

KALVIS

Experts in engineering and production of biomass heating equipment



Private company



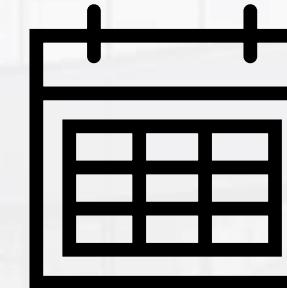
180 employees



16 000 m² production area



140 technological processes

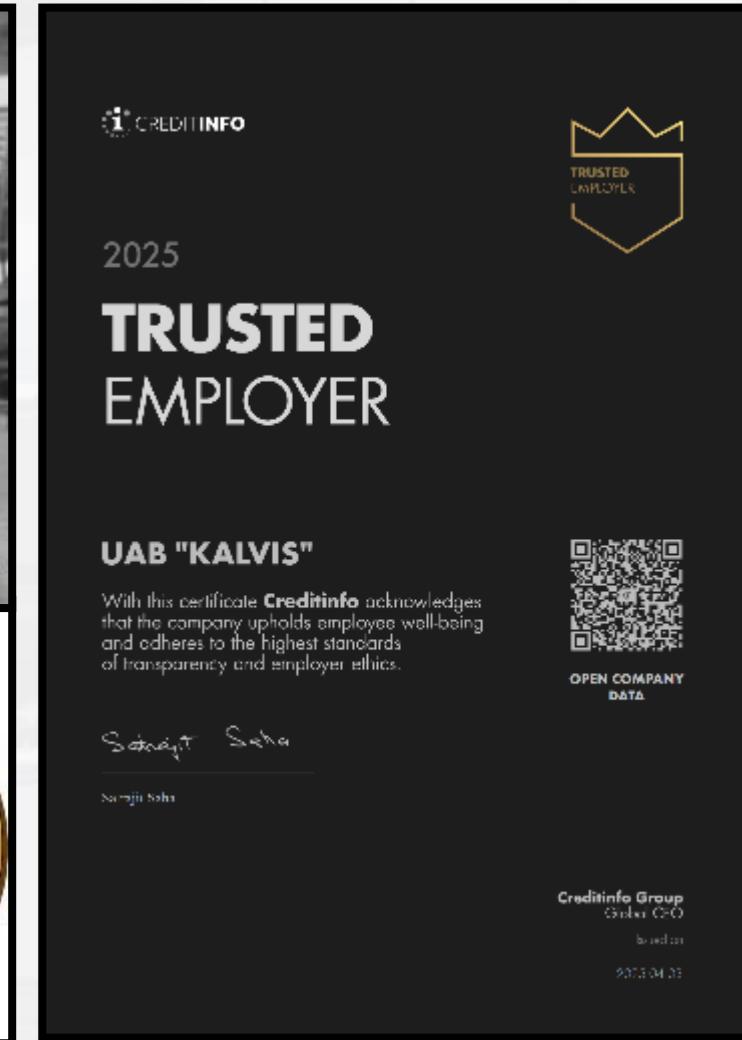


Since 1994



Annual turnover 10 mln. €

ACHIEVEMENTS



vision
values
key

CORE VALUES



BUSINESS SEGMENTS



Industrial Heating
Equipment



Domestic boilers



Subcontracting

KALVIS



ISO 9001



ISO 14001



ISO 45001



ISO 3834-2

CERTIFICATES

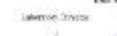
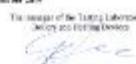
ENVIRONMENTAL RESPONSIBILITIES



<h1>MANAGEMENT SYSTEM CERTIFICATE</h1> <p>Customer No: 1000-0000000000000000</p> <p>Initial certification date: 17.07.2017</p> <p>DNV-GL 2018-07-17 to 2021-07-16</p> <p>This is to certify that the management system of UAB Kalvis Trakų 10, 4-11-91012, Kaunas, Lithuania and the sites as mentioned in the appendix accompanying this certificate</p> <p>ISO 45001:2018</p> <p>This certificate is valid for the following scope: DESIGN, MANUFACTURE, TESTING, SALE, INSTALLATION, START-UP AND DEBUGGING WORK OF HEATING EQUIPMENT AND ARTICLES OF METAL CONSTRUCTION, THERM, MFTAI CONSTRUCTIONS, OTHER NON-STANDARD PRODUCTS OF METAL, INSTALLATION, START-UP AND DEBUGGING WORK, OPERATION, MAINTENANCE, ATTACHMENT AND REMOVAL OF HEATING EQUIPMENT, ASSEMBLY, REPAIR, REPAIR, PREPARATION, MATERIALS FOR HEATING EQUIPMENT, INSTALLATION, PROGRAMMING AND ASSEMBLY, HEAT PRODUCTION (MOLLE ROOMS), INSTALLATION OF HEATING, VENTILATION AND AIR CONDITIONING SYSTEMS OF BUILDINGS.</p>	
<p>ISO 45001:2018</p> <p>UAB Kalvis Trakų 10, 4-11-91012, Kaunas, Lithuania</p> <p></p>	<p>DNV-GL 2018-07-17 to 2021-07-16</p> <p>ISO 45001:2018 Initial certification date: 17.07.2017</p> <p>DNV-GL 2018-07-17 to 2021-07-16</p> <p></p> <p>FINAS Lithuanian Association of Quality Management</p> <p></p> <p>Minoru Nakata Manager Representative</p>

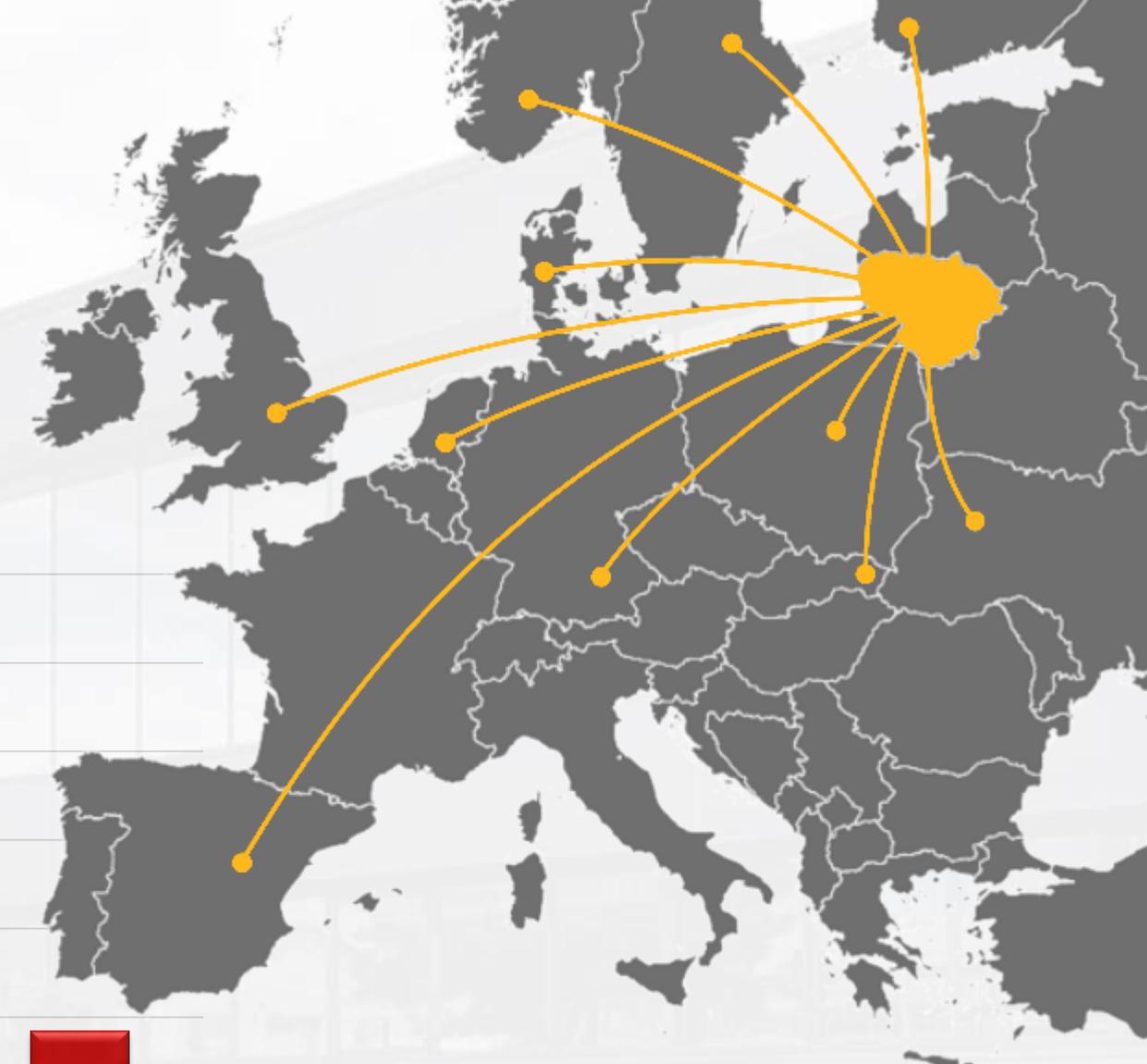
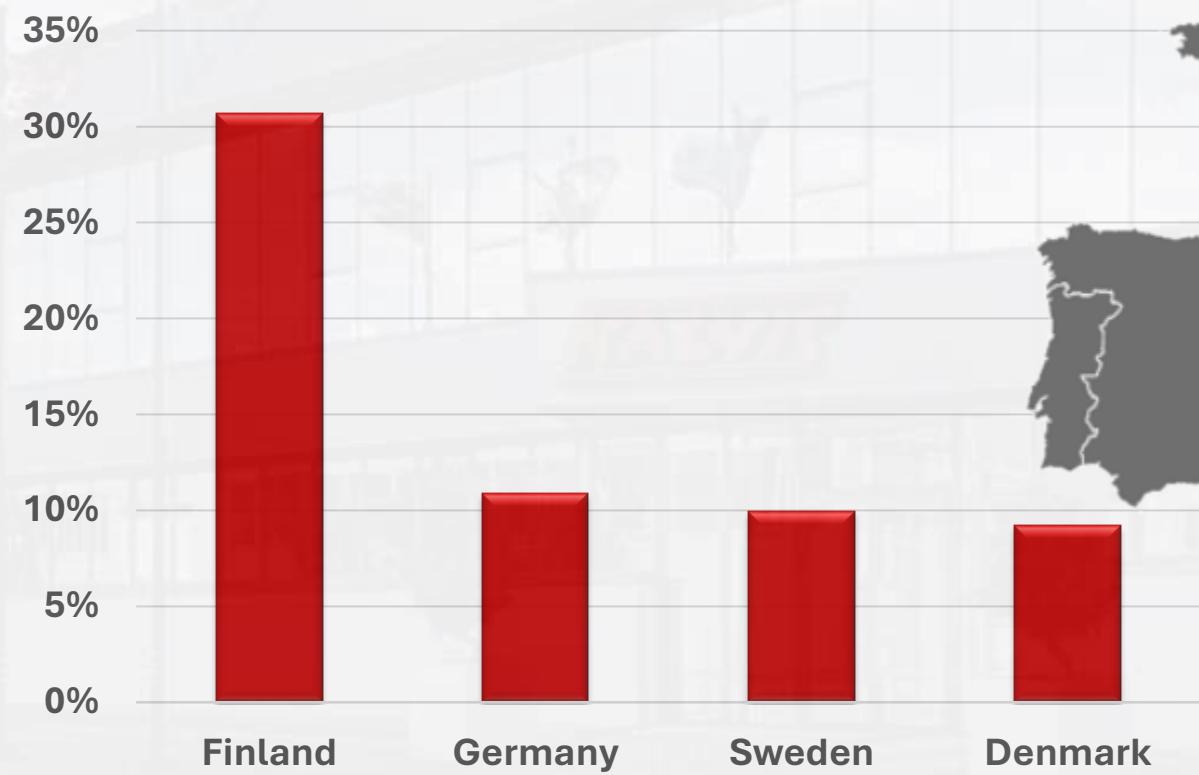
ISO 45000

EcoDesign

 <p>INSTITUTE OF POWER ENGINEERING Research Inst. for Nuclear Energy, LMT</p> <p>1930 Vilnius, K. Mėlyno 1 e-mail: inpe@inpe.lt fax: +370 62 735 2000, 2000 2827 2011</p> <p>TECHNICAL LABORATORY OF DESIGN AND MANUFACTURING DEVICES Accredited Laboratory no. 003/17</p> <p>1930 Vilnius, K. Mėlyno 1 e-mail: tladmd@inpe.lt fax: +370 62 735 2011</p>	
 <h1>AN ENVIRONMENT-FRIENDLY DEVICE</h1> <h2>CERTIFICATE</h2> <p>No. OS/329/CUE/16</p> <p>This is to confirm that: water boilers</p> <p>K-2-16 DG; K-2-20 DG and K-2-30 DG</p> <p>are in accordance with the following standard: EN 16000-3:2010, EN 16000-3:2010 and its technical specification EN 16000-3PN/EN 16000-3PN/1 PN-EN-16000-3-1:2011</p> <p>manufactured by:</p> <p>LAIB KALVIN, Pramnės g. 15, LT-78135, Šiauliai, Lithuania</p> <p>and the equipment is of class A for ECO-EN 16000-3EN/16000-3PN/1 standard.</p> <p>This certificate has been issued on the basis of laboratory test performed by Technical Laboratory of Design and Manufacturing Devices in Lithuania (—) —— for the following scope: Water Boilers and their components. The laboratory is accredited by the State Accreditation Committee of Lithuania for the scope of EN 16000-3:2010 and its technical specification (EN 16000-3PN/EN 16000-3PN/1) for the following parameters (see the list of parameters with which the test was performed).</p> <p>The conditions for valid operation of this certificate relate to the manufacture of the mentioned devices in compliance to the EN 16000-3:2010, EN 16000-3PN/1:2011 and the laboratory which issued the certificate.</p> <p style="text-align: center;">Certificate validity period: From September 2016 to September 2018</p> <p style="text-align: center;">Lithuanian Devices</p> <p style="text-align: center;"></p> <p style="text-align: center;">Signature</p> <p style="text-align: center;">Lithuanian Devices</p> <p style="text-align: right;">The manager of the Testing Laboratory of Design and Manufacturing Devices</p> <p style="text-align: right;"></p> <p style="text-align: right;">Signature</p>	

5 class

EXPORT SHARE 80%



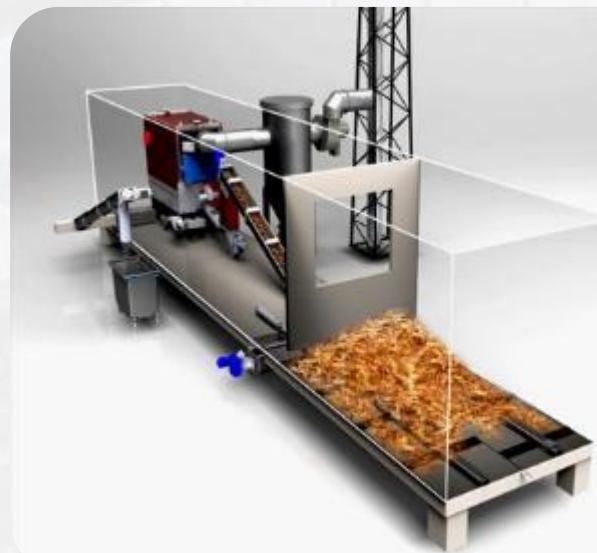
KALVIS

KALVIS BRAND DOMESTIC HEATING EQUIPMENT



KALVIS

KALVIS BRAND INDUSTRIAL HEATING EQUIPMENT





TYPES OF AUTOMATIC BOILER HOUSES



- Without permanent operating / standby personnel
- Autonomous
- Fully automatic



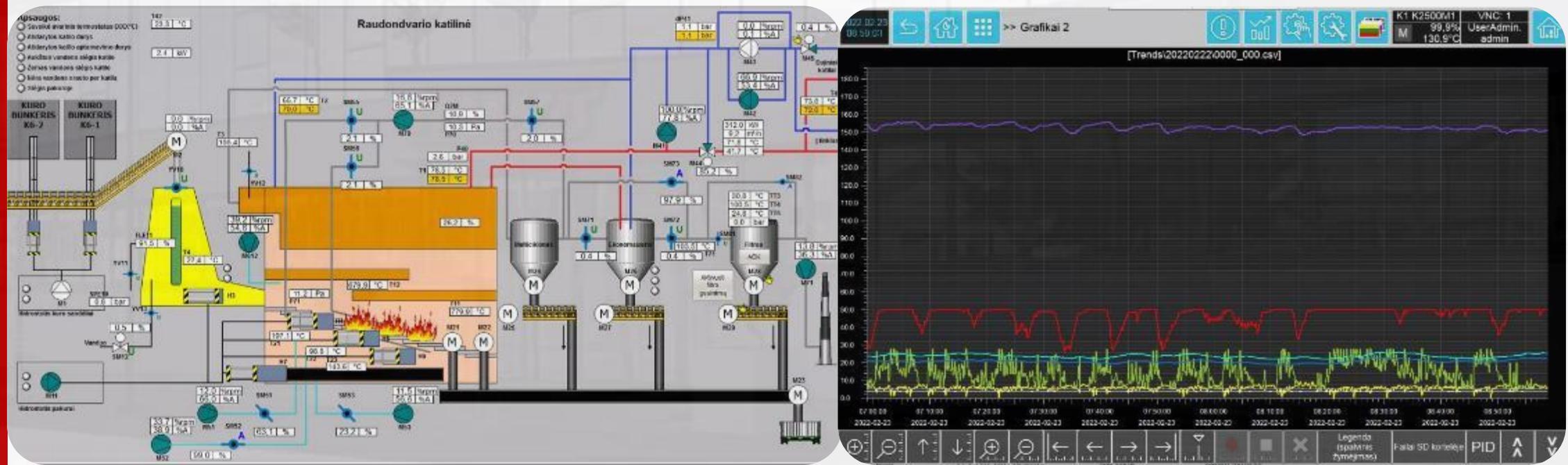
ADVANTAGES OF KALVIS AUTOMATIC BOILER HOUSES

- Low maintenance and repair costs
- Automatic ash removal system
- Large ash container - does not require frequent cleaning
- Automatic ignition / extinguishing
- Design ensures easy access to maintainable parts
- Design ensures maintenance work can be carried out in compliance with hygiene requirements
- Modulating control
- Reduced personnel costs



FULLY AUTOMATED PROCESSES

- ☐ Boiler combustion operation (fuel feeding, air control, draft maintenance)
- ☐ Ash removal control (from the boiler and other equipment)
- ☐ Temperature maintenance (supply and return water temperatures)
- ☐ Heat exchanger cleaning management
- ☐ O₂ concentration adjustment in flue gases
- ☐ Fault and emergency event detection and system shutdown





REMOTE BOILER HOUSE CONTROL

- ❑ Via Internet connection (wired or mobile) – monitor and adjust parameters from any location
- ❑ GSM text message notifications about faults to maintenance personnel
- ❑ Secure access with different user rights (operator, administrator, service)
- ❑ Service access for real-time fault diagnostics and support



INDUSTRIAL HEATING BOILERS FOR DIFFERENT FUEL TYPES



Pellets



Wood Chips



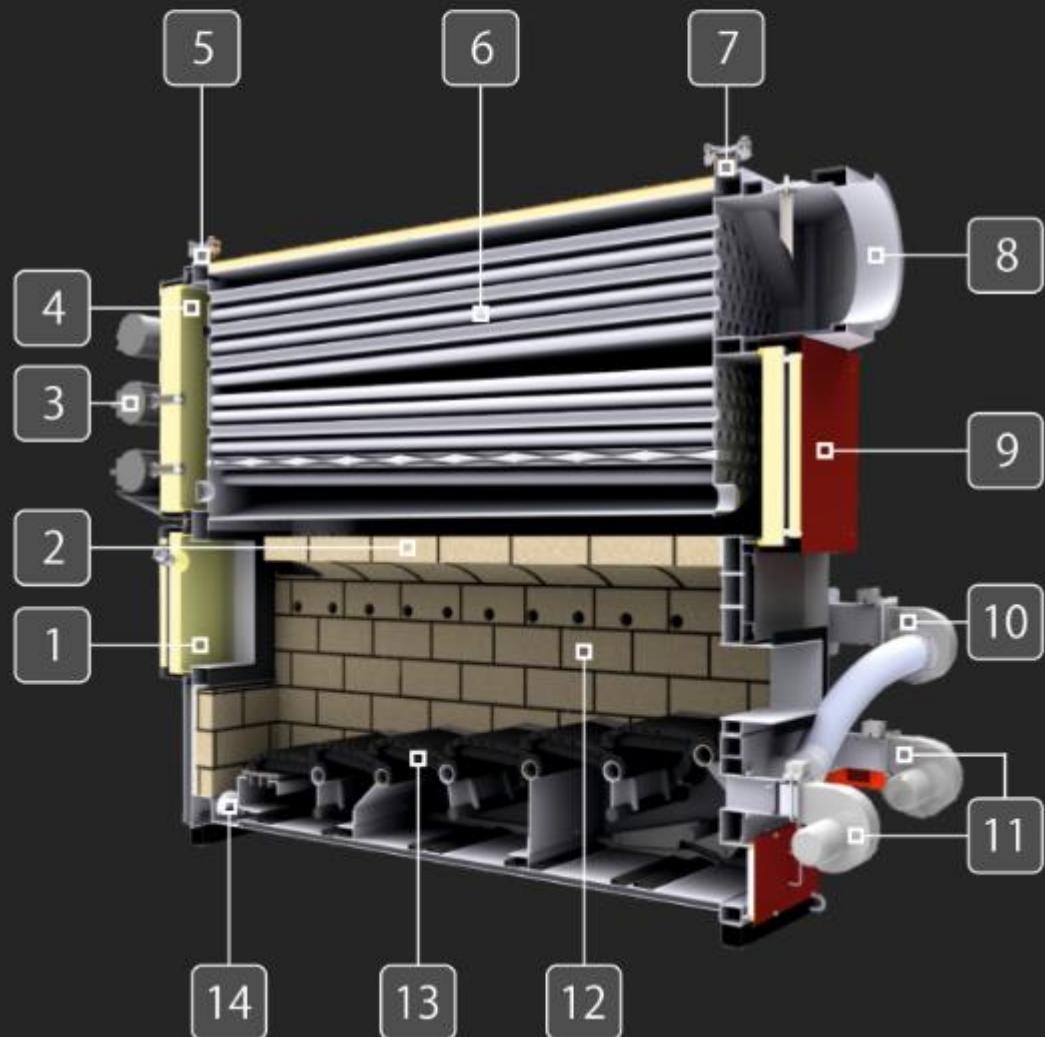
Logs



Waste Wood

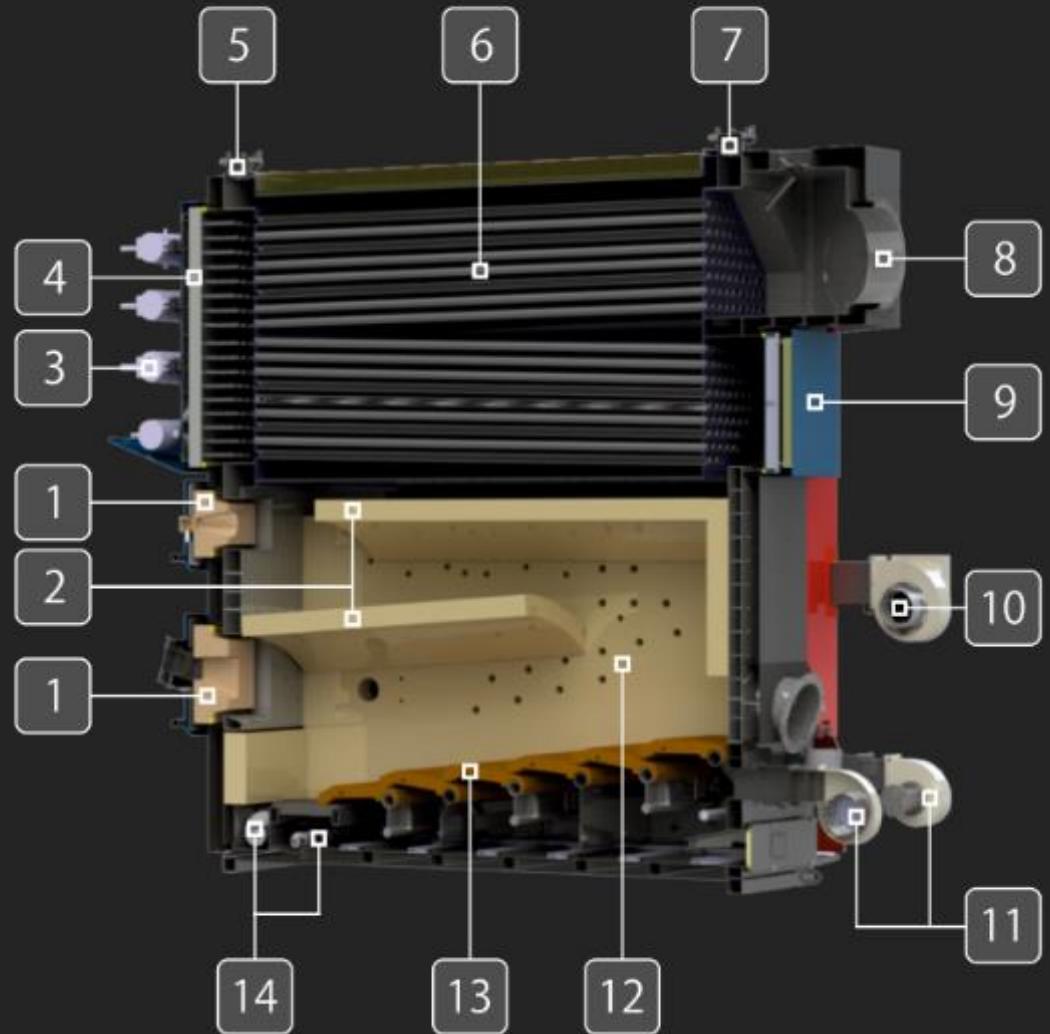


Peat



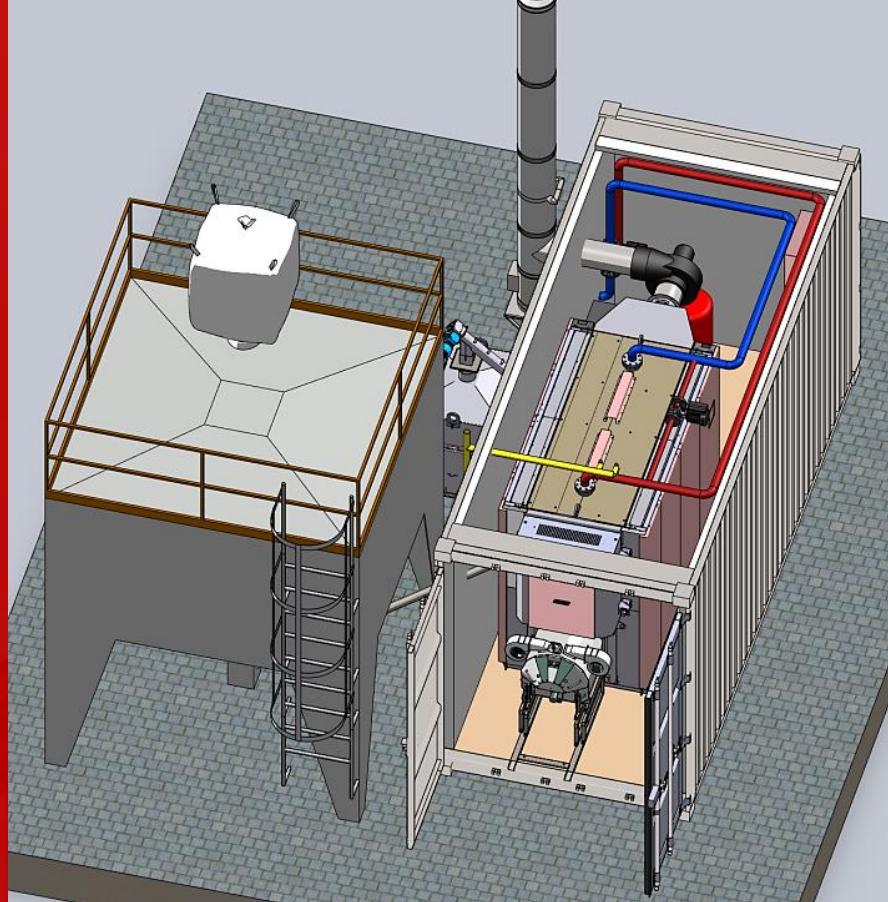
Industrial heating boilers M-1 type

For different types of fuel
(wood chips MC-48%, pellets,
sawdust, waste wood)
(up to 5MW)



Industrial heating boilers M-2 type

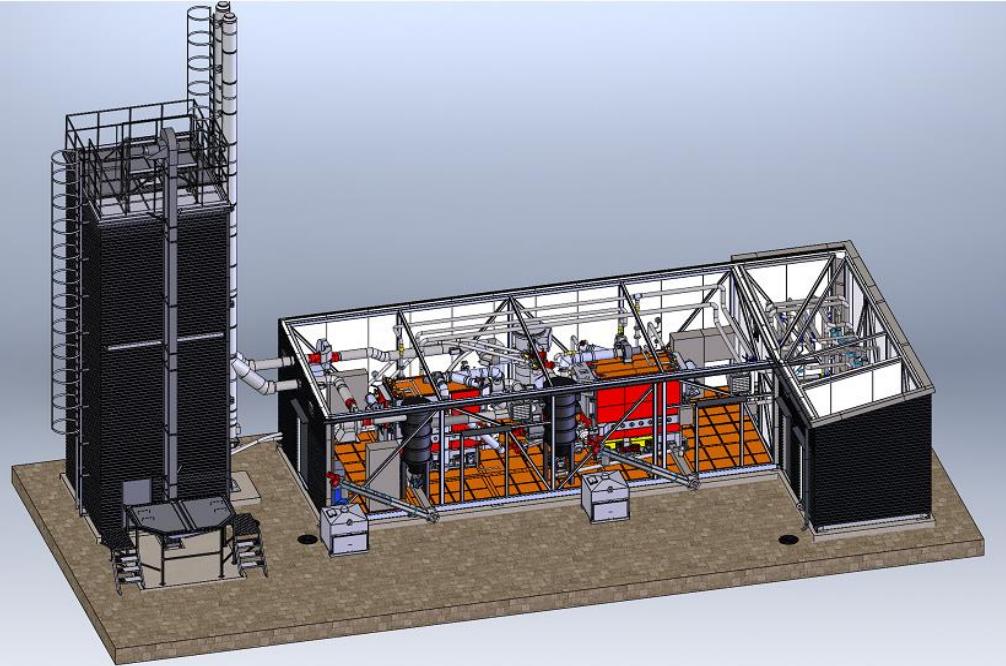
For different types of fuel
(wood chips MC-55%, sawdust,
waste wood)
(up to 3MW)



Pellet boilers with burners (MG type)

Industrial boilers for schools,
companies, greenhouses, or other
bigger size buildings (100-500 kW)





Turnkey solutions - containerized boiler houses

320kW + 500kW boiler house

Fuel: industrial wood pellets

Location: Lithuania



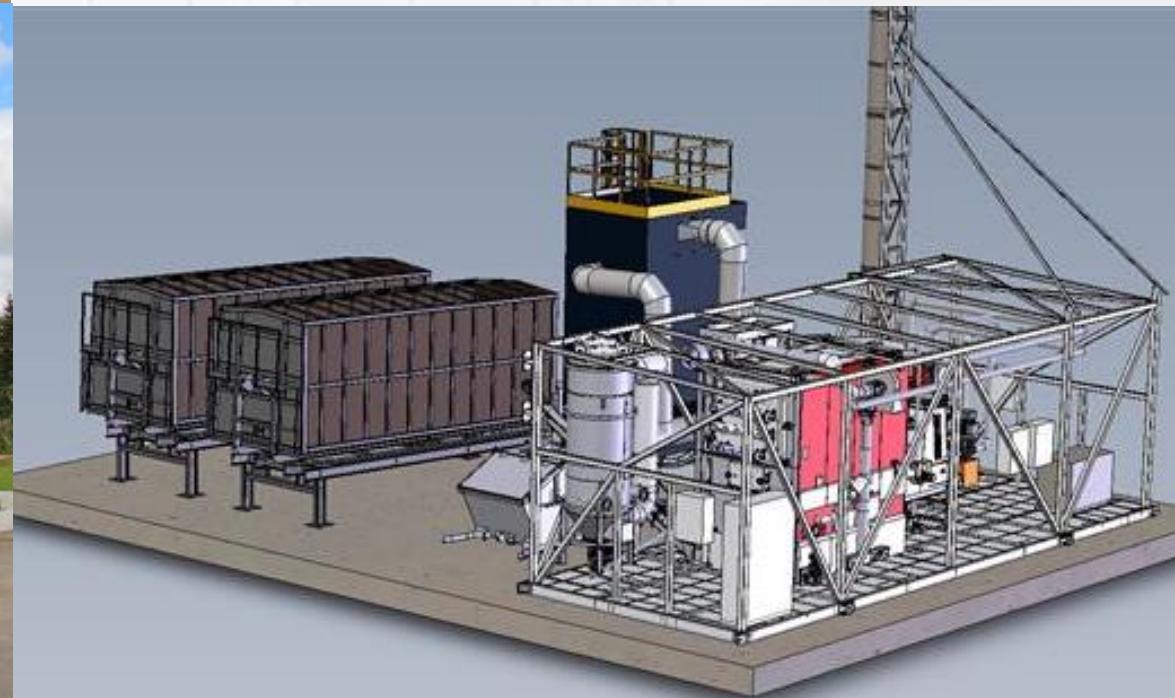
Turnkey solutions - containerized boiler houses

1500kW biomass plant

Fuel: wood chips

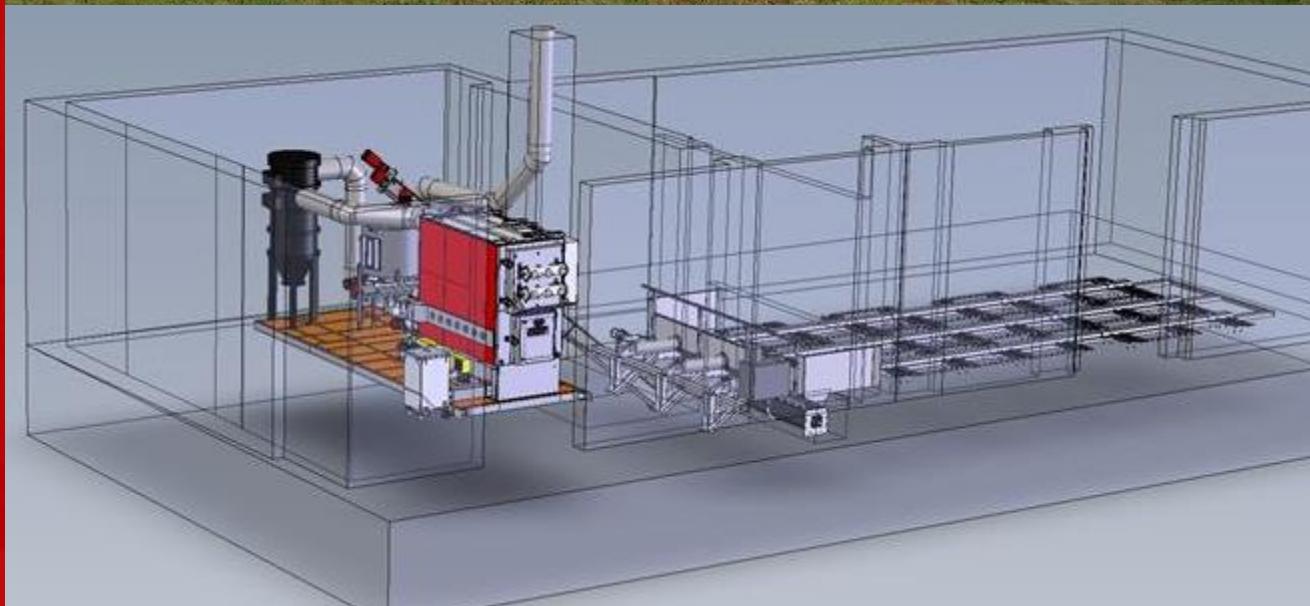
Location: Lithuania (Raudondvaris, KE)

Established together with a partner
AXIS Technologies

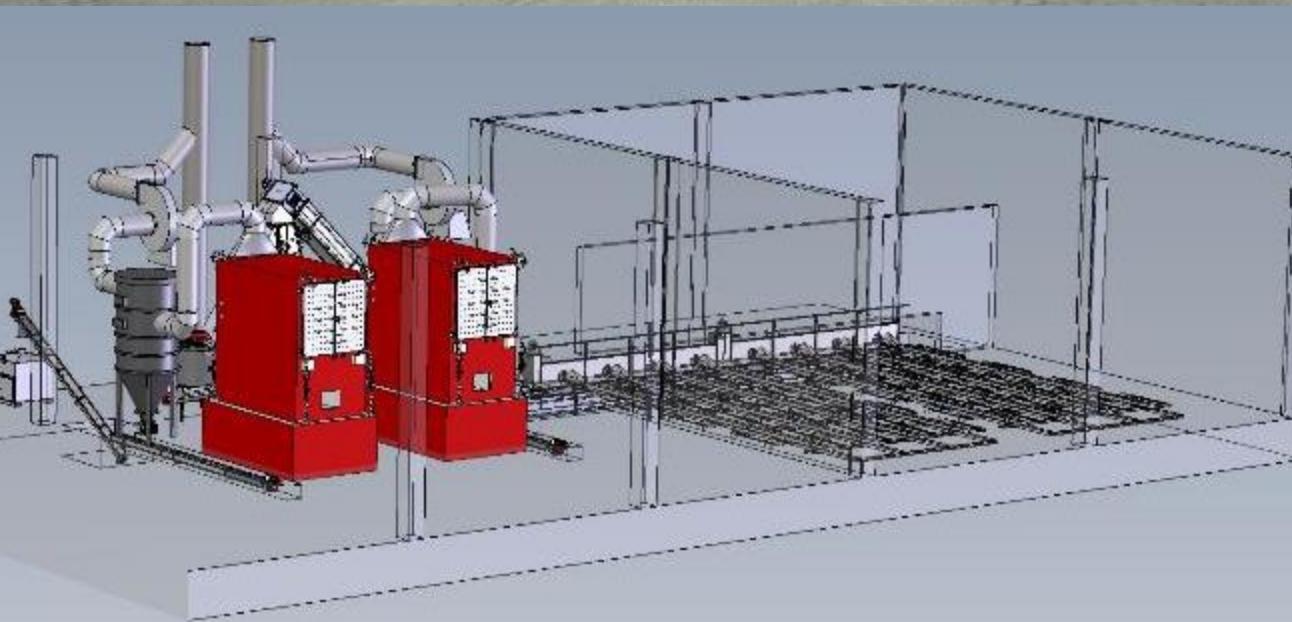


500kw boiler house heats castle in France

500kW biomass plant
Fuel: wood chips



Siemens



2 x 950kW boiler
house

Fuel: wood chips
Location: Poland



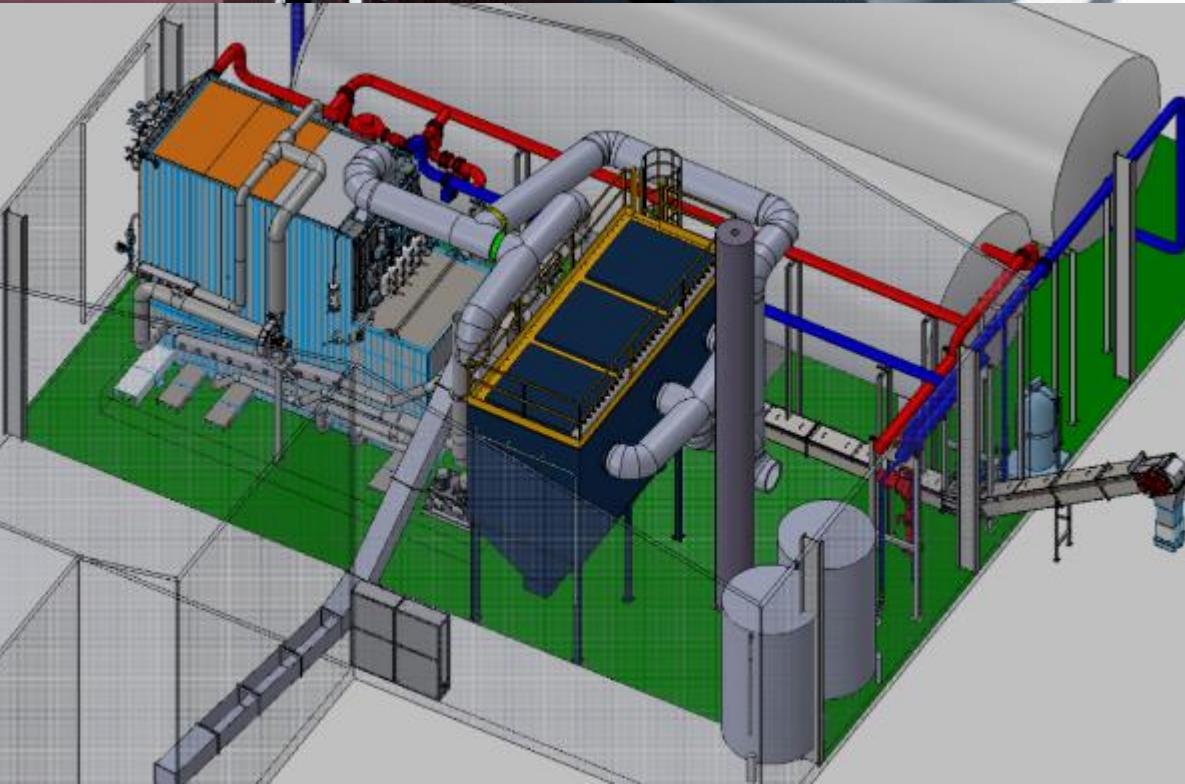


500kW boiler house (in sea container)

Fuel: waste from the rose farm
Location: Kenya

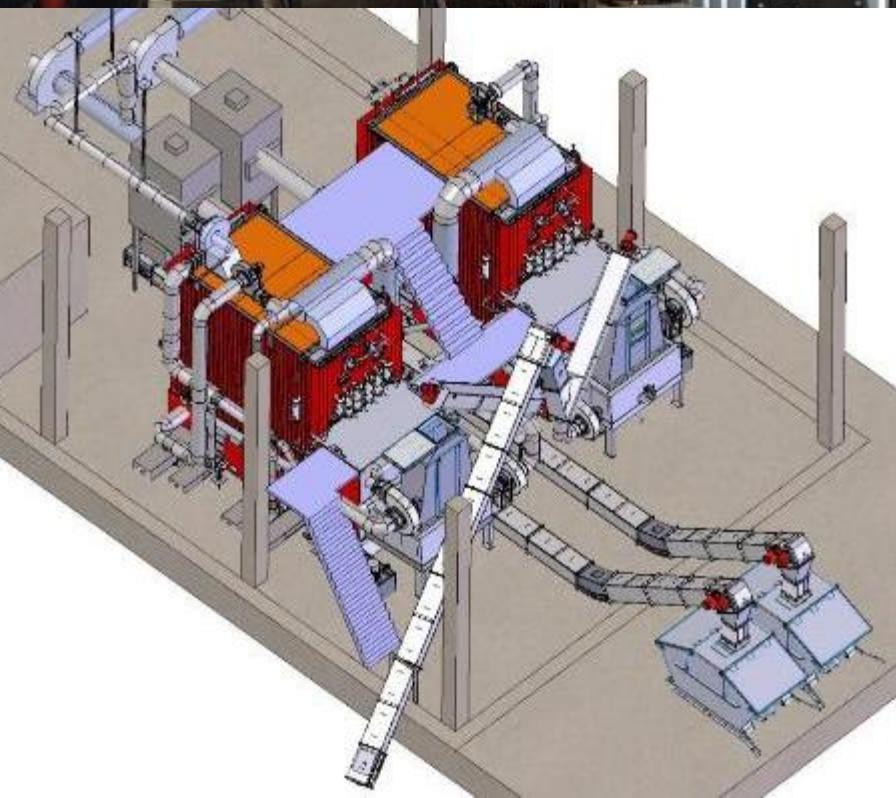


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4MW plant

4MW plant on woodchips in the
UK for greenhouse industry



2 x 3MW district
heating plant

Fuel: wood chips
Location: Latvia (Maduona)

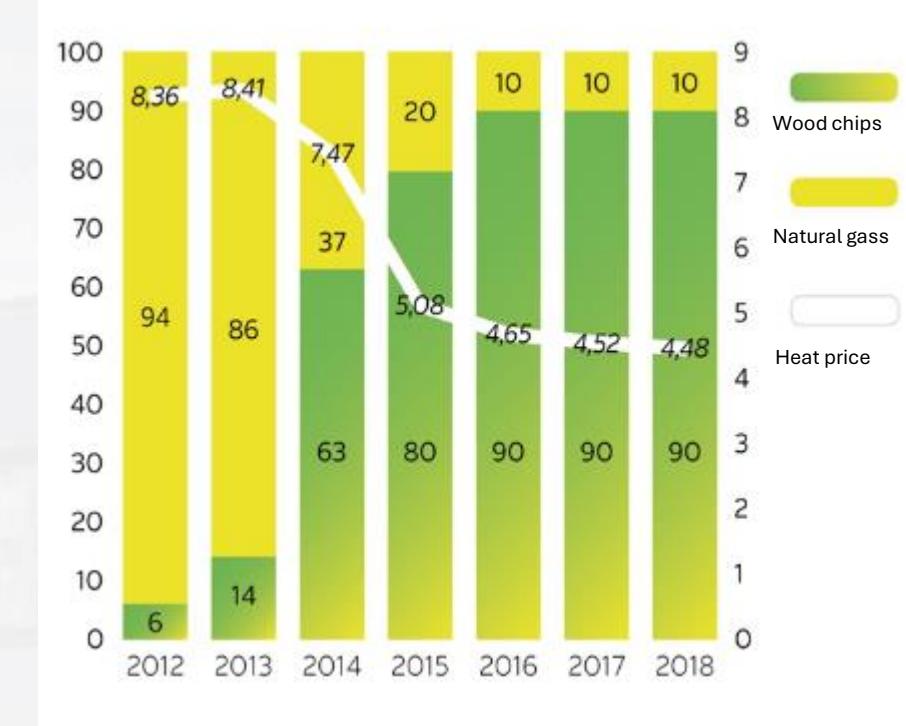
Bioenergy technology development in Lithuania

Reduced heat prices in Lithuania

THE PRICE OF HEAT IN LITHUANIA REDUCED
(OVER 5 YEARS)

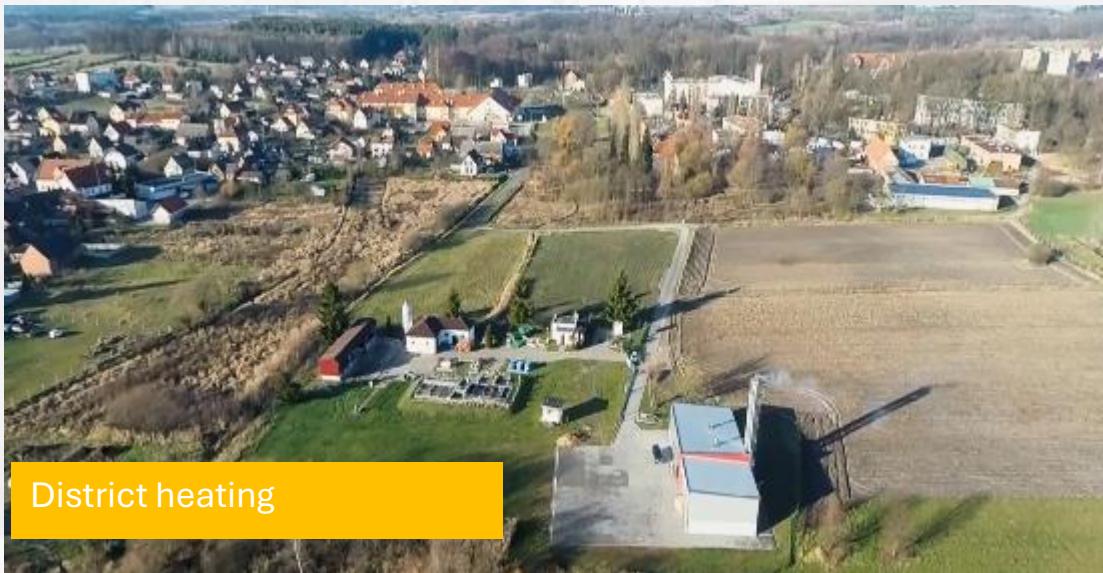
-35 %

KAUNAS CITY SUCCESS



Differences depend on used Biomass share percentage 26

DIFFERENT EXPERIENCE WITH DIFFERENT TYPES OF IMPLEMENTATION



TESTING OF NEW BOILERS EQUIPMENT PERFORMED IN KALVIS LABORATORY

KALVIS





Thank You!

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