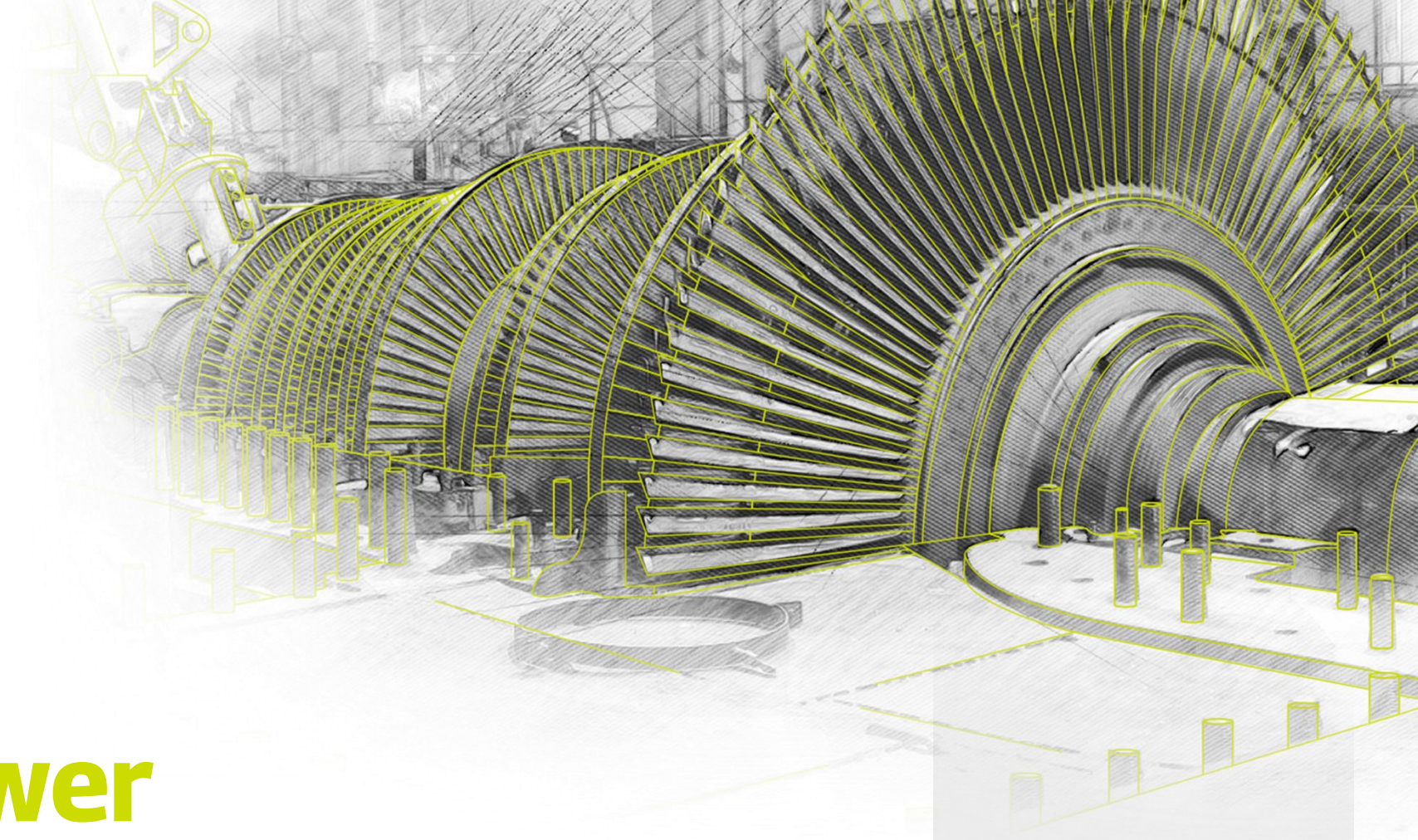
DB ENERGY

Zero-emission industry



Reactive power compensation

Elimination of reactive energy charges for inductive and capacitive loads

Wrocław, 2026

REDUCING EMISSIONS AND ENERGY CONSUMPTION

We help medium-sized and large industrial companies become part of a zero-emission future. We want to co-create factories that we could have right next door. We tailor each service to your needs and requirements, advising, designing, implementing and financing energy efficiency measures. ***It's decarbonization that pays off.***

Ph.D. Eng. Piotr Danielski

President and co-founder of DB Energy

BENEFITS

Unconventional solutions

We combine audit expertise with interdisciplinary knowledge and the best technical solutions. We implement non-obvious combinations of technologies based on detailed analyses. Thanks to this, the projects we propose deliver the greatest benefits.

Decarbonization, that pays off

We develop, implement, and finance energy-efficient investments, enabling industrial companies to achieve real zero-emissions in a way that generates profit. By delivering projects from audit to execution, including financing, we can implement an investment for which the Client does not have to contribute a single penny.

Real zero-emission

Where businesses are compelled to adapt to environmental regulations, that's where we step in. We support companies in increasing their competitiveness by reducing emissions and energy consumption. As a result, they become more competitive — and the environment becomes cleaner.

MISSION AND VISION

Mission

Implement decarbonization and energy efficiency in industry in such a way that companies want to do it and find it profitable!

Vision

We want to help create factories that we could have in our neighborhood - zero-emission, quiet and energy-efficient.

Unique
VALUE PROPOSITION

DB ENERGY

Decarbonization that pays off - additional profits thanks to energy efficiency.

We make sustainable and effective investments in decarbonization that bring our clients long-term financial and environmental benefits.

DB ENERGY OFFER

CONSULTING

- Walk Through Audit
- Energy Efficiency Audit
- Company Energy Audit
- White Certificates
- Carbon Footprint Calculation
- Zero Emissions
- Energy Measurements
  - Cooling Source Efficiency Measurements
  - Air Compressor Efficiency Measurements
  - Boiler Efficiency Measurements
  - Fan and Pump Efficiency Measurements
- Interim Energy Efficiency Manager

INVESTMENT IMPLEMENTATION

- Feasibility study
- General contracting
- ESCO investment financing
- Energy monitoring
- Interim Energy Efficiency Manager

TECHNOLOGIES

- Cogeneration
- Photovoltaics
- Heat recovery
- Refrigeration
- Compressed air
- Drive control
- LED lighting
- Energy management systems

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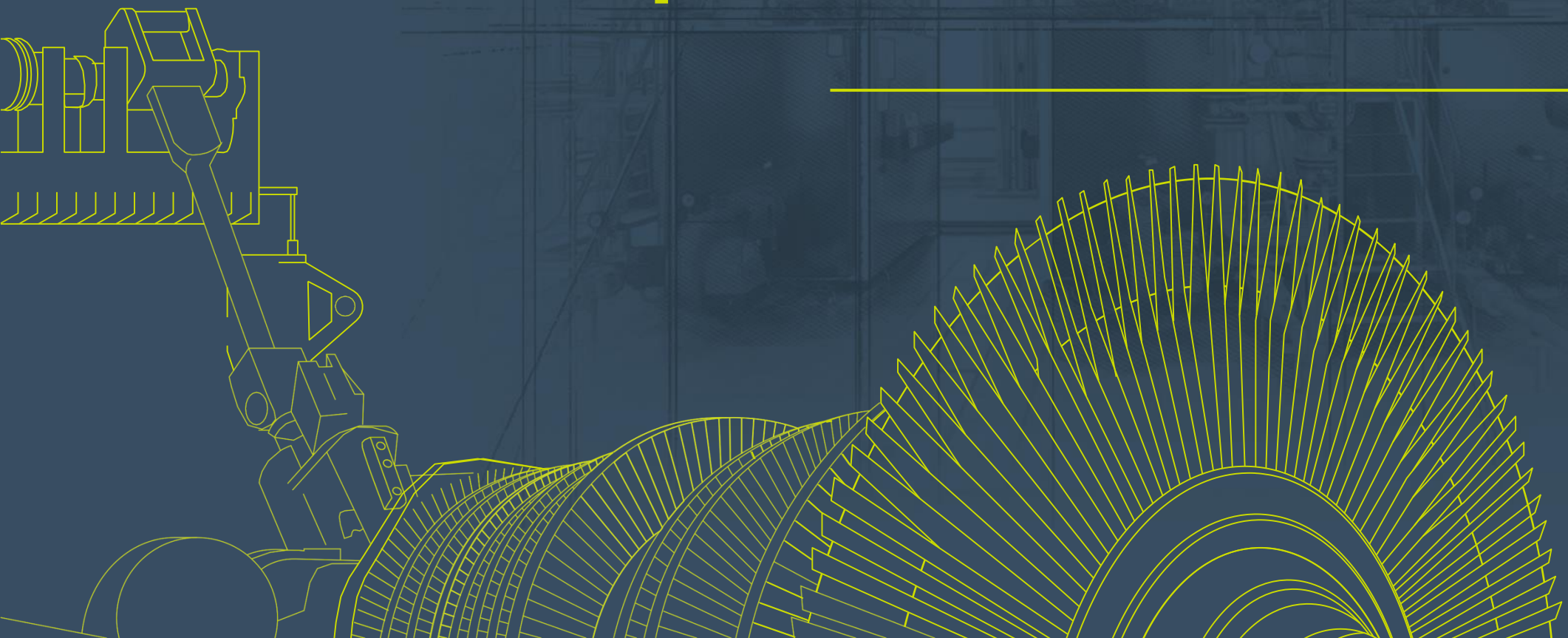
Compensation of **reactive power**



PASSIVE POWER IN A NUTSHELL

- **var – Volt Ampere Reactive** – unit of reactive power
- **inductive and capacitive** – we distinguish between inductive and capacitive reactive power depending on the receiving device

- **Reactive power causes additional load on the grid** – reactive power charges are intended to encourage consumers to reduce their consumption.
- **Reactive energy affects network capacity** – increasing active energy losses and, consequently, its costs, as well as limiting connection capacity availability.

- **tg φ > 0.4** – coefficient used by the operator for billing reactive energy consumption: consumption of more than 40 kVarh of reactive energy per 100 kWh of active energy consumed results in an additional charge

TYPES

Inductive reactive power

Typical receiving devices generating inductive reactive power:

induction motors, transformers, lighting installations (fluorescent lamps, mercury lamps and sodium lamps), induction furnaces, chokes.

Capacitive reactive power

Typical load devices generating capacitive reactive power:

UPSs, computers, damaged capacitor batteries, welders, inverters, live cables.

FOOD INDUSTRY

Reactive power compensation:

- limits excessive reactive energy consumption,
- reduces customer costs,
- allows for a reduction of approx. 2% in active energy charges,
- increases the efficiency of electrical equipment and installations,
- has a short payback period,
- is designed individually to suit the needs of the plant.

Typical solutions

The most common solution for eliminating reactive energy charges is to install compensation devices:

- **capacitors** in the case of inductive reactive energy,
- **chokes** in the case of capacitive reactive energy.

REDUCTION OF REACTIVE ENERGY CONSUMPTION

Limiting reactive power consumption begins to make economic sense when:

the cost associated with non-contractual consumption of reactive energy is **at least PLN 500/month net**

charges for reactive energy consumption **are continuous and cyclical** (not incidental)

Required information:

Is a reactive power compensation system already installed?

Are there charges for inductive or capacitive reactive energy, or perhaps both?

Are the following available:

- 15 minute measurement data for active and reactive energy, or
- VAT invoices for the last 12 months?

We limit

REACTIVE ENERGY CONSUMPTION

This is where we most often eliminate reactive energy charges:

- treatment plants and pumping stations,
- hotels,
- woodworking plants, sawmills, paper mills, printing plants,
- concrete plants,
- mechanical plants.

Want to learn more about reactive power compensation?

We have an article for you in our knowledge base:

http://

Reactive power – what it is and how to address issues related to its consumption

Complete process support of

EFFICIENCY IMPROVEMENT

complex service for the entire process of improving energy efficiency

maximizing customer benefits and savings

IDENTIFICATION OF SAVINGS

Audits:

- Walk Through
- Company Energy audit
- Energy Efficiency audit
- Zero-emission strategies

PROJECT CONCEPTS

- detailed feasibility studies for specific energy-saving investments
- guidelines for designers necessary to achieve maximum benefits and savings
- construction projects

FINANCING AND IMPLEMENTATION

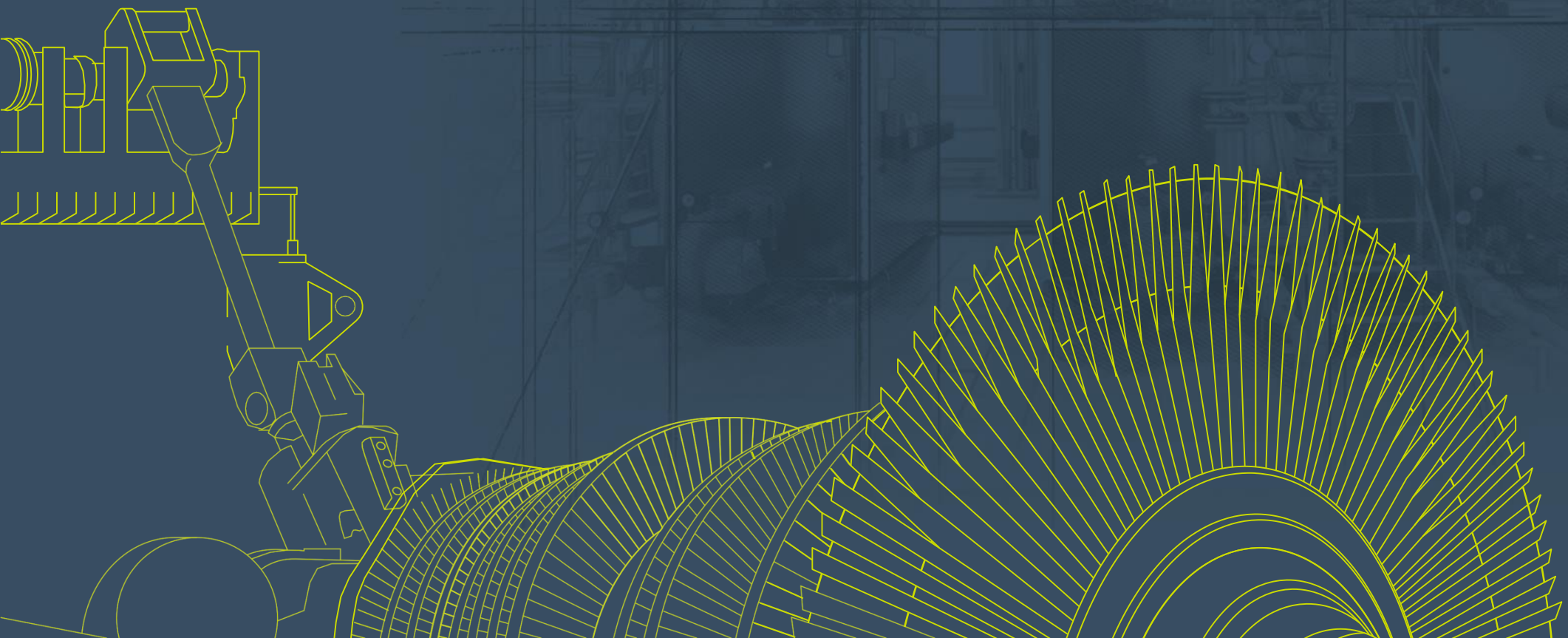
- financing of investments by DB Energy under the ESCO model
- implementation of investments by DB Energy as general contractor
- maximization of benefits and savings

DIAGNOSTICS AND MONITORING

- regular monitoring of energy consumption and efficiency
- continuous identification of further energy efficiency improvements
- long-term support for the implementation of a zero-emission strategy

DB ENERGY

They have **trusted us**



Selected
CUSTOMERS

OUR PARTNERS

Dolnośląski Instytut Studiów Energetycznych

Centrum Informacji o Rynku Energii

ING Bank Śląski

EFESO Management Consultants

Last Energy

Metale.org

Izba Energetyki Przemysłowej i Odbiorców Energii

Napędy i sterowanie

Polski Przemysł

Zachodnia Izba Gospodarcza

Ernst&Young

Polskie Górnictwo Naftowe i Gazownictwo

DB ENERGY

Zero-emission industry

We operate worldwide

DB ENERGY

DB ENERGY

Zero-emission industry

1445

industrial projects

We help medium and large industrial companies become part of a zero-emission future. We want to co-create factories that we could have right outside our doors. We advise, design, implement and finance energy efficiency activities. This is decarbonization that pays off.

EUR 1.3 bn

value of completed projects

9.8 TWh

total reduction in energy consumption

EUR 512 mln

annual savings of our customers

CASE STUDIES

Our selected projects:

Schumacher Packaging

The largest LNG-powered cogeneration unit in southern Poland

Soufflet Malt House

From audit to 40% emission reduction

Simoldes Plasticos

Project from A to Z

Additional information

We have prepared a package of materials for you:

Newsletter

We encourage you to subscribe to our newsletter, in which we share technical, financial, and legal knowledge on energy efficiency and zero emissions once a month.

Downloadable materials

We have also prepared a package of downloadable materials for you, concerning the products and services offered by DB Energy and the most interesting projects we have completed.

LinkedIn newsletter

Every Tuesday, we publish the Cost-Effective Decarbonization newsletter via LinkedIn. Each week, our team creates and comments on expert content, which we present in an easy-to-understand format.

Additional information

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