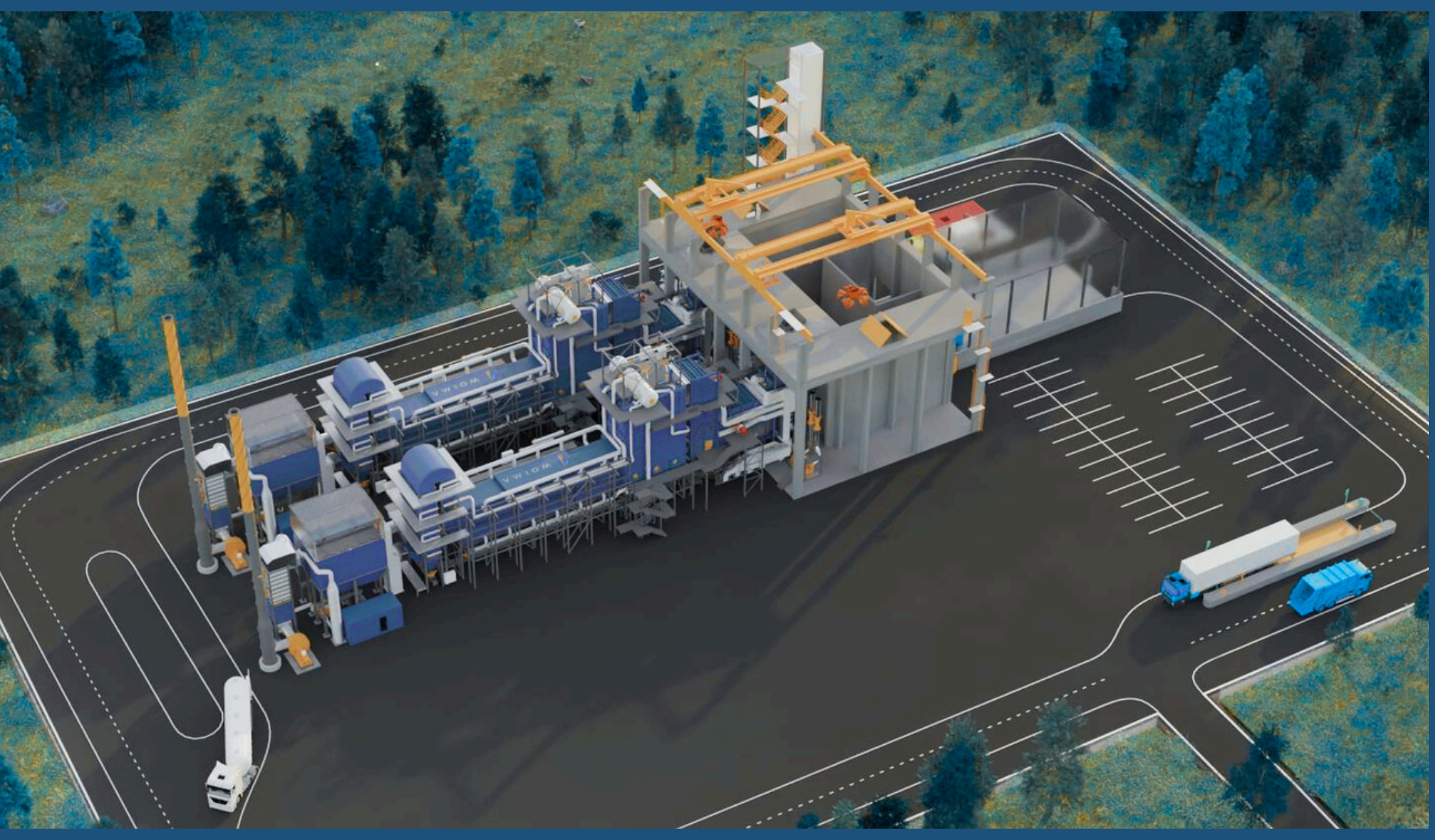
KONA INC

MODULAR INSTALLATIONS

Turning Waste Into Energy



PRESENTATION 2025

PROVEN AND RELIABLE WASTE-TO-ENERGY TECHNOLOGY

- “Conventional” waste-to-energy power plant with conservative steam parameters (400 °C / 40 bar(g))
- Grate combustion system (reciprocating step grate)
- Empty passes ensuring 850 °C residence time for 2 seconds
- Horizontal superheaters
- Vertical economizers
- Flue gas cleaning using dry sorbent reactor, baghouse filters, and Selective Catalytic Reduction (SCR)
- Stack equipped with induced draft fan and Continuous Emissions Monitoring System (CEMS)

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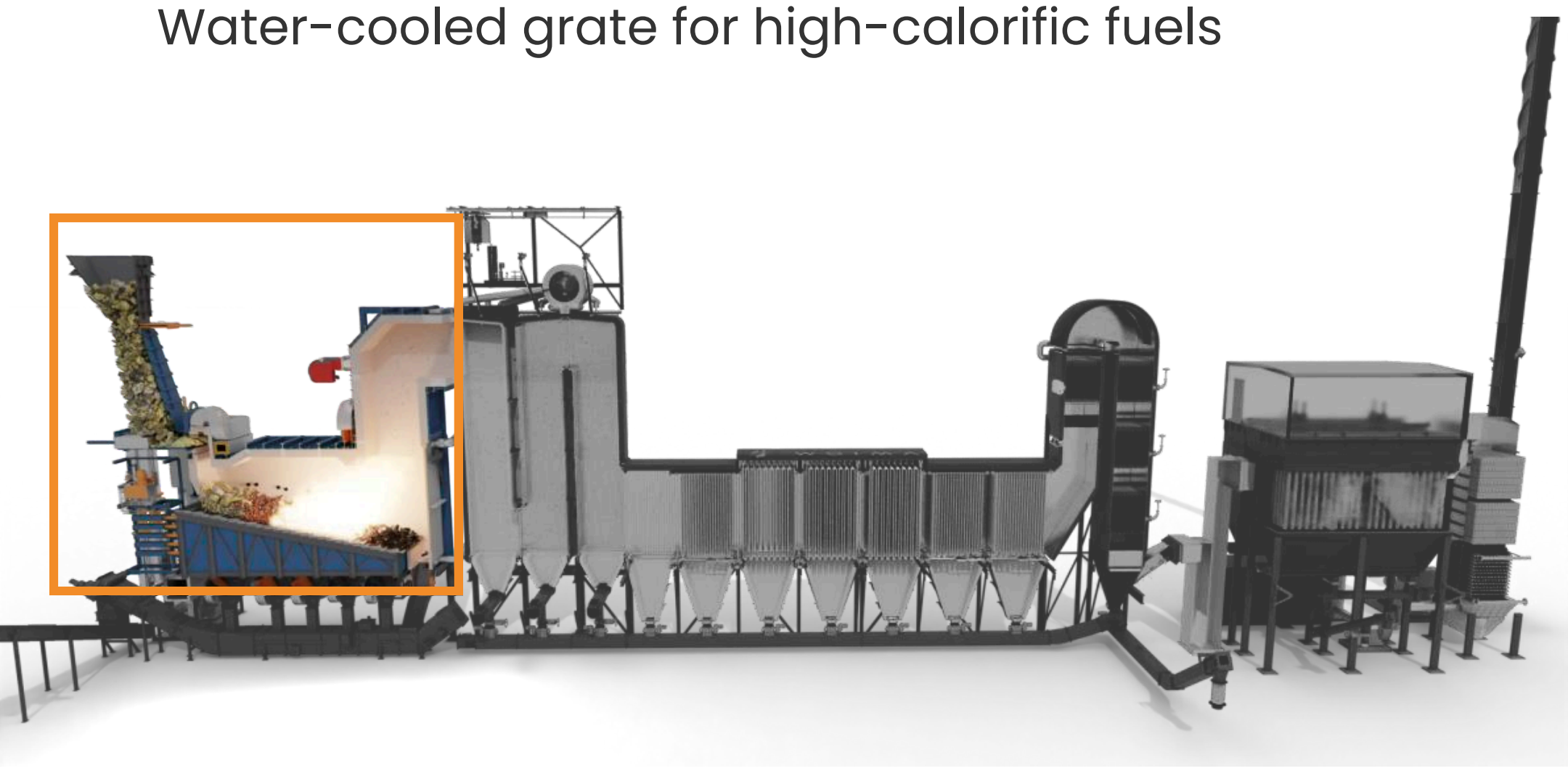
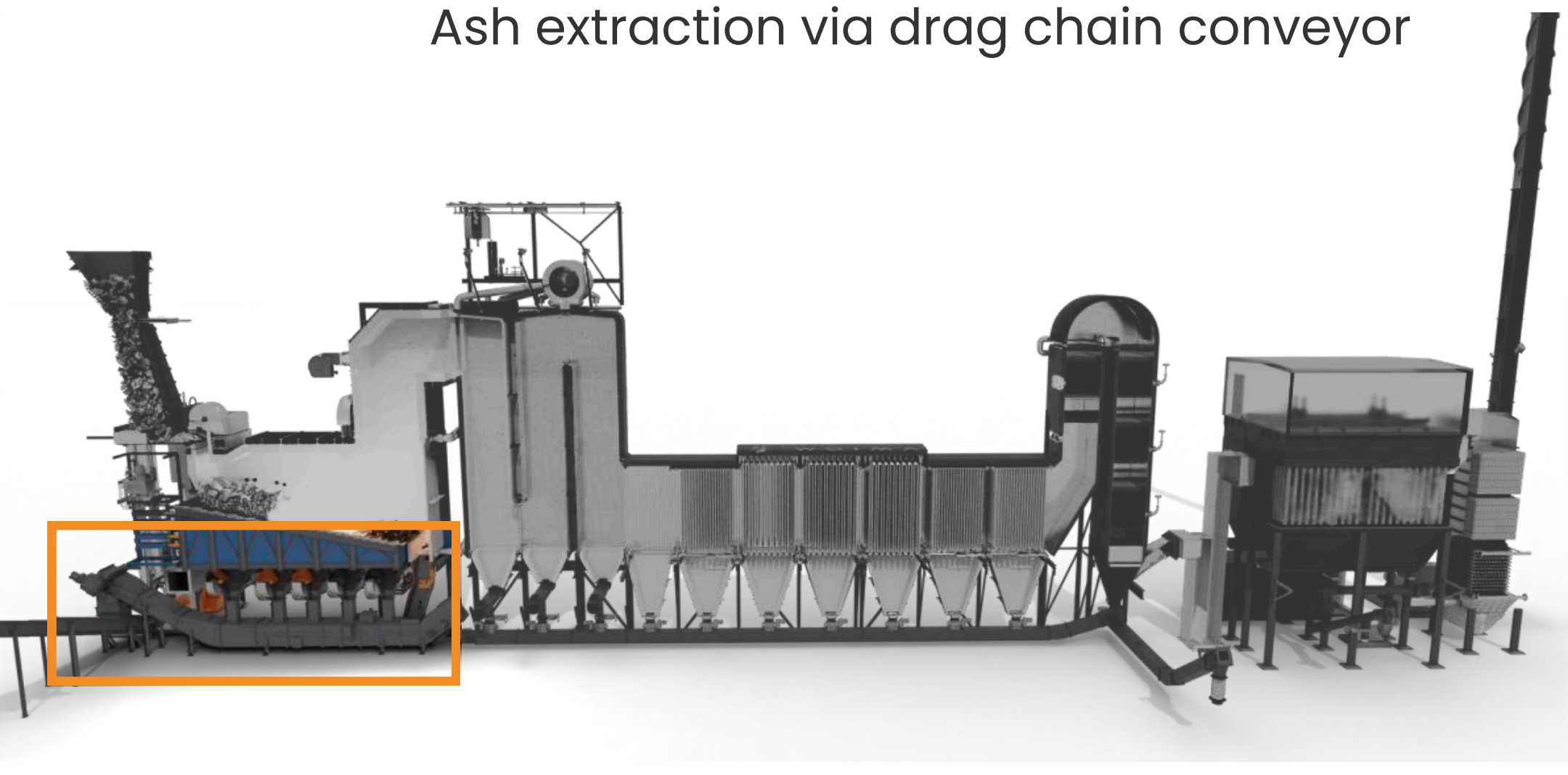
GRATE SYSTEM

Air-cooled grate for low-calorific fuels
Water-cooled grate for high-calorific fuels



BOTTOM ASH HANDLING

Ash cooling in a water quench tank
Ash extraction via drag chain conveyor



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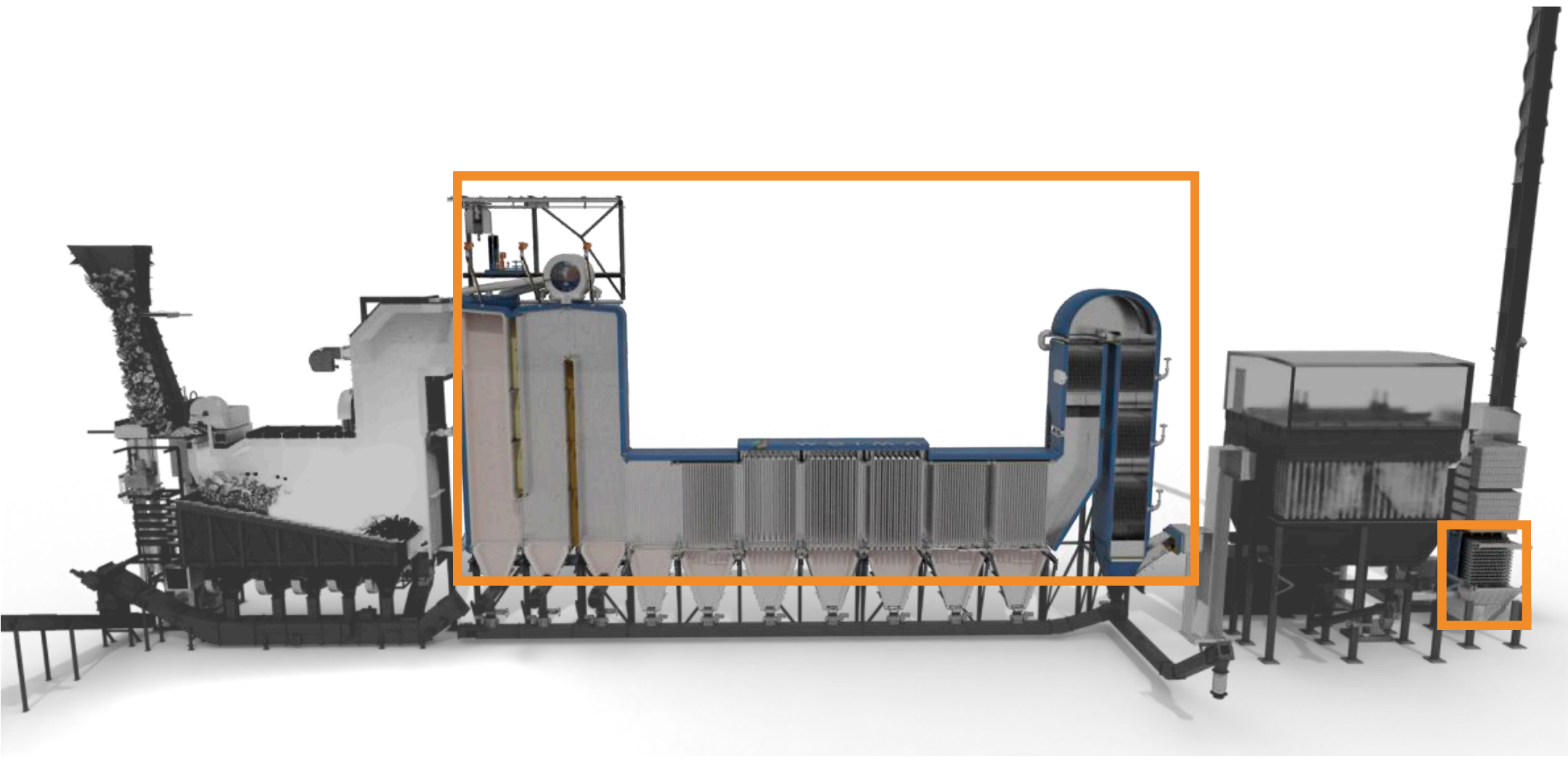
BOILER SYSTEM



Includes empty passes, boiler sections, superheaters, and economizers

Universal “one-design-fits-all” solution — suitable for fuels with calorific values ranging from 7 to 22 MJ/kg

Refractory lining and Inconel cladding added as needed based on fuel characteristics

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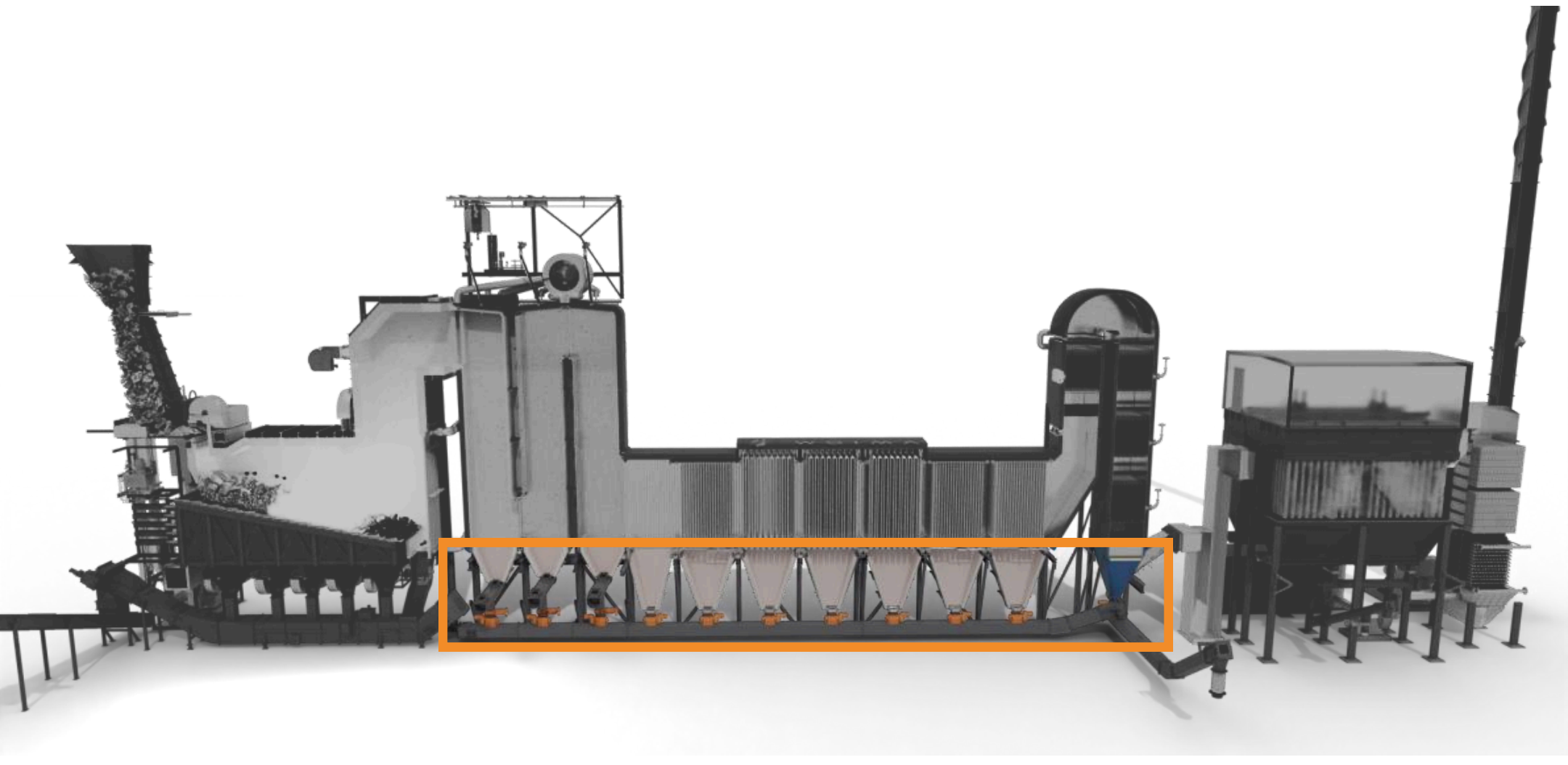
BOILER ASH HANDLING

Boiler cleaning using water spray, pneumatic rapping, and acoustic cleaning systems

Collection of boiler ash in sealed, thermally insulated hoppers

Ash extraction via belt conveyor (either combined with or separate from the APCr — Air Pollution Control Residue — system)



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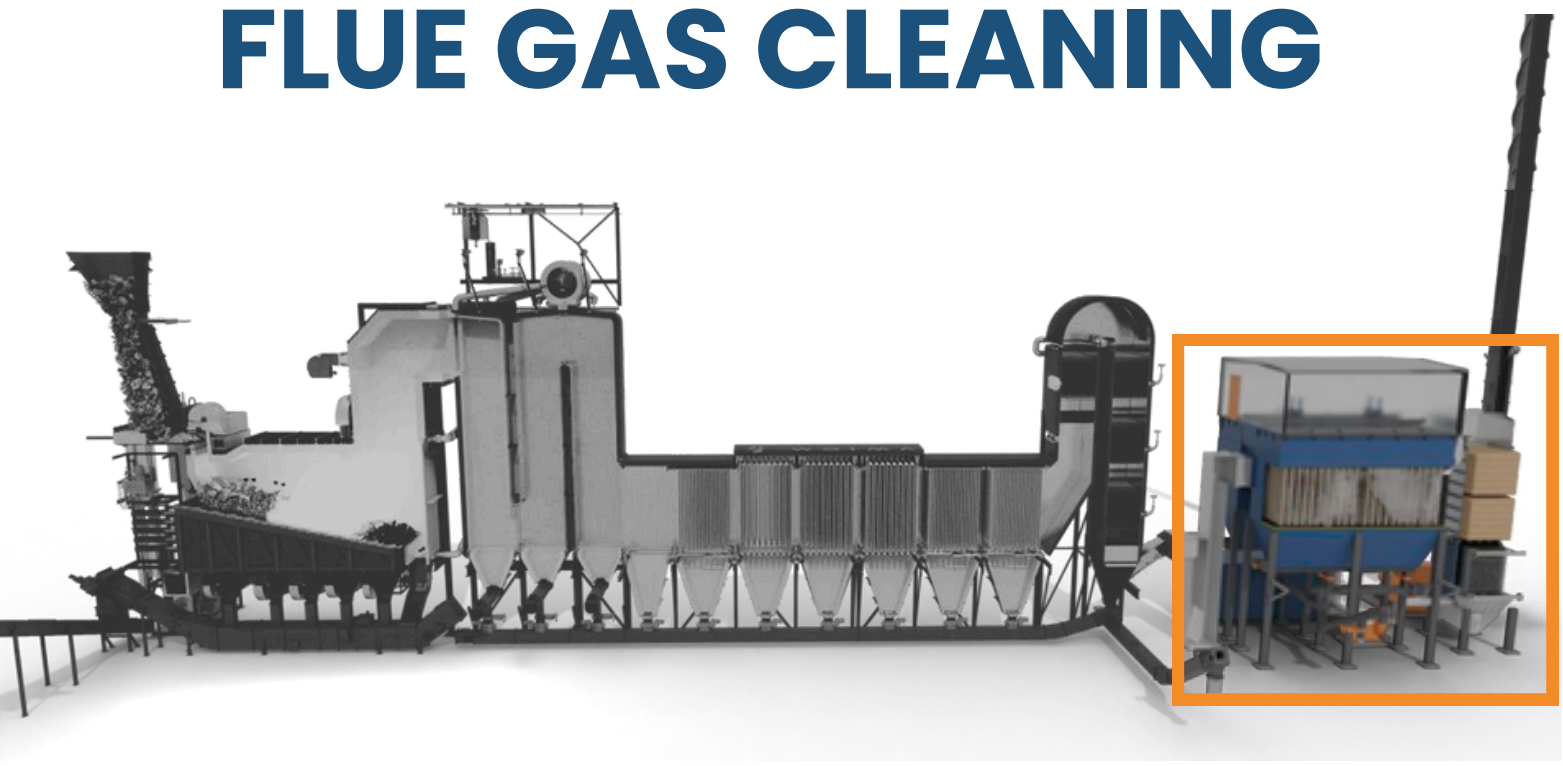
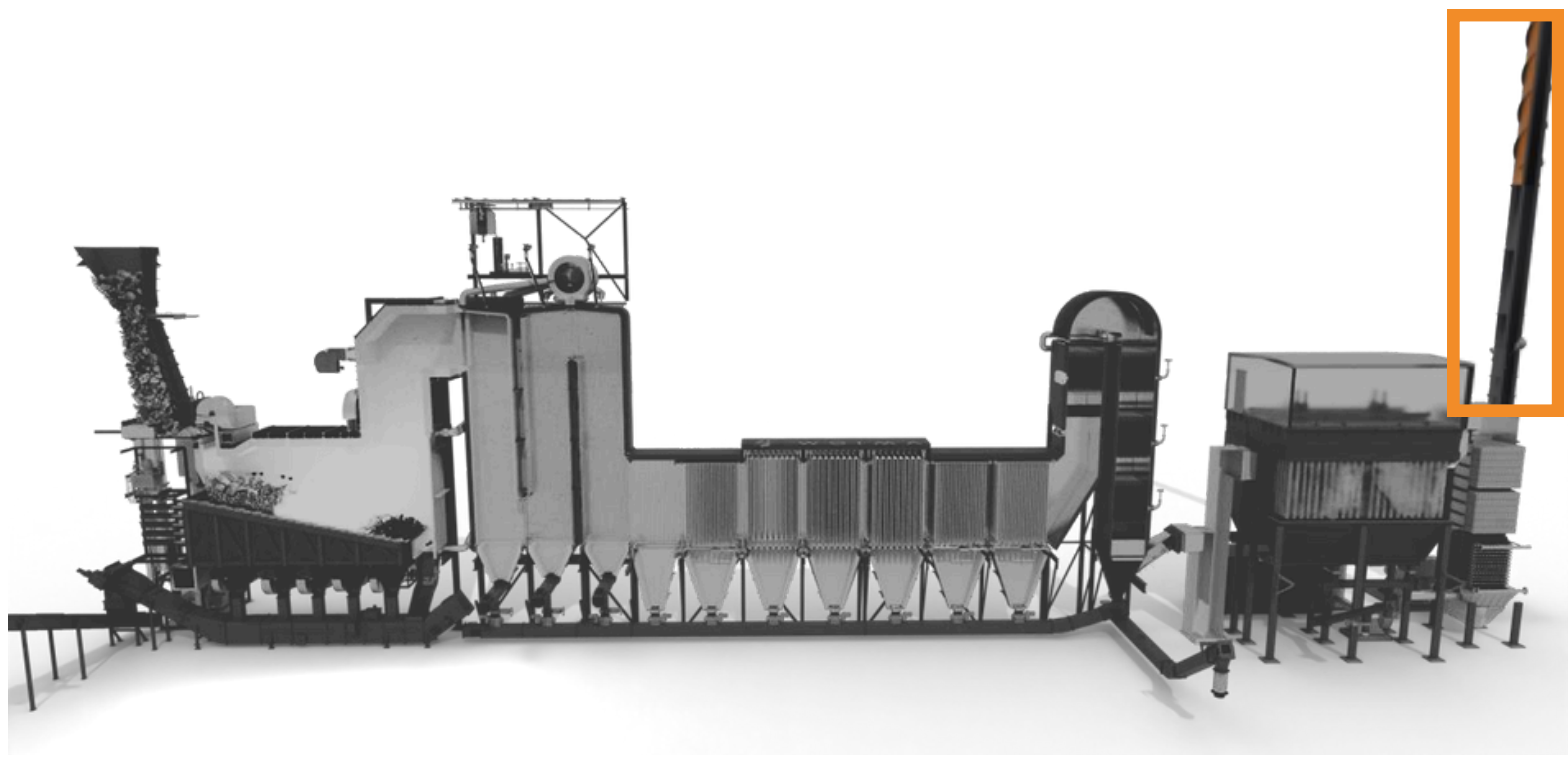
FLUE GAS CLEANING



- Treatment with sodium bicarbonate and activated carbon to neutralize acidic gases and adsorb heavy metals
- Particulate capture using high-efficiency baghouse filters
- NOx emissions reduction through Selective Catalytic Reduction (SCR) with ammonia solution

STACK AND CEMS

- Standard 32-meter stack — customizable to meet client-specific requirements
- Continuous Emissions Monitoring System (CEMS) included as part of the standard configuration



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SCALABILITY

Modular Waste-to-Energy Power Plant

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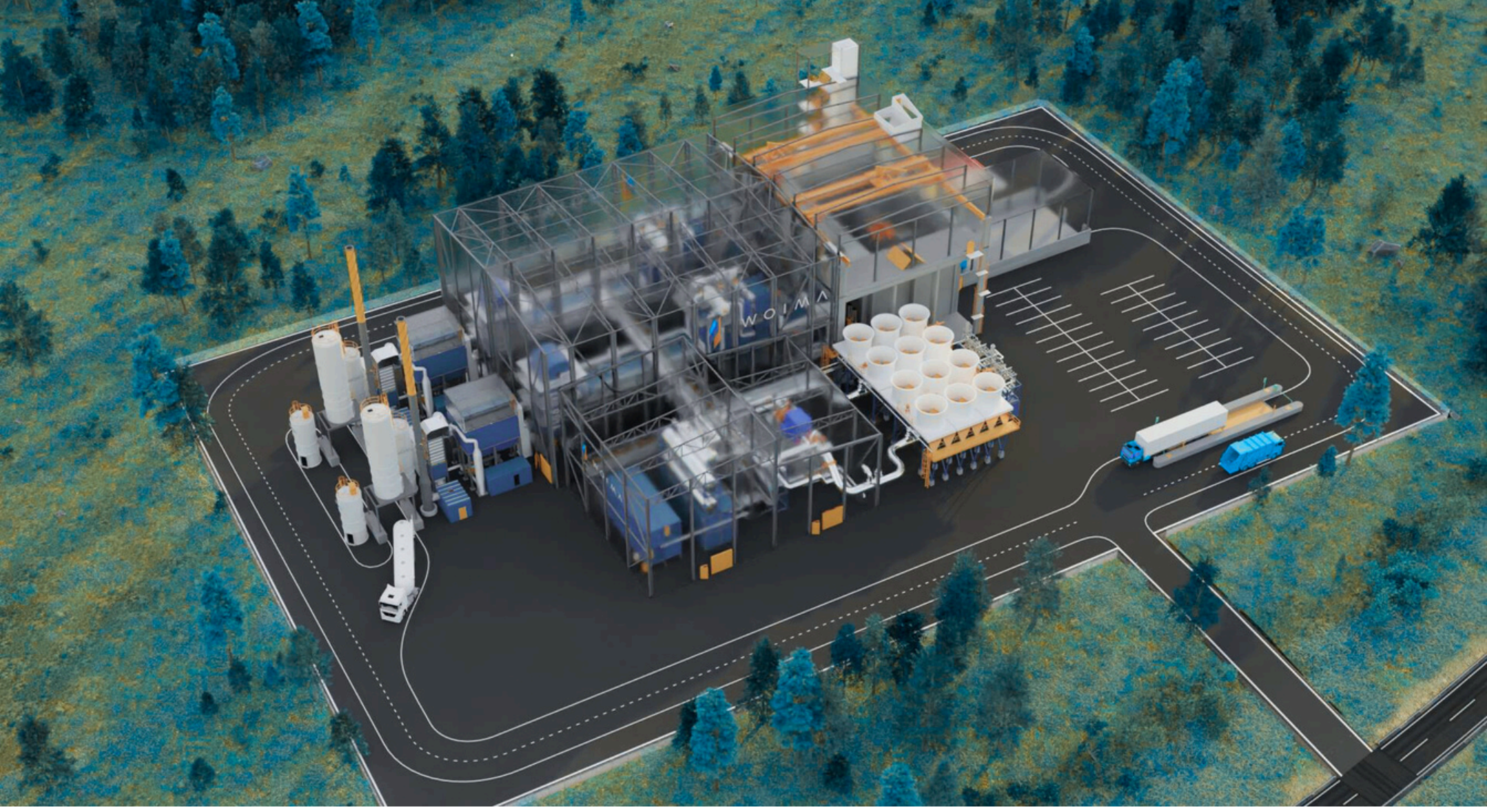
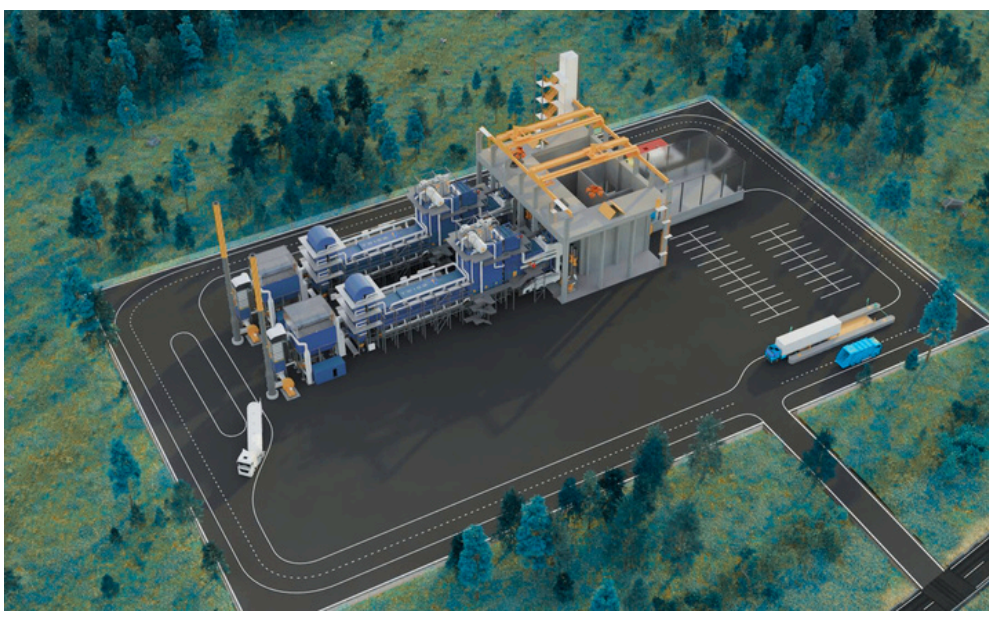
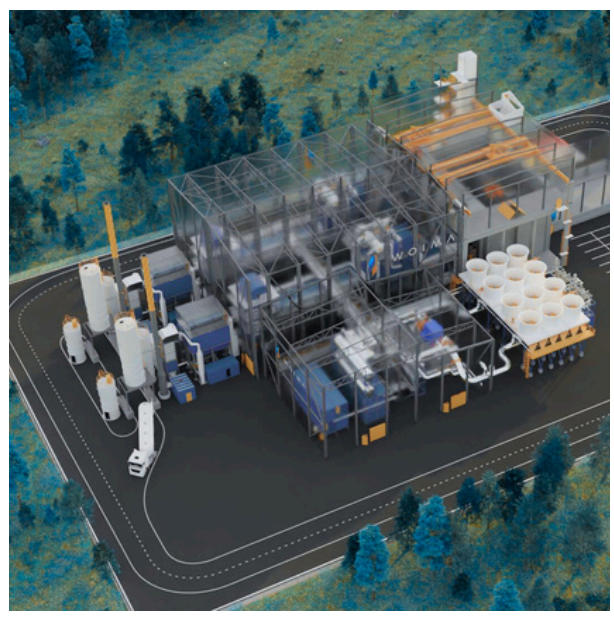


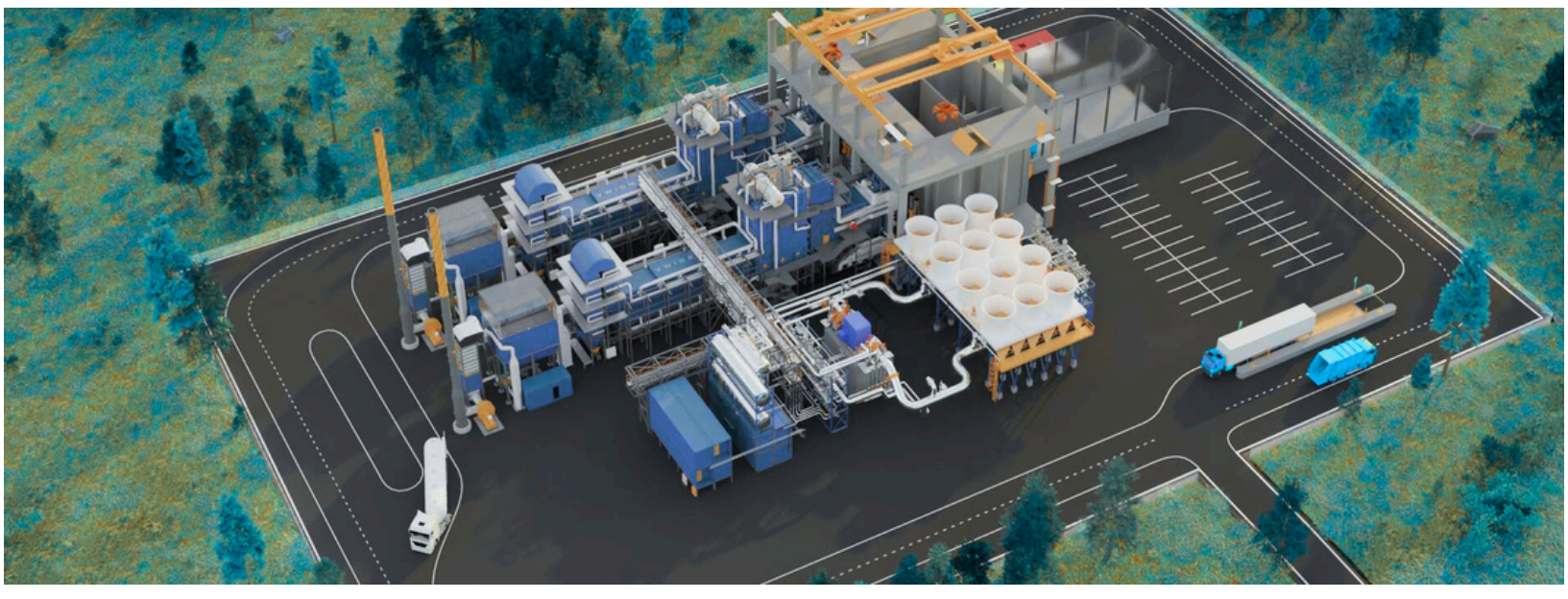
BOILER ISLAND SIZES:

10 – 15 – 20 MW

The design enables rapid development of boiler islands with various capacities ranging from 10 to 20 MW. Each line follows the same modular structure, and all plants can be scaled up to four lines.







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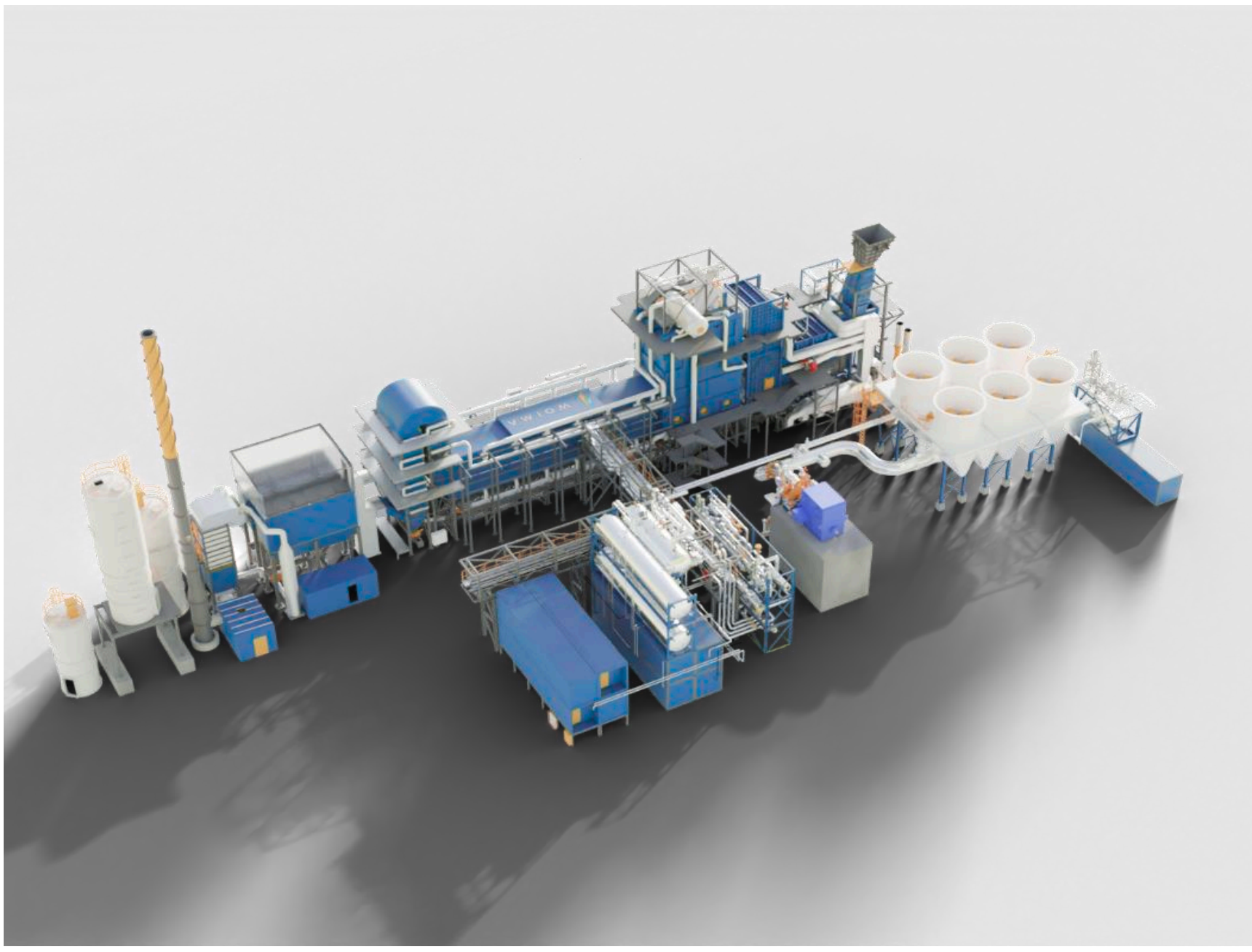
SINGLE LINE

15 MW(th) – 3.7 MW(e) (gross) – ~50,000 tons of municipal solid waste per year (approx. 30,000 tons of RDF).

The standard plant can be scaled up or down in 15 MW(th) increments.

- Each line is an independent boiler island and can be delivered either simultaneously or in sequence.
- The site layout is designed to accommodate two lines.
- The energy generation system (steam turbine and air-cooled condenser) is also modular, allowing easy expansion.



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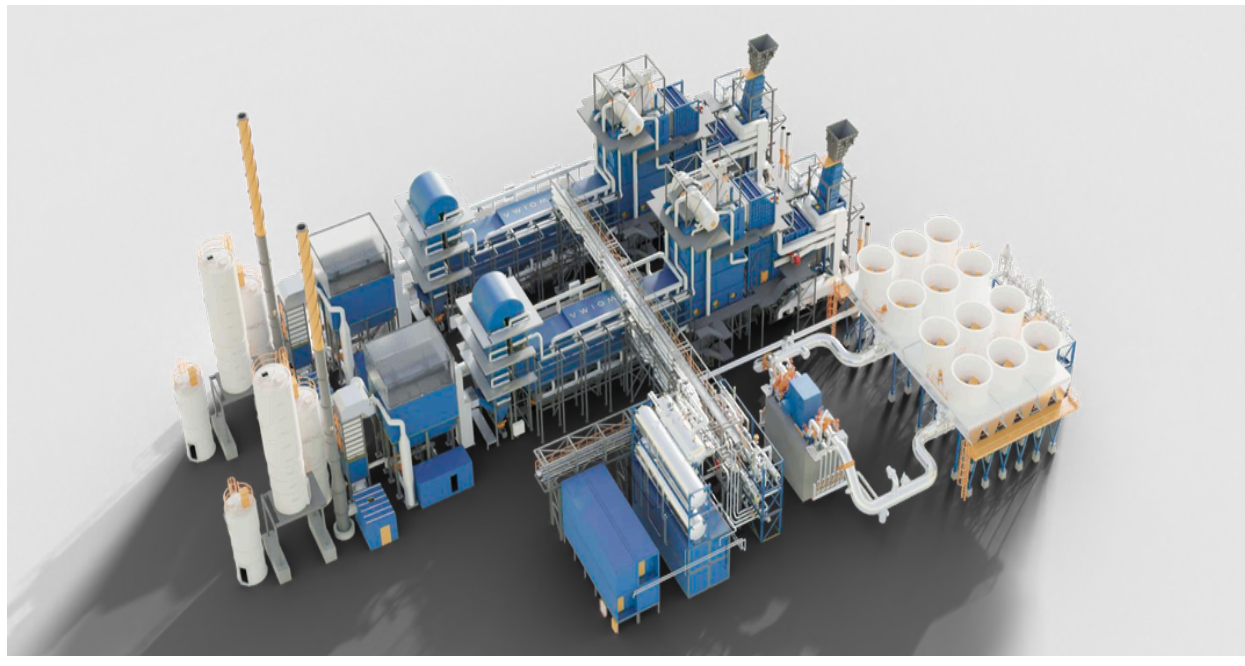
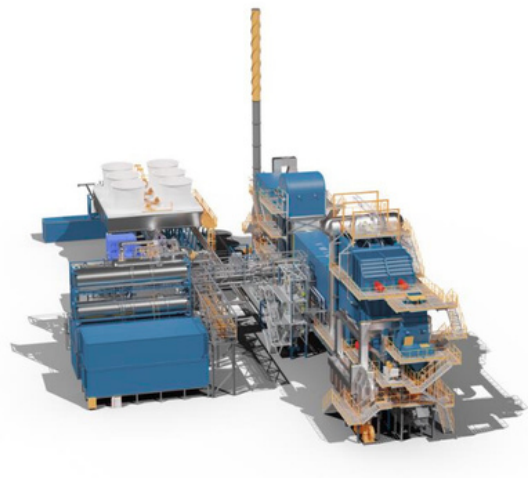
TWO LINES

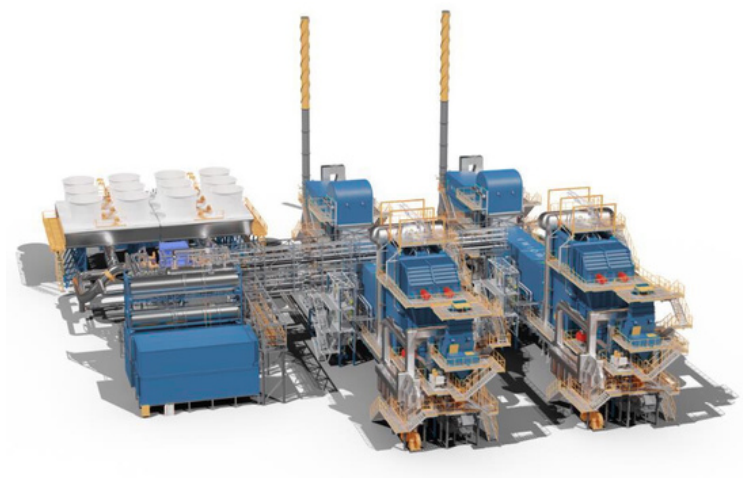


30 MW(th) – 7.5 MW(e) (gross) – ~100,000 tons of municipal solid waste per year

THREE LINES

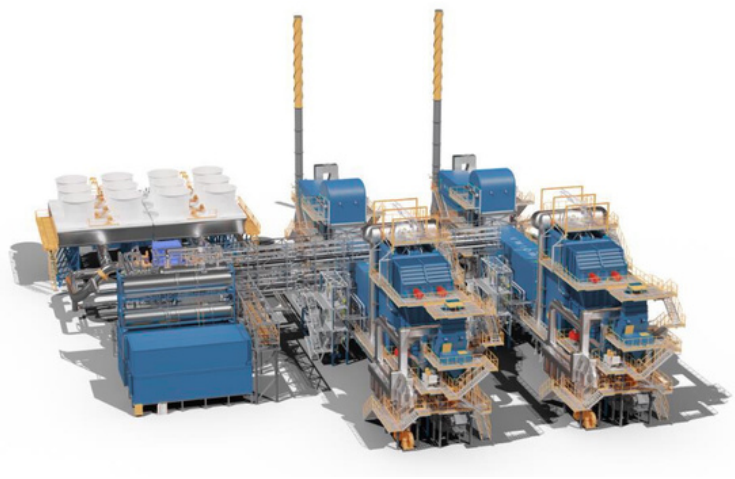
45 MW(th) – 11.2 MW(e) (gross) – ~150,000 tons of municipal solid waste per year

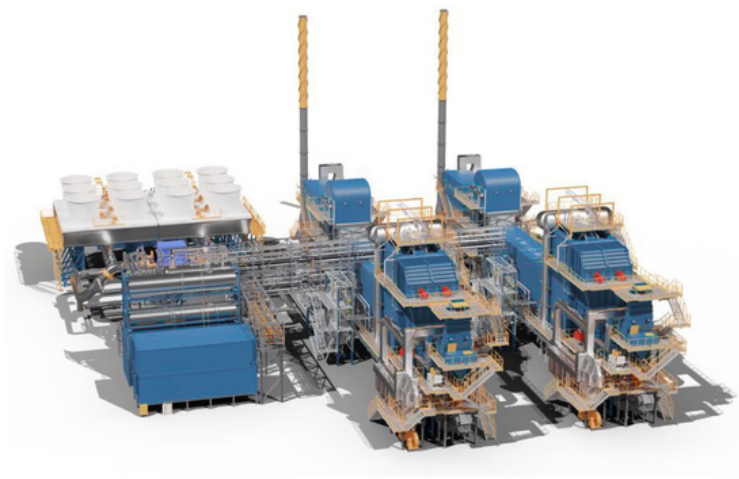




FOUR LINES

60 MW(th) – 15 MW(e) (gross) – ~200,000 tons of municipal solid waste per year





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SITE AREA

Light foundations; detailed design information is available early in the project development phase.

The civil works specification also defines the plant footprint:

- One line — 2,500 m²
- Two lines — 4,200 m²
- Three lines — 6,700 m²
- Four lines — 8,400 m²

+ required roads and supporting infrastructure

The installation is built on reinforced concrete slabs.

The turbine hall is the only permanent building on site — all other components are preassembled modules.

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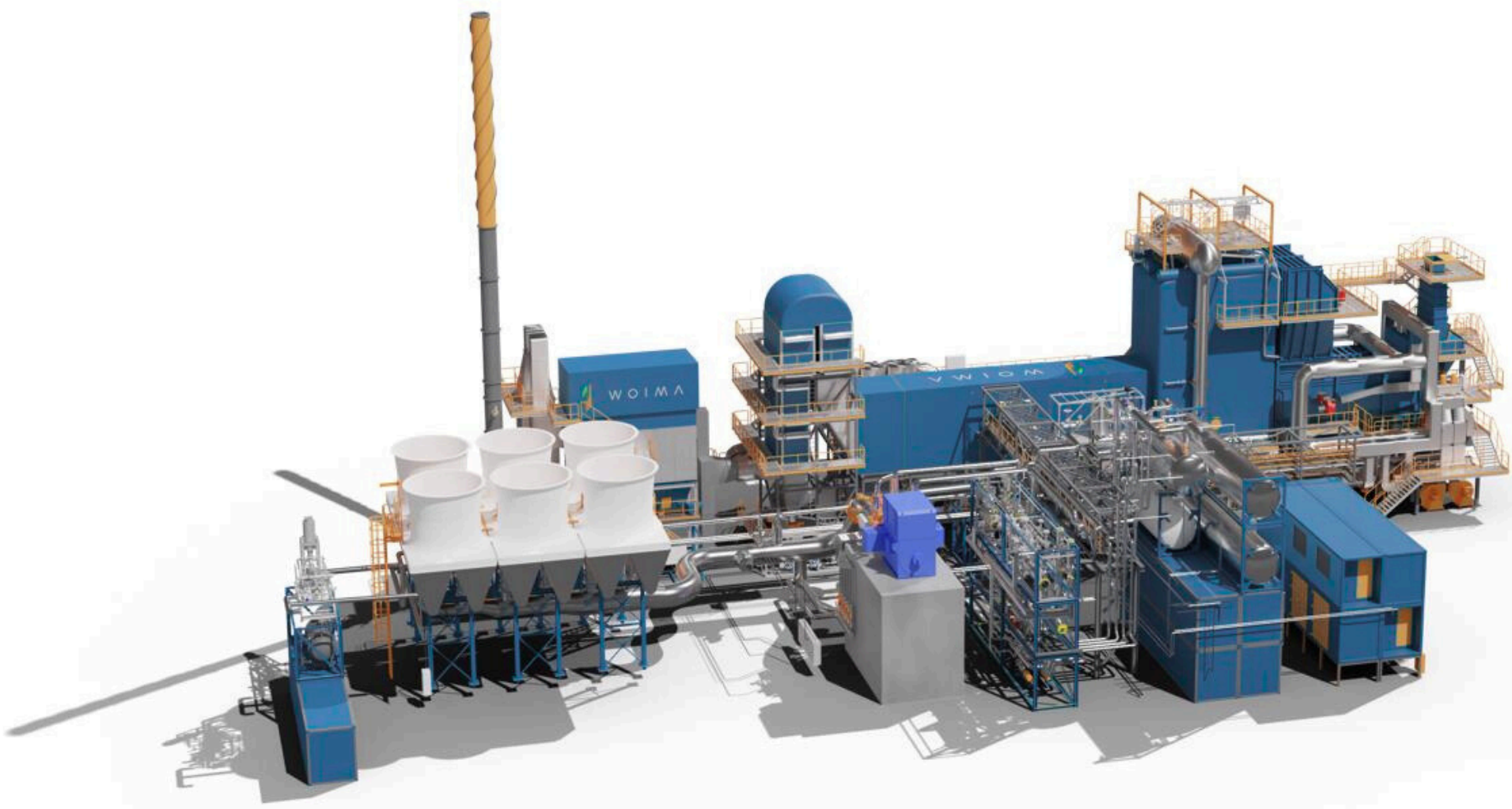

VALUE PROPOSITIONS:

A SINGLE SOLUTION FOR DELIVERING YOUR WASTE-TO-VALUE PROCESSING NEEDS

- Combining SFW's experience in energy technology and project execution with WOIMA's global reach and innovative plant design
- Capacity suitable for small and medium-sized power plants
- Integration of proven technology with an innovative, modular plant concept
- Fast and easy delivery and construction
- Available as a system running on electricity and/or steam
- Reliable design, low-cost solvent, and high automation level for reduced operational costs (OPEX)
- Scalable solution: start small and expand as demand and funding grow
- Potential for mobility with modules that can be disassembled for more flexible business models
- Reducing owner risks

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THANK YOU

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