



PZEM ENERGY

Asset optimization | Trading |
Origination | B2B

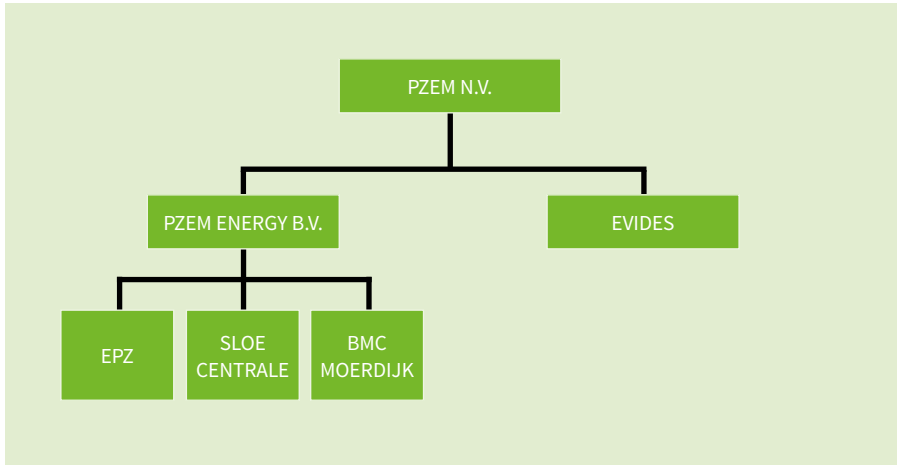
ABOUT PZEM ENERGY

PZEM Energy generates electricity, trades energy on the wholesale markets, provides balancing services in power and gas markets, and provides customer solutions to producers and business end users. Our seat is located in Middelburg, the capital of the province of Zeeland in the Netherlands.

Our portfolio is composed of nuclear, gas-fired, renewable generation capacity and PPAs with producers of different sources of renewable energy. With access to fast-cycle gas storage capacity PZEM provides short-term flexibility solutions to gas portfolios. Furthermore we supply energy and energy related products and services to large and medium size customers.

As a responsible producer, trader, and supplier of electricity, PZEM contributes to the transition to a sustainable economy. The share of renewable production in our portfolio increased to 40%. With our highly efficient CCGT power plant, we play a crucial role in providing the necessary flexibility to manage volatile production from renewable energy sources. With a CO₂ emission factor of ca. 100 grams per kWh the PZEM production portfolio remains well below the national average of 450 grams per kWh (2017).

COMPANY STRUCTURE



PZEM Shareholders

The province of Zeeland holds 50% of the PZEM NV shares. The other 50% are held in varying percentages by municipalities in Zeeland.

PZEM Board of Directors and Supervisory Board

The board of directors consists of a chief executive officer and chief operational officer. The supervisory board has three members.

PZEM Energy

PZEM Energy's business activities include asset optimization, trading, origination and supply of power and gas to business customers.

Evides

The 50% ownership of water supply company Evides is structured under the holding company PZEM N.V. Water supply is a regulated business in the Netherlands.

EPZ

EPZ, 70% owned by PZEM Energy, operates the only nuclear power plant in the Netherlands.

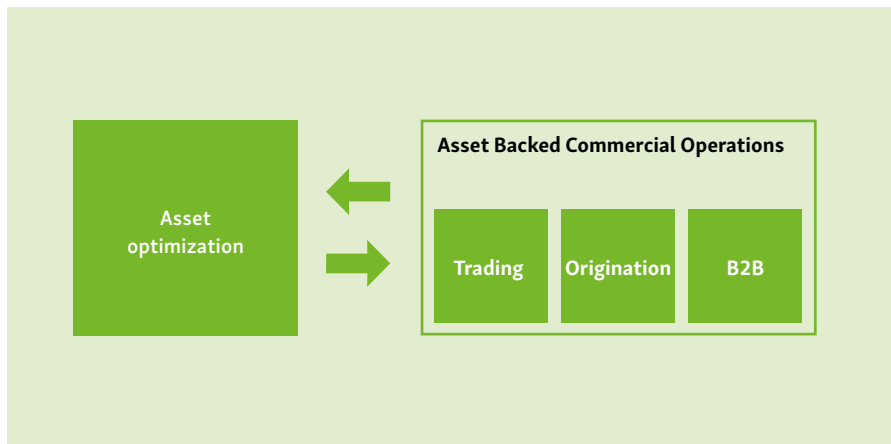
Sloentrale

Sloentrale is a power plant consisting of two identical CCGT units. PZEM Energy holds 50% of the shares.

BMC Moerdijk

BMC Moerdijk, 50% owned by PZEM Energy, is the only power plant on the European mainland that converts poultry manure into renewable electricity on an industrial scale.

ACTIVITIES



Asset optimization

Asset Optimization optimizes the overall value of PZEM Energy’s asset portfolio, including long-term PPAs, over the lifetime of the underlying contracts.

Trading

Trading is responsible for 24/7 commercial optimization of our asset and customer portfolio by trading electricity, gas, guarantees of origin and emission rights in the Northwestern European energy markets. Furthermore Trading provides ancillary forward hedging services through Saxo Bank’s online trading portal.

Origination

Origination closes structured deals with wholesale counterparties and large business customers. Focus is on electricity, gas and guarantees of origin in the Dutch energy markets.

B2B

B2B supplies energy to medium size customers through our online sales portal and account management. Focus is on electricity, gas and guarantees of origin in the Dutch energy markets.

BUSINESS TEAMS

PZEM Energy's business teams consist of an excellent mix of highly educated local and international employees with extensive knowledge and expertise of the Northwestern European energy markets and in particular the Dutch energy markets.

COMMERCIAL

Origination

A two-tiered team of skilled professionals with a commercial background and so-called structurers with a quantitative background. The commercially oriented originators rely on a comprehensive network of business relations and have many years of experience in negotiating structured deals regarding Dutch power, gas and guarantee of origin. The structurers advise the originators on the optimal deal structure and apply sophisticated valuation models for pricing purposes.

B2B

B2B consists of experienced people in the Dutch energy markets, closing supply contracts for power, gas and services to medium size customers. Operational excellence is key and contact is possible either personally via account managers or through an online platform on which customers can receive a firm offer quickly and in real-time.

TRADING & OPTIMIZATION

Trading

Trading consists of skilled professionals, responsible for hedging PZEM Energy's long-term, mid-term and day-ahead physical and financial energy exposures.

Shift Trading

Shift Trading consists of experienced professionals, responsible for optimizing the PZEM's power and gas portfolio in the intraday and imbalance market. The team is active 24/7.

Quantitative Optimization

Quantitative Optimization consists of academics, responsible for the development of quantitative models, day-ahead bidding strategies, variable and marginal costs calculations, intra-day & imbalance optimization (including TenneT ancillary products), data management, contract management, maintenance planning and market analysis.



Together with our business partners we successfully develop and implement innovative and value-creating solutions



PORTFOLIO

1. Sloecentrale

The Sloecentrale is one of the most efficient power plants of the Netherlands.

Ownership PZEM	50%
Type of plant	CCGT
Location	Ritthem
Fuel	Gas
Capacity	2 x 435 MW
Off-take share	50%

2. EPZ (BS30)

EPZ operates BS30, the only nuclear power plant in the Netherlands.

Ownership PZEM	70%
Type of plant	Nuclear power plant
Location	Borssele
Fuel	Uranium
Capacity	485 MW
Off-take share	70%

3. BMC Moerdijk

BMC Moerdijk is the only power plant on the European continent to convert poultry litter into renewable electricity on a large scale.

Ownership PZEM	50%
Type of plant	Biomass plant
Location	Moerdijk
Fuel	Poultry litter
Capacity	32 MW
Off-take share	100%

4. Wind farms

PPAs with various wind farms in the Netherlands.

Ownership PZEM	-
Type of plant	Wind turbines
Location	Various locations in NL
Fuel	Renewable
Capacity	Varying
Off-take share	100%

A. EnergyStock

EnergyStock provides fast-cycle gas storage from depleted salt caverns located in the north of the Netherlands. PZEM uses its capacity for the purpose of balancing gas portfolios.

B. Gas Pipeline Infrastructure

PZEM owns the ZBL (Zuid-Beveland leiding) and has a share in the Axel-ELSTA leiding. Furthermore, PZEM has contracted capacity at ZEBRA and has long-term access to Fluxys transport capacity

C. Customer Portfolio

PZEM has a diversified portfolio of medium size business customers and large industrial off-takers.

OUTLOOK

In the transition towards a carbon neutral energy system the electricity sector will face significant challenges. Declining conventional capacity in combination with increasing intermittent generation make balancing of demand and supply a key challenge in the energy transition.

Global warming



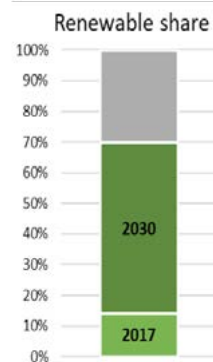
To limit human induced global warming to 2° Celsius, as agreed at the 2015 UN Climate Change Conference in Paris, a significant reduction in greenhouse gas (GHG) emissions is required. In the climate and energy framework the European Commission (EC) targets a cut in GHG emissions of at least 40% by 2030 (from 1990 levels).

To comply with the Paris climate agreement the EC announced a higher ambition in the European Green Deal; the GHG-reduction target should increase to at least 50% and towards 55%. The Dutch government has acknowledged this and has already embedded a domestic GHG reduction target of 49% by 2030 into Dutch law. To comply with this target a Dutch climate agreement has been established.

Renewable electricity

The increase of the renewable electricity share to 70% by 2030 is the most important measure for decarbonization of the energy sector included in this climate agreement. However, as options for (dispatchable) hydro or biomass facilities are limited, the majority of this additional renewable electricity will most likely be generated by intermittent capacity such as wind turbines and solar parks.

The agreement recognizes that system integration of these additional amounts of intermittent capacity will result in additional demand for flexibility, which could be supplied by flexibility sources such as demand-response, storage, interconnection capacity and dispatchable capacity. Therefore balancing of demand and supply is a key challenge in the transition towards low carbon energy supply.



STRATEGY

Our asset portfolio is able to facilitate the transition towards a sustainable energy sector as it combines intermittent renewable capacity with flexible generation capacity with a low carbon footprint.



Gas flexibility & back-up capacity

The growth of renewable capacity will significantly increase demand for flexibility. Therefore PZEM believes flexible and efficient gas-fired generation capacity will play a key role in securing supply towards a renewable driven energy system.



Zero emissions nuclear baseload

The reform of The EU ETS (Emission Trading System) and the ongoing high-emission and inefficient coal and lignite baseload generation capacity will strengthen power prices and improve the viability of our baseload nuclear power plant.



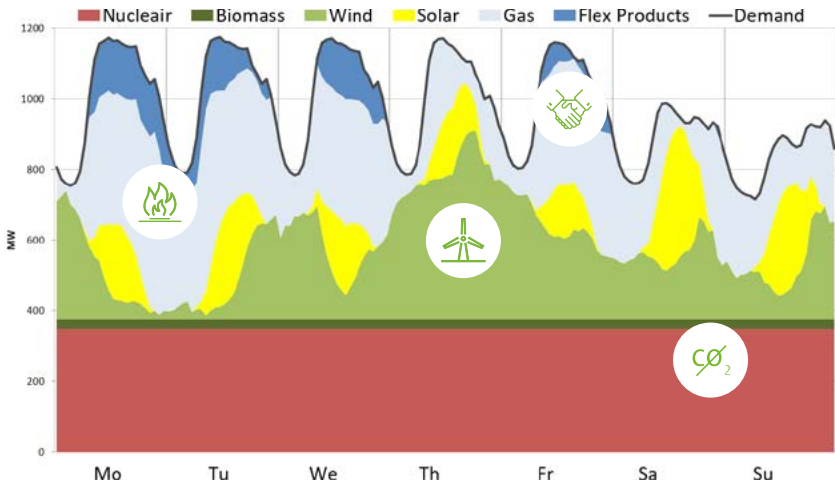
Renewable production / PPAs

The volatile generation from our renewable assets and PPAs complements with PZEM's flexible gas portfolio. We made it one of our strengths to manage and optimize demand and supply of flexibility in our portfolio.



Origination & B2B

Our Origination and B2B portfolio enables us to offer business solutions to unlock the flexibility that is available to our clients. PZEM identifies the flexibility opportunities and achieves maximum value on the appropriate markets (forward, day ahead, intra-day, imbalance, ancillary services).



PRODUCTS

PZEM wants to realize the best price and contract structure through its products. Please see an overview of the products below.

Power

- ✓ Day-ahead & intra-day market access
- ✓ Power Purchase Agreements (PPAs)
- ✓ Full supply (inc. balancing & PR)
- ✓ Flexible supply (VPP)
- ✓ Flexible off-take
- ✓ Price hedging (Saxo Bank's Energy CFDs)
- ✓ Balancing services
- ✓ Program responsibility
- ✓ Post day imbalance netting
- ✓ Forecasting
- ✓ Load optimization

Gas

- ✓ Off-take
- ✓ Full supply (inc. balancing & PR)
- ✓ Supply @ TTF-B (balance relation)
- ✓ Flexibility services
- ✓ Balancing services
- ✓ Price hedging (Saxo Bank's Energy CFDs)
- ✓ Program responsibility
- ✓ Peak supply
- ✓ Virtual fast-cycle storage
- ✓ Virtual transport

Certificates

- ✓ Guarantee of Origin (GO) off-take
(as part of PPAs)
- ✓ GO supply
- ✓ Certificate of Origin (CO) supply

MULTI ASSET TRADING PLATFORM

SaxoEnergy is suitable for everyone who deals with purchasing and/or selling of energy for a company. Because energy prices fluctuate heavily in a volatile market, smart companies use SaxoTraderGo, the online trading platform from Saxo Bank, to hedge their energy exposure. Your company still needs a physical contract for the actual delivery of energy.



What is SaxoEnergy

Through SaxoTraderGO*, a single environment to execute and manage risk of all Global Markets, Saxo Energy offers real time access to wholesale energy market prices including historical charts.

What is an Energy CFD?

Use Saxo Bank's Energy CFDs (contract for difference) to hedge your energy exposure. The Energy CFD's are derivatives 1-on-1 based on the underlying power and gas futures in the wholesale market. With a CFD you take solely a financial (non-physical) long or short position.

*PZEM Energy acts as market-maker for SaxoEnergy on SaxoTraderGO



Why SaxoEnergy

With SaxoTraderGo you have real-time access to the energy wholesale market assisting you to determine your strategic purchasing/selling and controlling your energy risk.

Your advantage:

- ✓ Fully integrated trading and risk management platform to hedge (energy) exposure
- ✓ Direct access to the wholesale market
- ✓ Real-time energy prices for power and gas
- ✓ Best price execution with Saxo Bank
- ✓ Supplier independent
- ✓ No restrictions on volume, buy back

Connecting your physical energy exposure with financial CFD hedges:

- ✓ Available products: German and Dutch Power Baseload/Peakload, Dutch Natural Gas TTF
- ✓ Available periods: Month 1-3, Quarter 1-3, Season 1-4 (TTF only) and Calendar 1-3
- ✓ Minimum contract size: 100kW (0,1MW)

CONTACT DETAILS

If you or your company would like more information about PZEM Energy's products and services, please contact us.

You can find my information below 

OR CONTACT US VIA



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