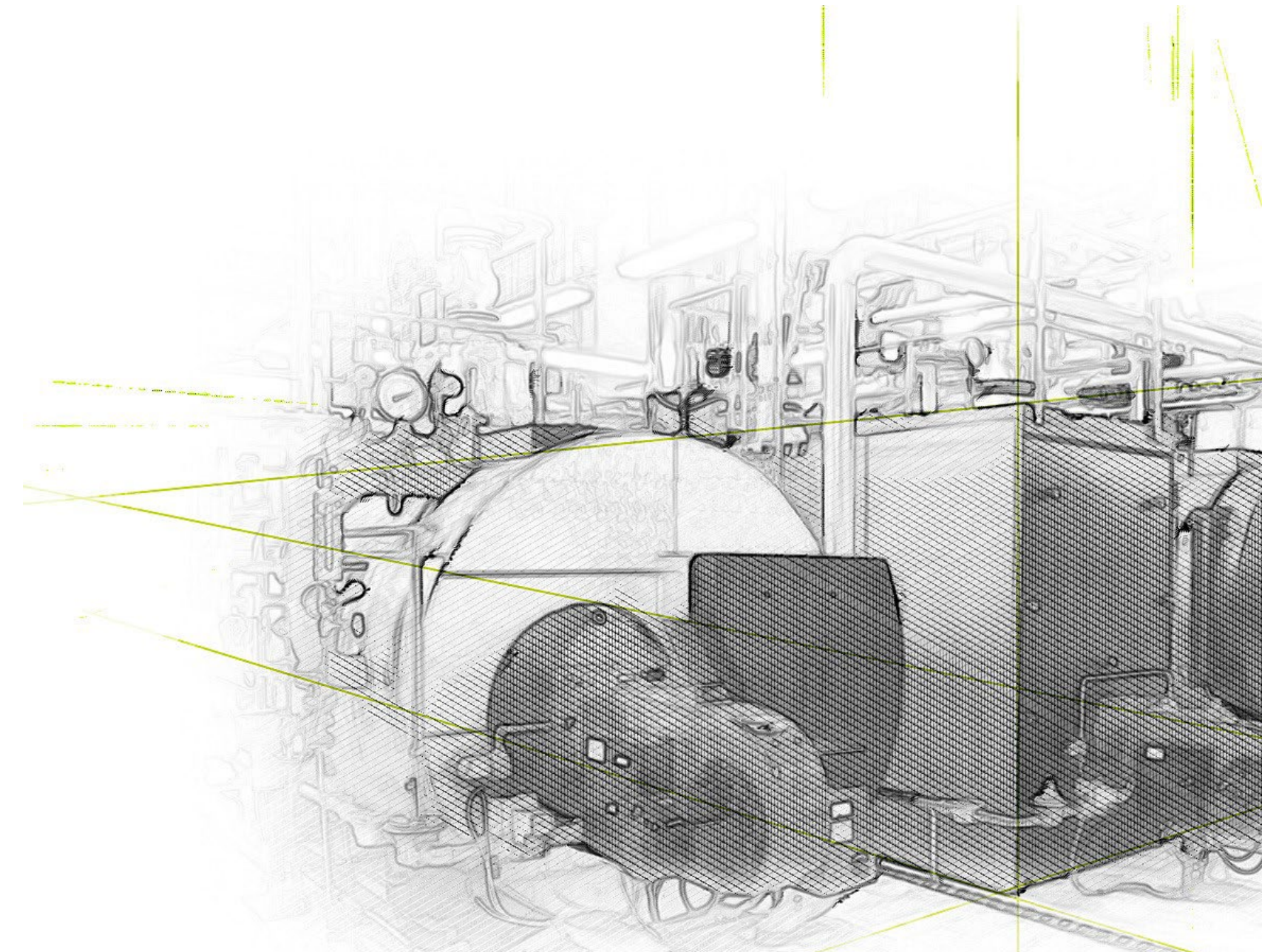
ESCO contractual period – **10 years**

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emission reduction – **9 543 tCO<sub>2</sub>** annually

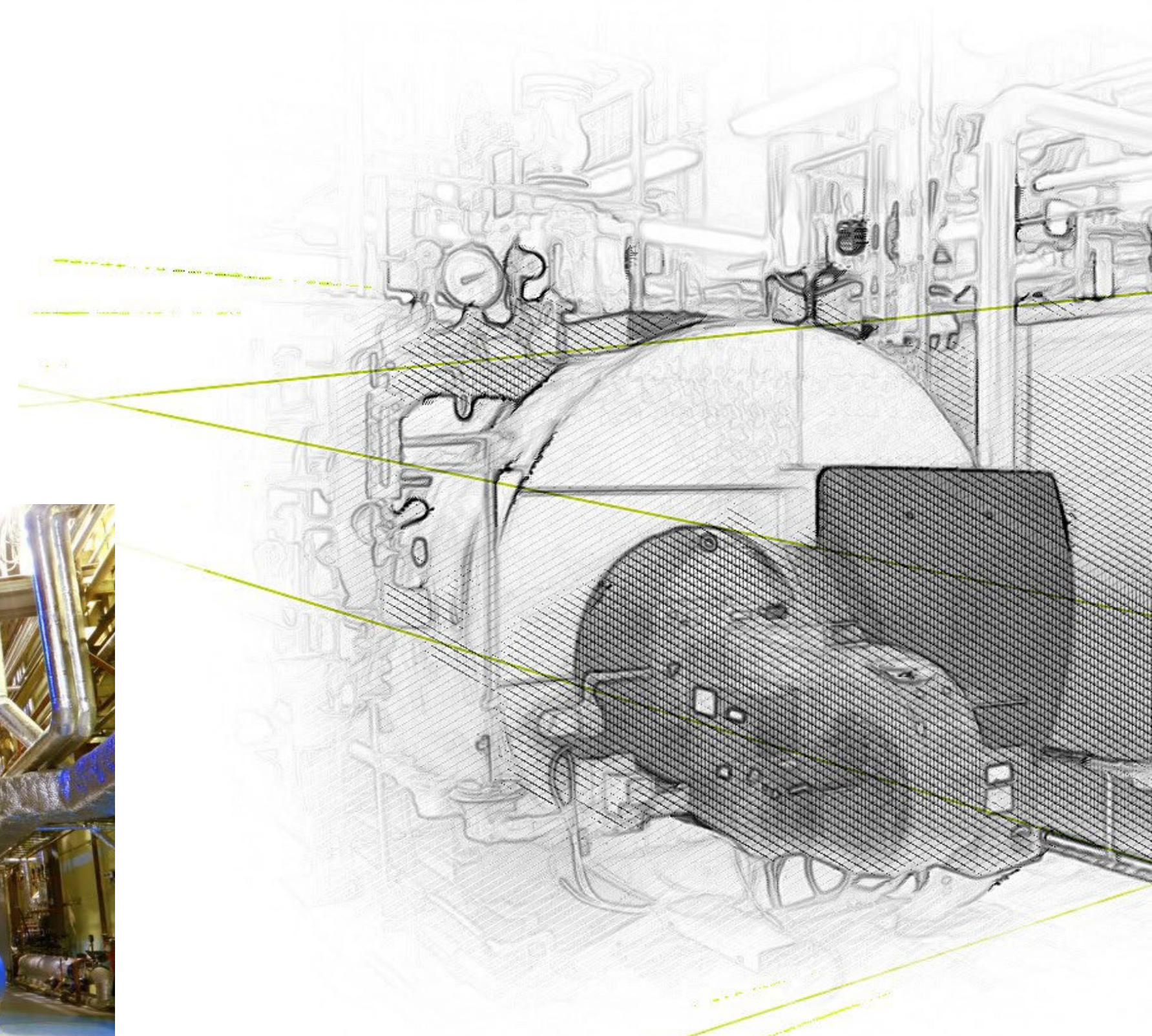
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# SOUFFLET POLSKA

world leader in malt production



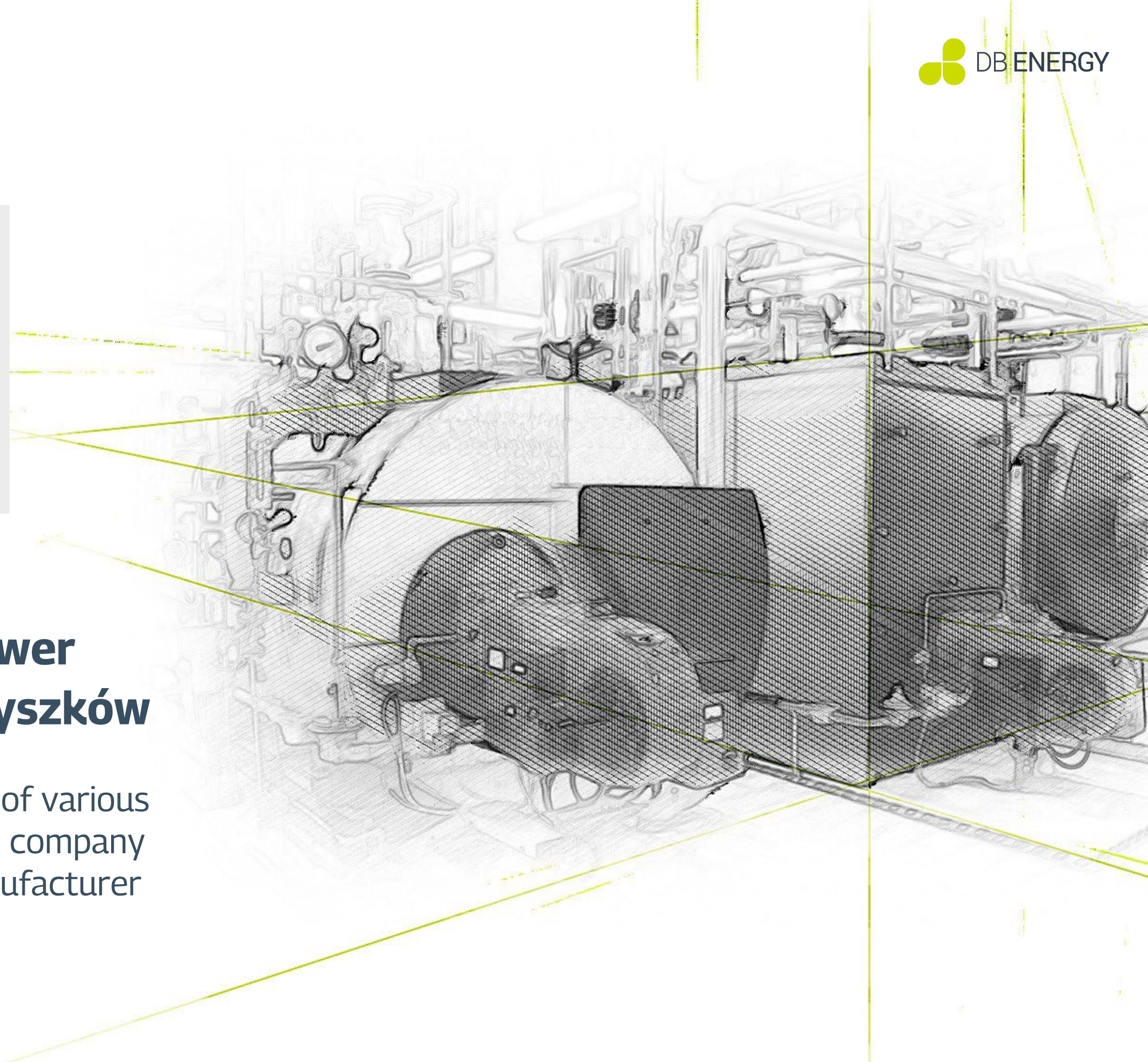


# SCHUMACHER PACKAGING

Heat and power plant improvement

**Annual savings of EUR 4.4 million -  
DB Energy improves the heat and power  
plant of Schumacher Packaging in Myszków**

Schumacher Packaging is a worldwide manufacturer of various types of paper packaging. Having 29 subsidiaries, the company is one of the biggest solid and corrugated board manufacturer in Europe.





# SCHUMACHER PACKAGING

Heat and power plant improvement

## The boiler improvements effects - real profits for Schumacher Packaging

total investment value - EUR 7.8 million

boiler efficiency increase by 20% (from 65% to 85%) - combustion process improvement

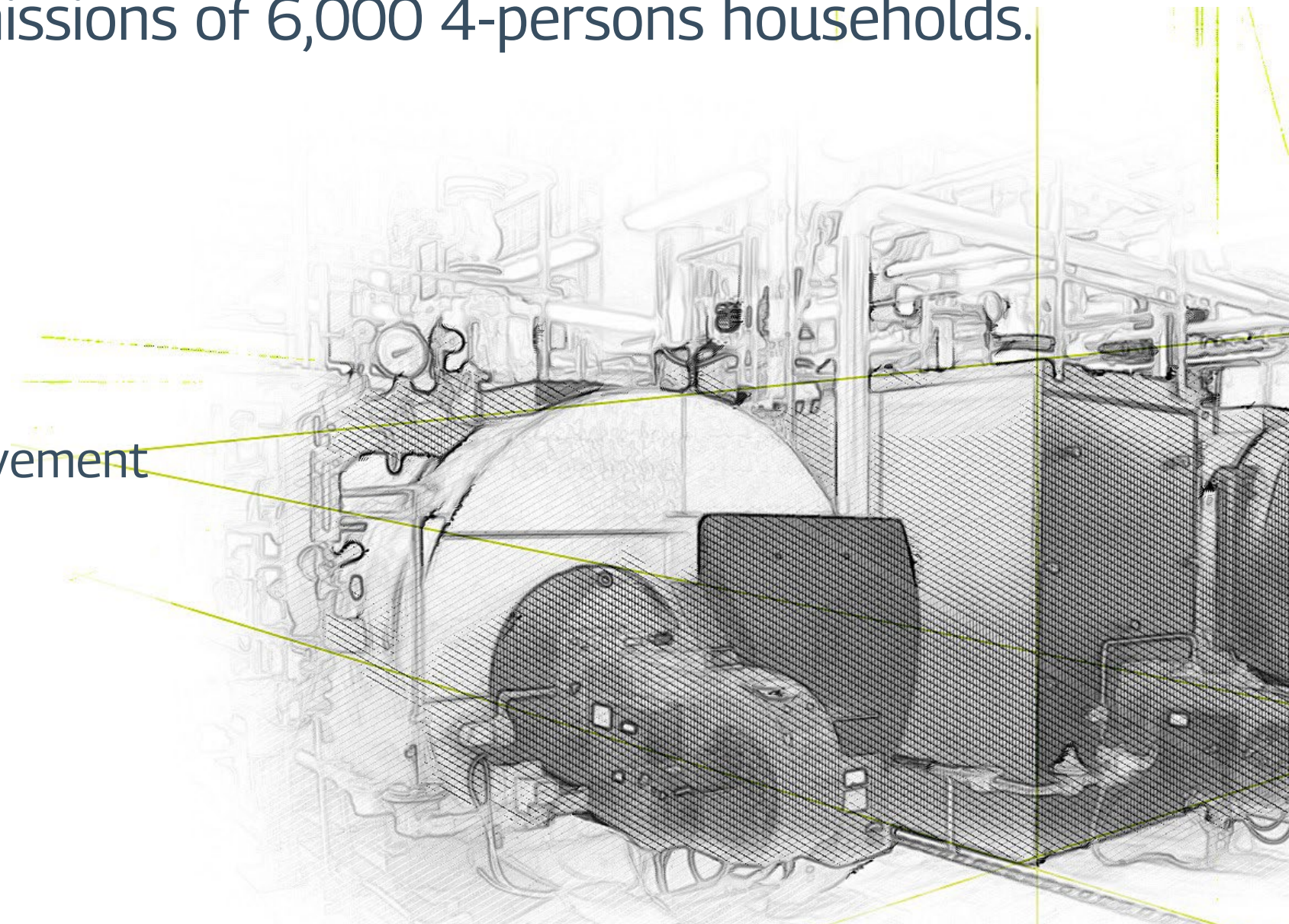
annual savings due to improvement of both boilers - approx. EUR 4.5 million

final energy savings of more than 6,200 toe - the possibility to be granted White Certificates of EUR 2.6 million

18 months - payback period

Due to the improvements the CO<sub>2</sub> emissions will be reduced from approx. **134,000 tons** to approx. **110,000 tons** annually.

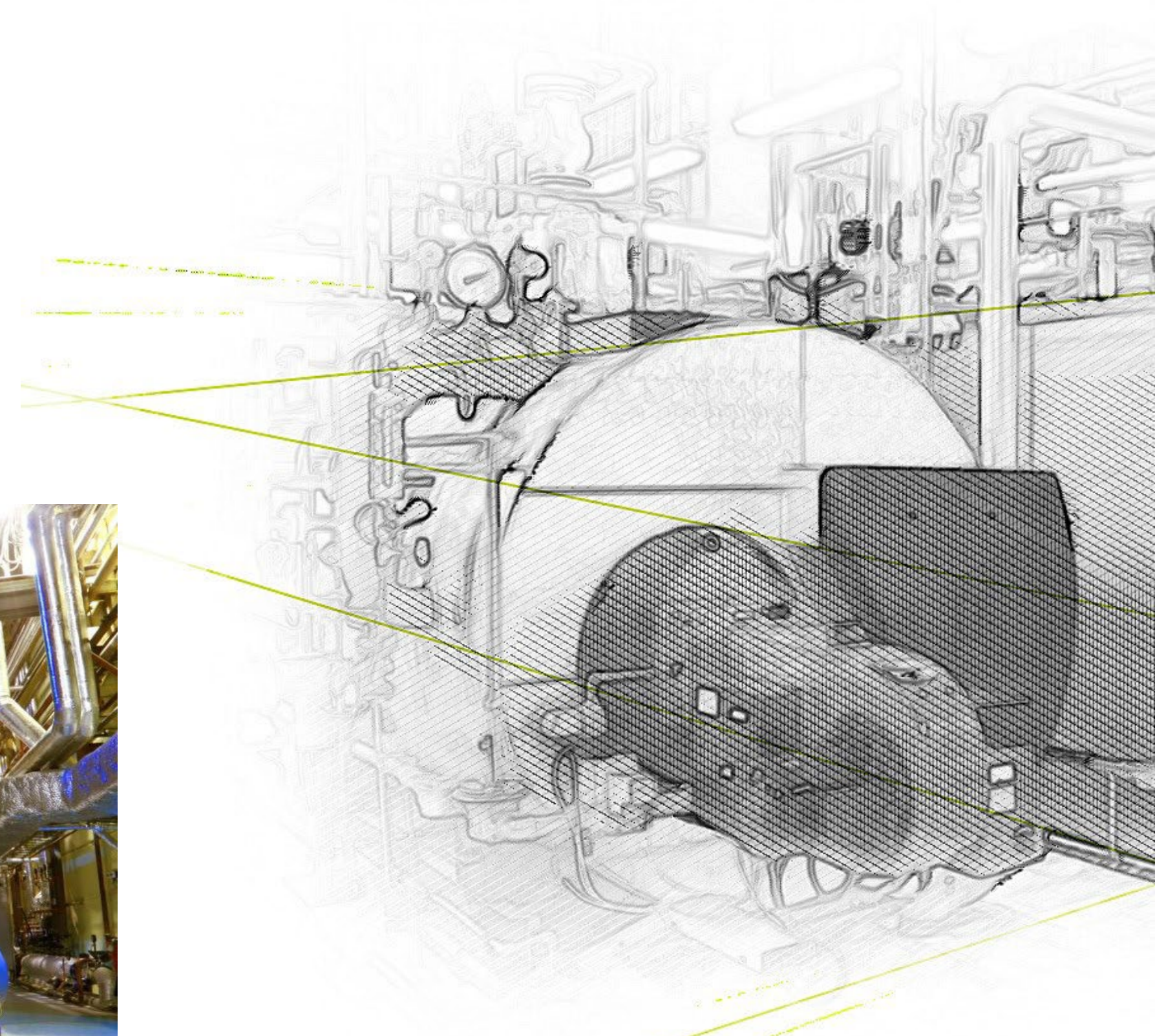
The difference of **24,000 tons** refers to the average annual CO<sub>2</sub> emissions of 6,000 4-persons households.





# SCHUMACHER PACKAGING

Heat and power plant improvement





# Contact for CLIENTS



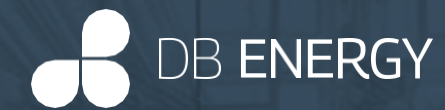
## Sebastian Jankowski

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[www.dbenergy.pl](http://www.dbenergy.pl)



VI Commercial Division of District Court Wrocław-Fabryczna,  
under KRS number 0000685455, NIP 8942995375, REGON 02124914  
Share capital of PLN 306,146



European Union  
European Regional  
Development Fund



DB Energy conducts the R&D project titled „Development of an innovative drive diagnostics system (DiagSys) based on electrical signal measurements characteristic of mechanical damage to rotating machine components, together with a specialized analyser of machine operating status and efficiency (APPS 3)”. The project is financed under the Intelligent Development Operational Programme 2014-2020, under sub-measure 1.1.1. „Industrial research and development work carried out by enterprises”. No. of the competition: 1/1.1.1/2015. Value of the project PLN 5,974,021.85. Value of co-financing PLN 3,727,676.11.