

Quo Vadis Energies?

Current situation and expected development of the energy prices.

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22/03/2023
BRATISLAVA

AGENDA

**1. STRUCTURE OF THE SLOVAK
ELECTRICITY MARKET**

2. HOW THE FINAL PRICE IS MADE UP

3. COMMODITY PRICES

4. SPOT or FIX

5. IMPROVE YOUR DIAGRAM

6. DECREASE YOUR CONSUMPTION
Energy Efficiency Measures

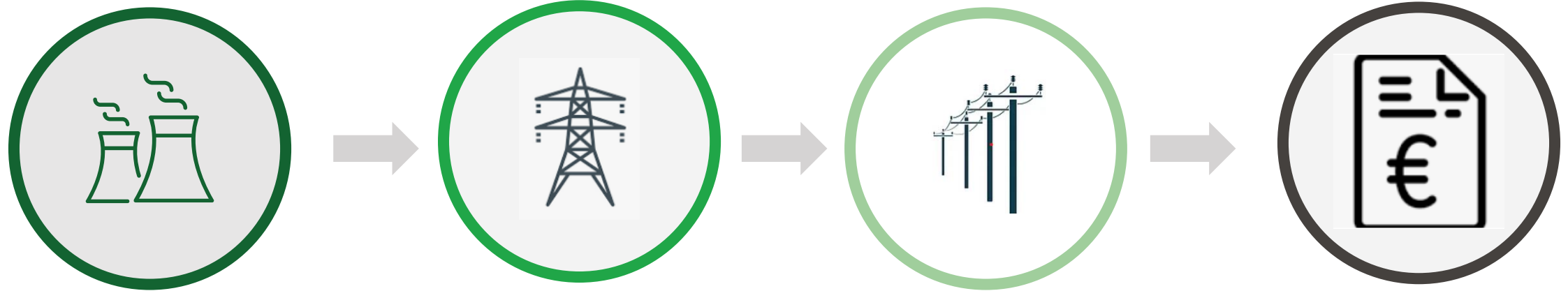
7. LOW HANGING FRUITS
Simple Projects with fast ROI

**8. THE IMPORTANCE OF AN
ENERGY MEASUREMENT SYSTEM**

9. EXAMPLE OF BUSINESS CASES

10. Q&A SESSION

STRUCTURE OF THE SLOVAK ELECTRICITY MARKET



Electricity Generators –
i.e. Slovenske Elektrarne

High Voltage Grid
Operator - SEPS

Local Distribution
Companies – ZSDis,
SSD, VSD

Electricity Supplier – i.e.
ZSE, SSE, VSE, etc.



**COMMODITY
PRICES**



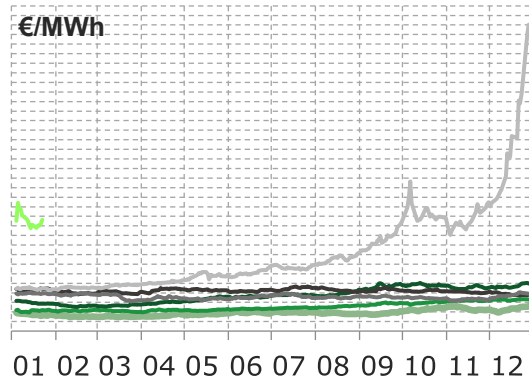
**DISTRIBUTION
COSTS**



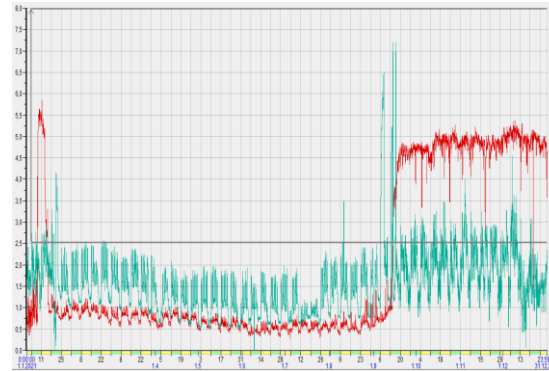
**COST OF
DIAGRAM AND
SUPPLIER'S
MARKUP**

Composition of the final price

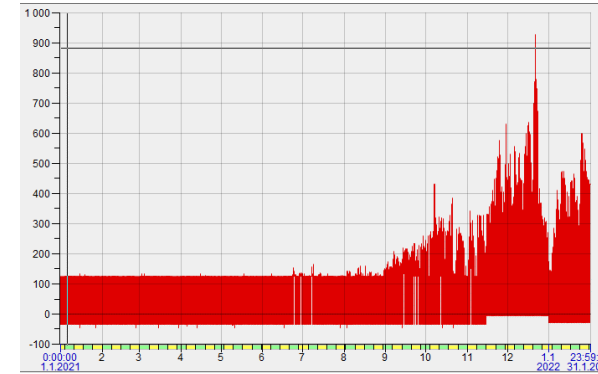
Exchange (SK)



+ DIAGRAM



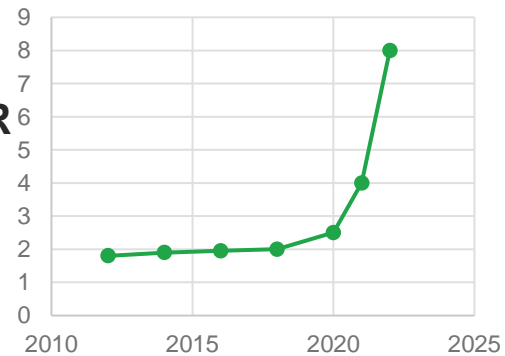
+ DEVIATION



€

+ INTERNAL SUPPLIER COSTS

Risk, Financial costs, margins,...

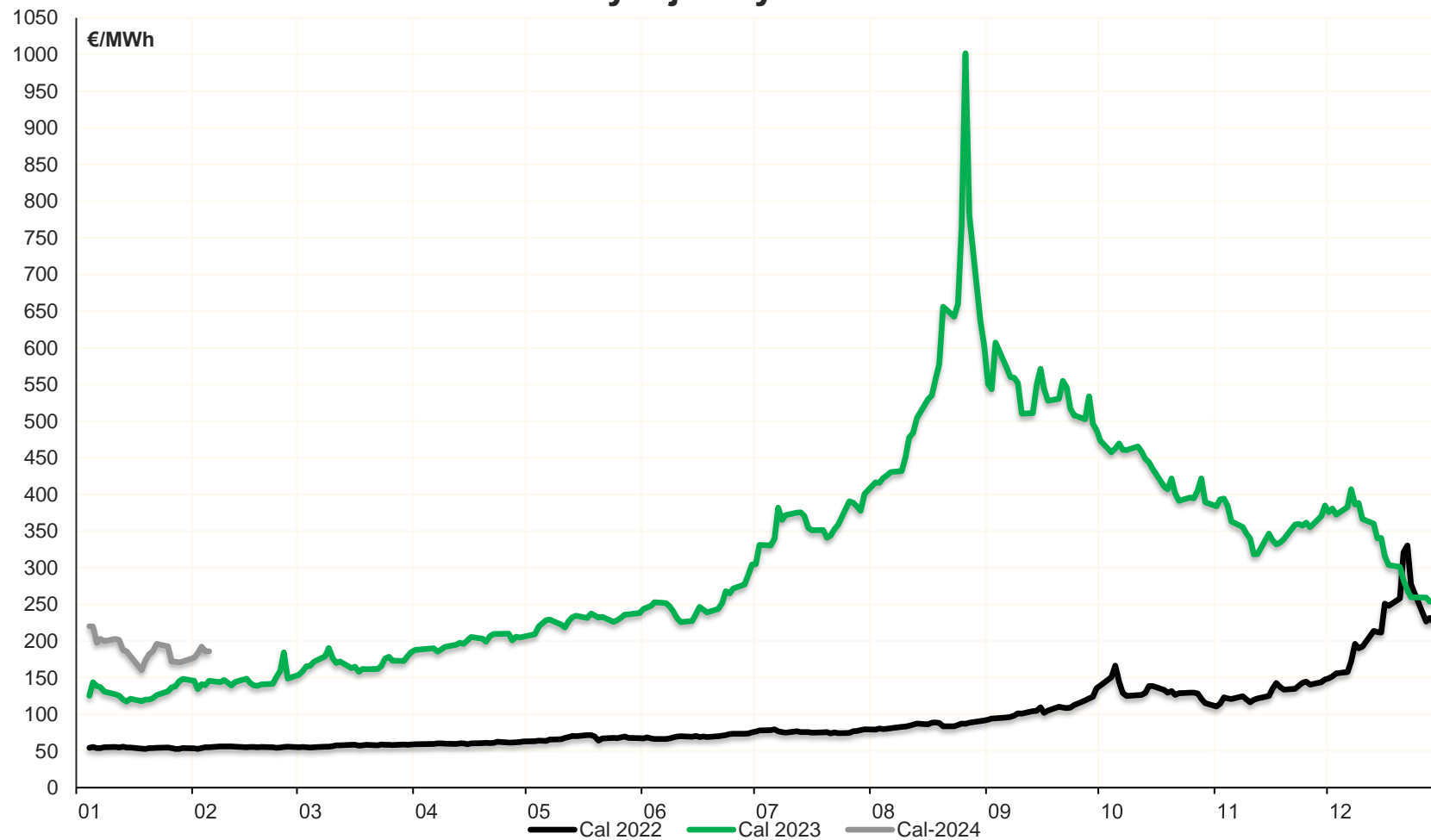


+ DISTRIBUTION COSTS



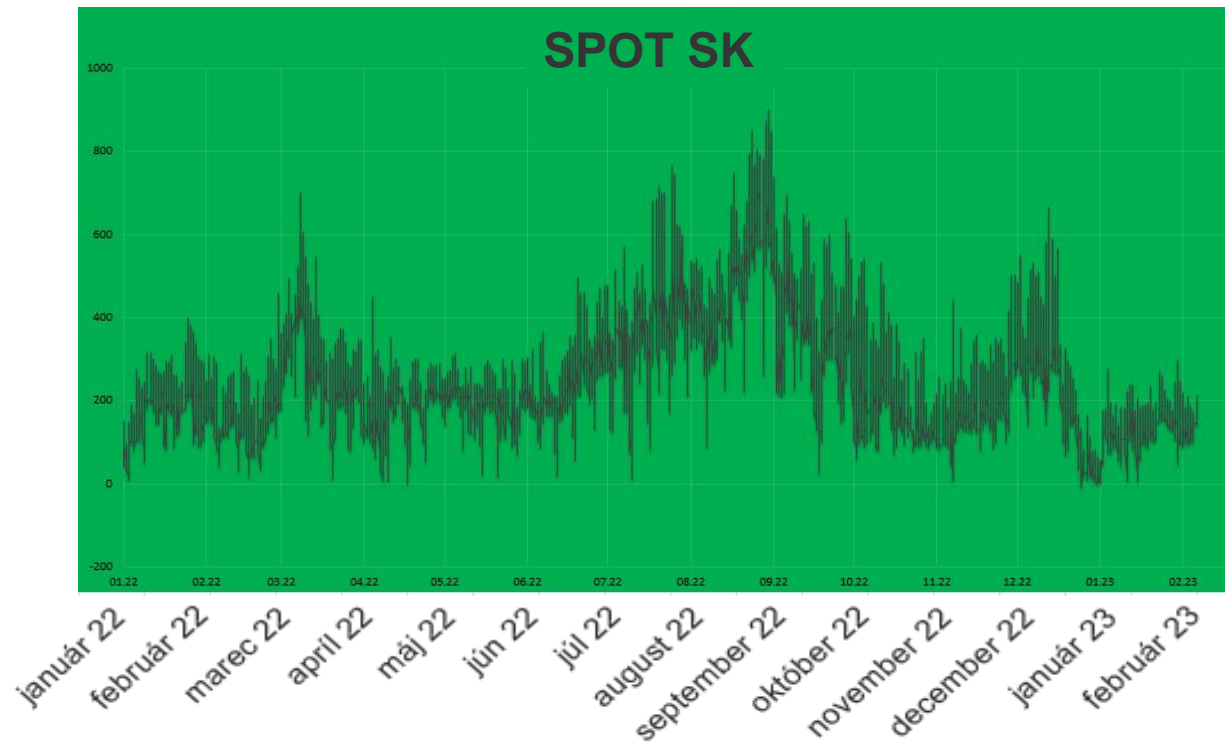
Evolution of prices

Vývoj ceny PXE SK

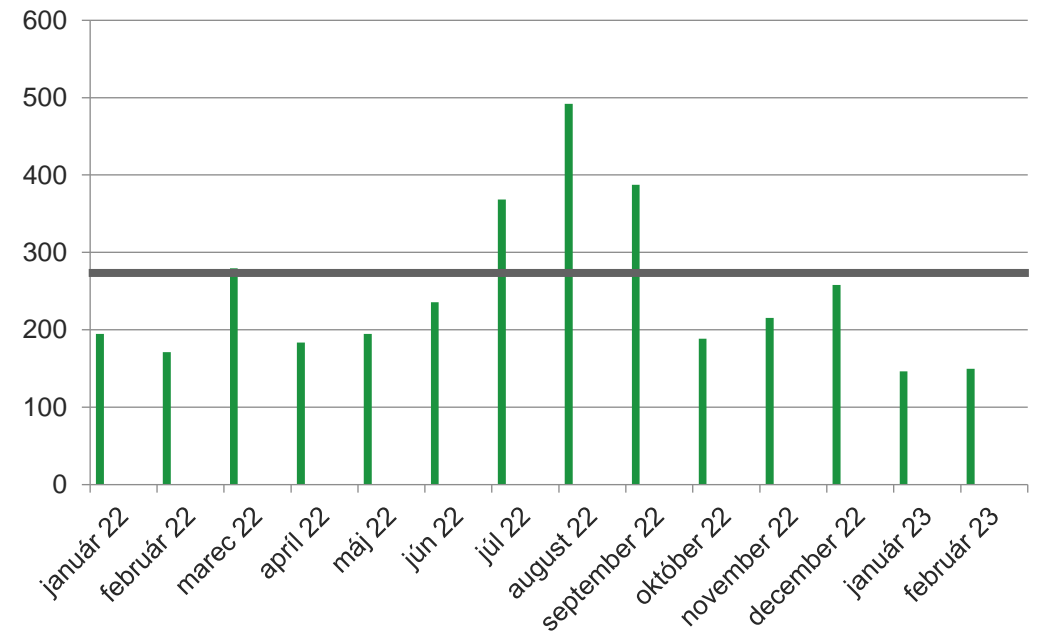


Purchase on the spot market

- Average from beginning of year 2023: **270€ / MWh**
- Highest prices in summer (**vyše 430 €**) - dry weather and gas prices
- **October 2022** “only” **188 €**



Monthly average SPOT





Spot or Fix?

DISTRIBUTION COSTS



WENT UP

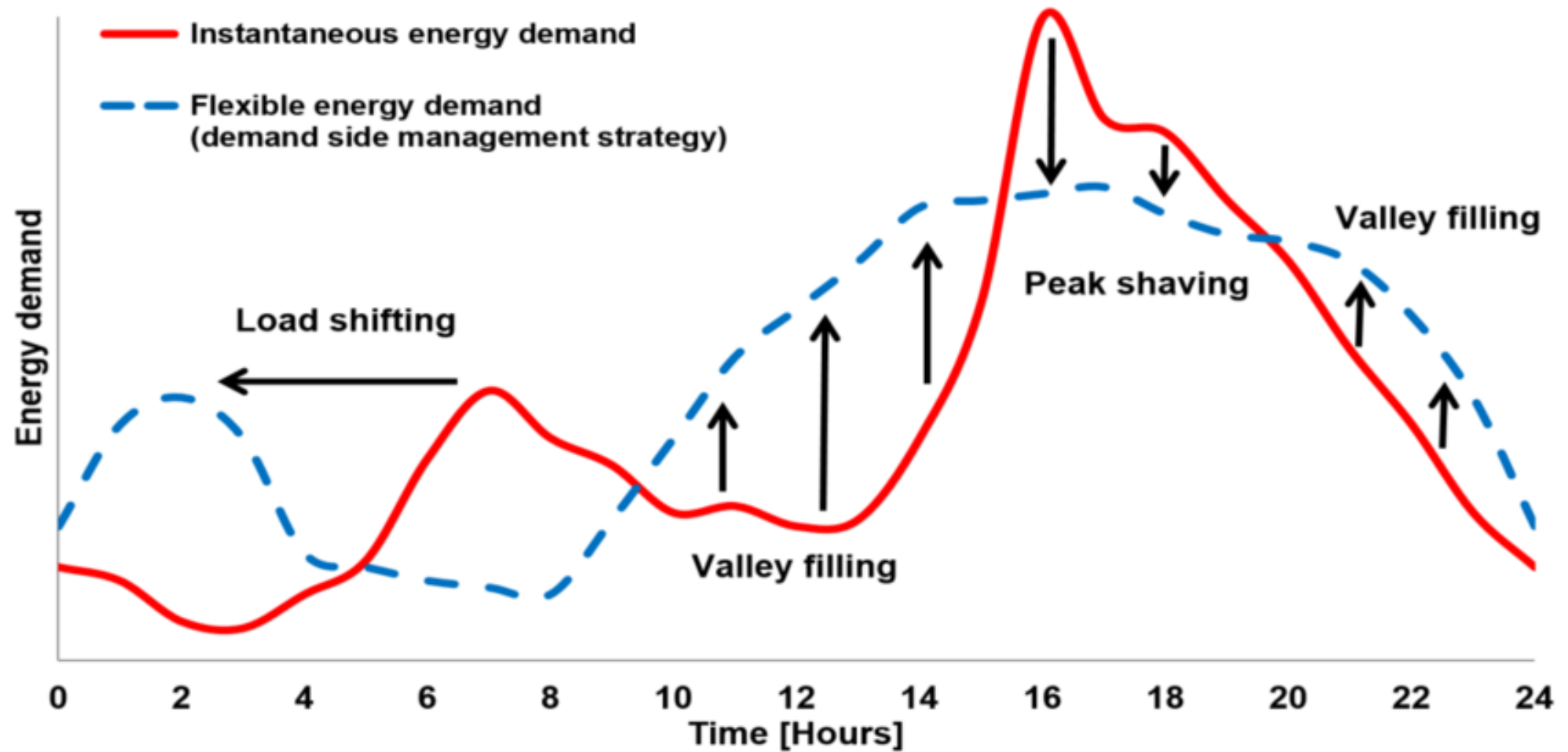
URSO approved higher distribution costs as a direct result of high inflation and higher regulations prices

MRK AND RK UNDER CONTROL

Study your consumption pattern and adapt Reserved Capacity to it. Avoid to pay fines for overcoming its limits

**LOW TO NONE
CONTROL
OVER THEM**

IMPROVE YOUR DIAGRAM

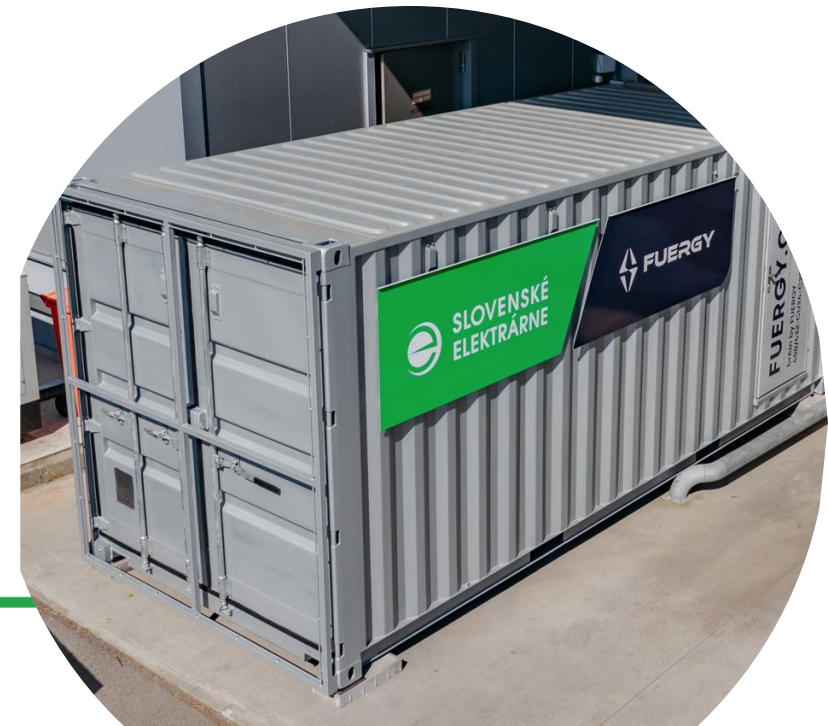


PV PLANT + BATTERY



A PV Plant help you reducing your consumption peaks especially in the April-September period. Ideal for companies with cooling technology

A Battery system will work throughout the year in order to flatten the peaks by moving consumption from the grid during time



ENERGY EFFICIENCY



The **Cheapest** Energy is the one you do not **Waste**



100% UNDER CONTROL

It's based on your own decisions

FAST ROI

With high energy prices the return on investment can be really fast



LOW HANGING FRUITS

Energy Efficiency Projects with easy implementation and Fast ROI



LED LIGHTING

Easy design, certain savings, fast returns



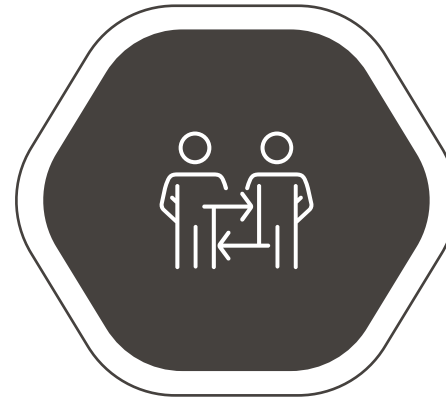
OLD GAS BOILERS

Gas Leaks and high maintenance, modernization is at fast ROI



DEMAND FLEXIBILITY as a SERVICE

CASH flow positive from day one



ENERGY PERFORMANCE CONTRACTS

Investment costs are paid by energy savings achieved



RK SAFEGUARDING

Installing a system to safeguard overcoming reserved capacity and avoid fines



AN EASY QUESTIONNAIRE TO IDENTIFY LHF

If you are interested send
me an email to
energy.services@seas.sk
and we will send you the
questionnaire

THE IMPORTANCE OF AN ENERGY MANAGEMENT SYSTEM

MEASURING ENERGY FLOWS IN DETAIL TO FOCUS WHERE IT MATTERS

MAPPING

Identify all major energy consuming machines

IMPLEMENT

Implement and run the system to collect precious data over a long term period



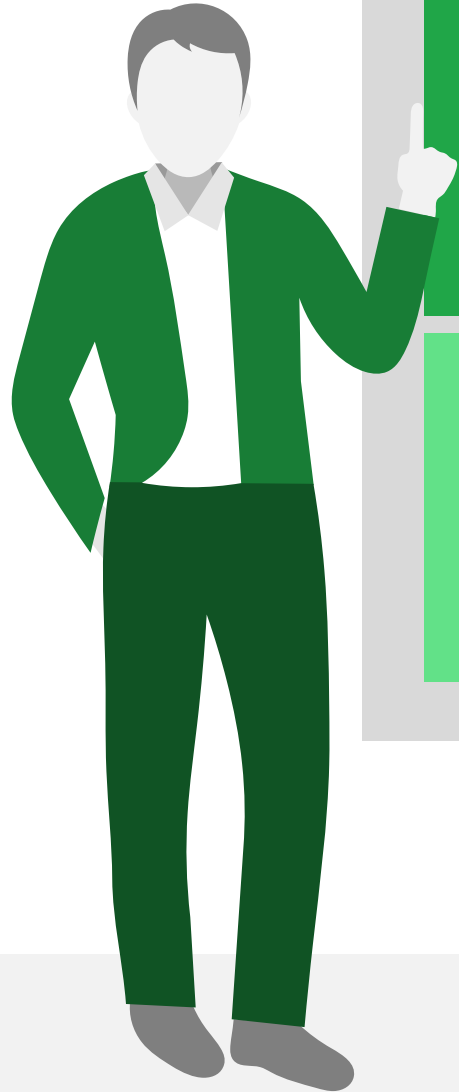
PARAMETERS

Define all parameters which will be key to take future energy efficiency related decisions

DECIDE

Based on the collected data decide which technology is worth replacing with a more recent and efficient one

LED LIGHTING MODERNIZATION (2019)



ENERGY PERFORMANCE CONTRACT

MAKES SENSE IF FACTORY WORKS 24/7

FULL FINANCING GIVEN

ENERGY SAVINGS > INSTALMENTS

CASH FLOW POSITIVE FROM DAY ONE



SAVINGS

62%

MWh SAVED

540

CONTRACT DURATION

5 YEARS

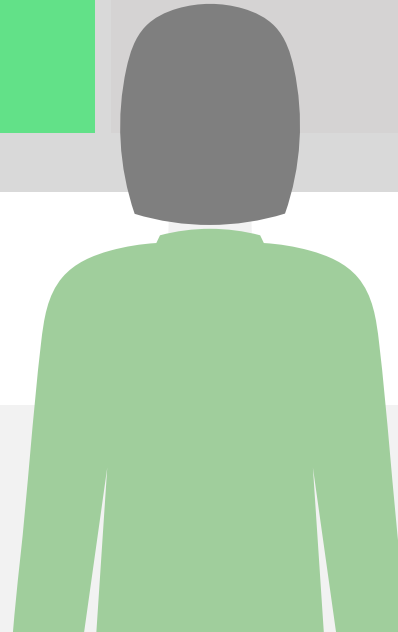
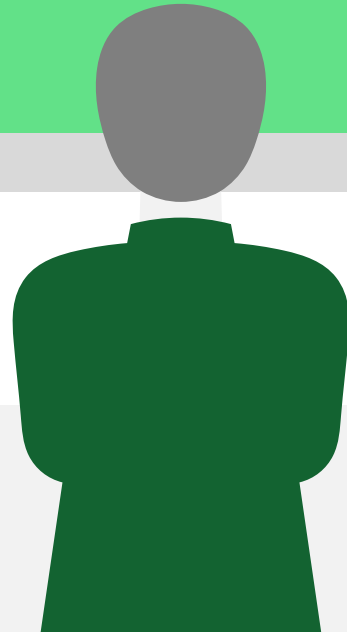
AUTOMATIC REGULATION SYSTEM

DIFFERENT TYPES OF SENSORS

LIGHT QUALITY

HUGE
IMPROVEMENT

\$100,000.00



GAS BOILER MODERNIZATION (2020)



ENERGY PERFORMANCE CONTRACT

FULL FINANCING GIVEN

ENERGY SAVINGS > INSTALMENTS

CASH FLOW POSITIVE FROM DAY ONE



SAVINGS

**52%
(13%)**

MWh SAVED

118

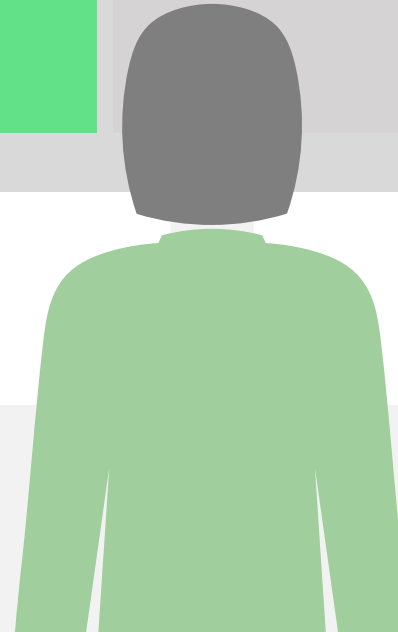
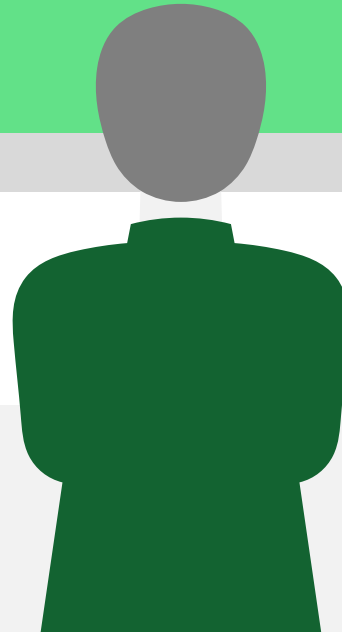
CONTRACT DURATION

3 YEARS

UNMANNED OPERATION

**AUTOMATIC
REGULATION SYSTEM**

**COMPLETE
INFRASTRUCTURE
RECONSTRUCTION**



DEMAND FLEXIBILITY as a SERVICE



PARTNERSHIP CONTRACT
OPERATIONAL LEASING CONTRACT
ENERGY SAVINGS > INSTALMENTS
CASH FLOW POSITIVE FROM DAY ONE

**REDUCING
DEVIATION
COSTS**

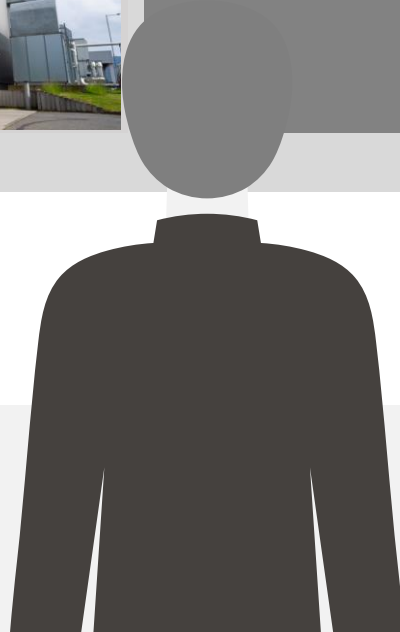
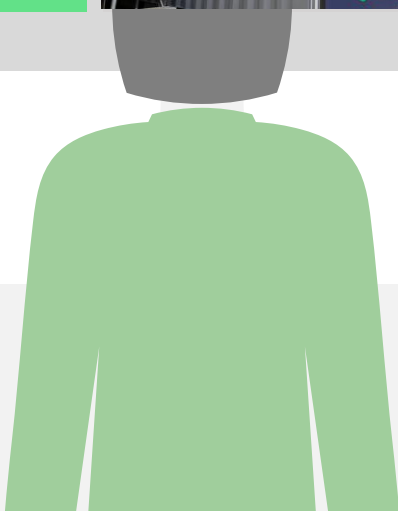
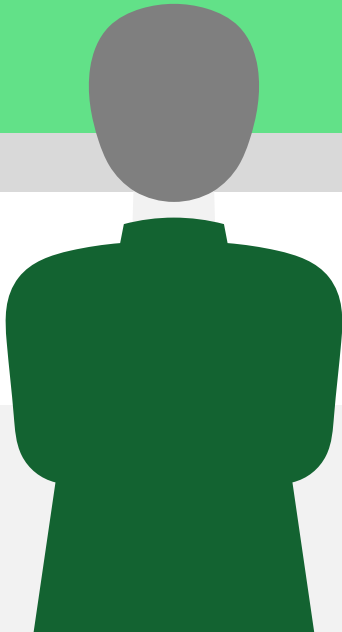
PV SAVINGS
**10K Eur
per
year**

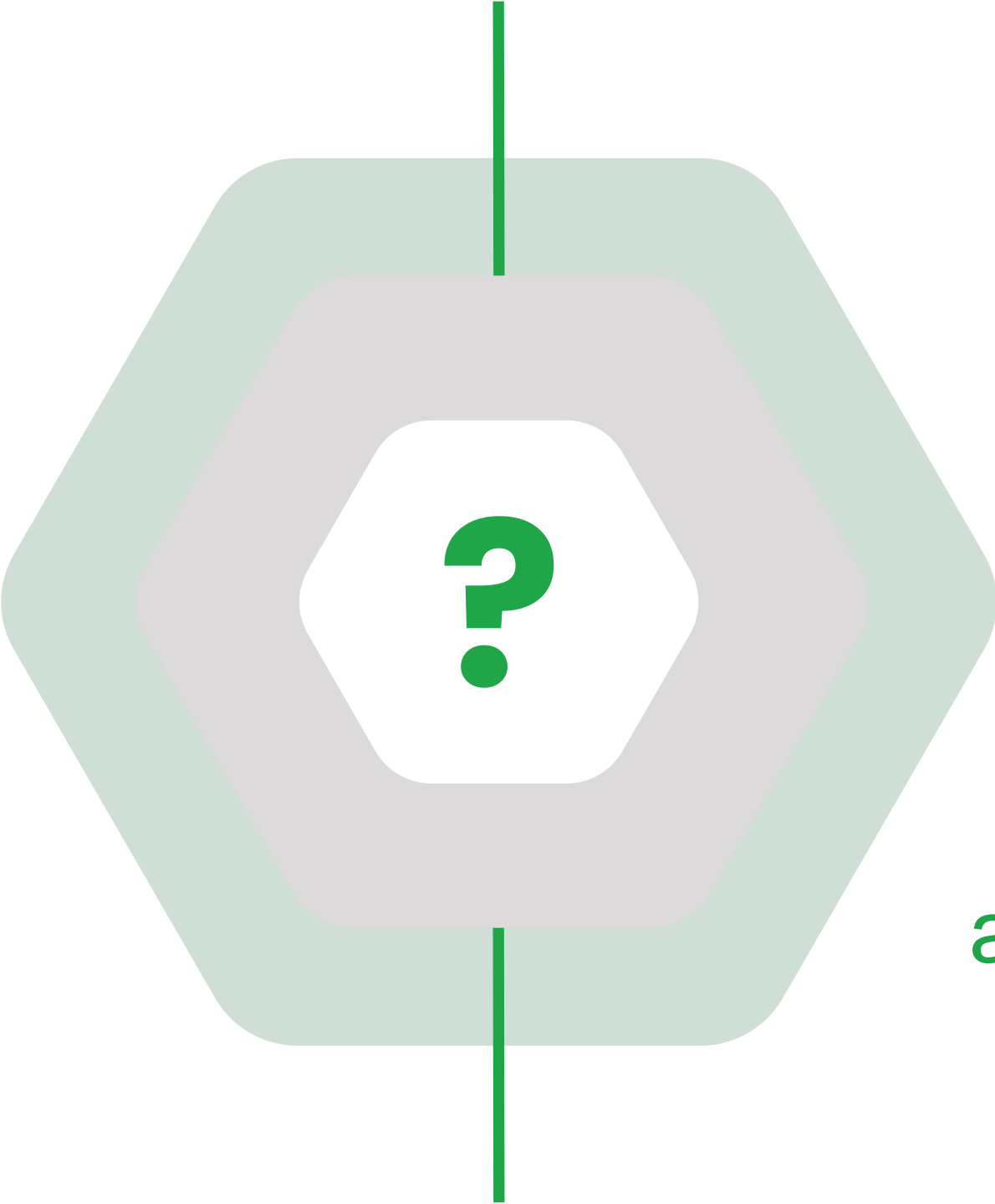
BATTERY SAVINGS
**20K Eur
per
year**

CONTRACT DURATION
10 and 5 YEARS



**IMPACTING ON
CONSUMPTION and
DIAGRAM**





ANY

QUESTIONS

?

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len zapni