

CONGRESS
EUROHEAT
TALLINN 2015 & **POWER**



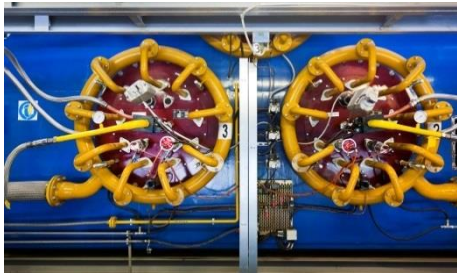
37th Euroheat & Power Congress, 27-28 April 2015, Tallinn, Estonia

DHC Perspectives in Tallinn

Priit Koit
Utilitas, CEO

April, 2015





Leader in Estonian district heating sector



UTILITAS

- Estonian holding company investing in Estonian utilities sector



TALLINNA KÜTE

- Networks in 8 cities across Estonia



ERAKÜTE

- Tallinn, Maardu
- Keila, Haapsalu, Rapla, Valga, Jõgeva, Kärdla

- 500 km of district heating networks managed

- 4 400 buildings heated

- 39 boilerhouses with total installed capacity of 1.1 GW



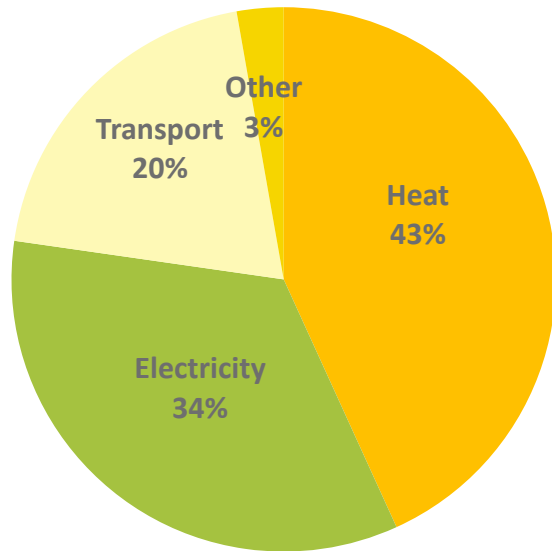
TALLINNA
ELEKTRIJAAAM

- Biomass-fired CHP with 25MW electric and 67MW thermal installed capacity

- ▶ 1.8 TWh of heat and 170 GWh of electricity sold annually
- ▶ Market share in Estonia approximately 1/3

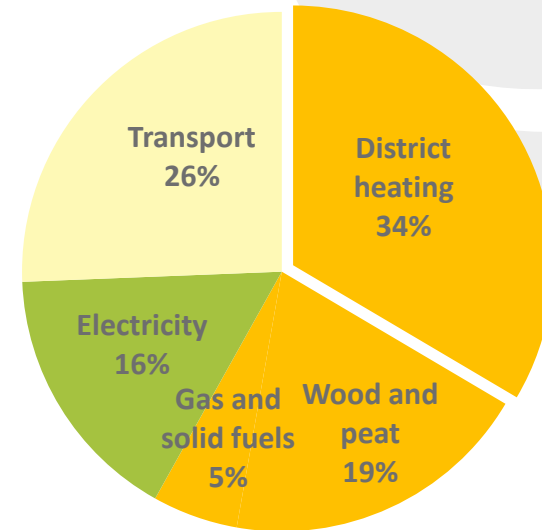
Largest component in national energy balance

Total energy consumption in Estonia, 2013



Energy consumption in households, 2013

Households
39%



Heat total
58%

Heat

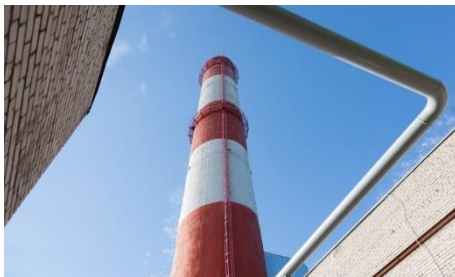
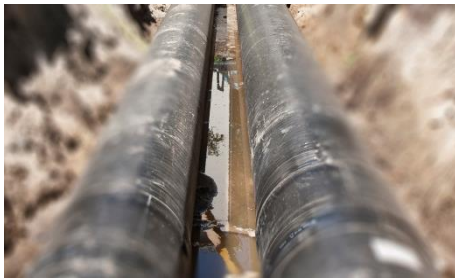
- 38% of total energy consumption
- 58% of households' energy consumption
 - Of which district heating above 50% in total and ca 70% in urban areas
 - Largest utility bill, ca 6.6% of household expenditures (electricity 3.5%)

Source: Statistics Estonia

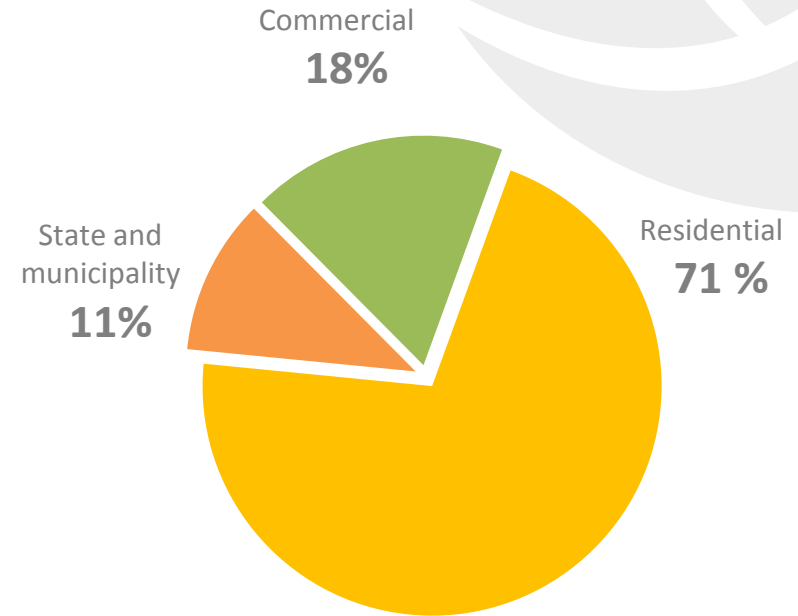
▶ Best suited for implementing European and national policies on energy efficiency, energy independence and promoting renewable energy sources

District heating in Tallinn

Talinna Küte supplying heat to 2/3 of Tallinn

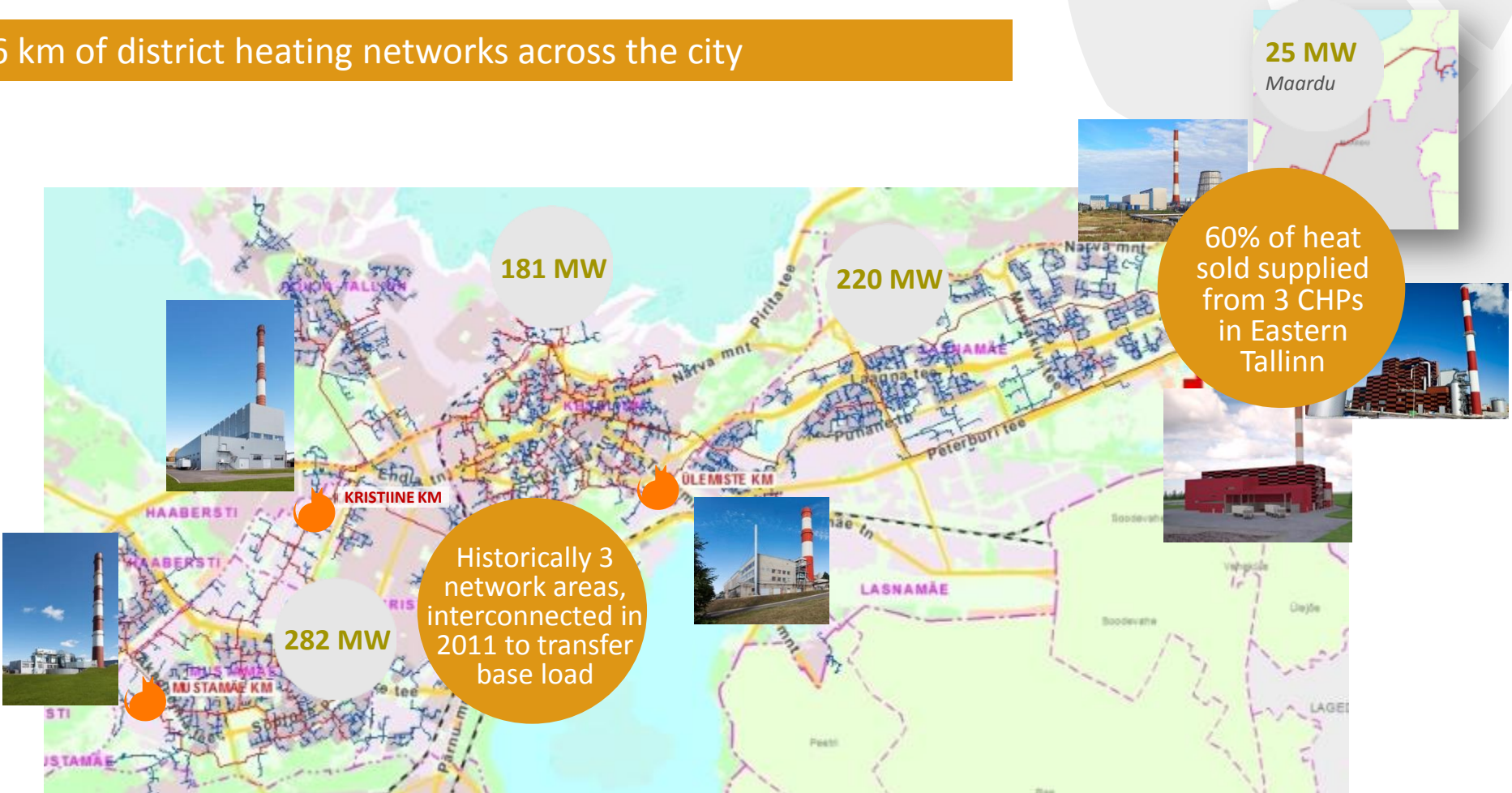


- 3640 buildings heated by Talinna Küte
- 130 thousand - 70% of all Tallinn households – using district heating
- All sales subject to price regulation by Estonian Competition Authority



Networks and key production facilities

426 km of district heating networks across the city

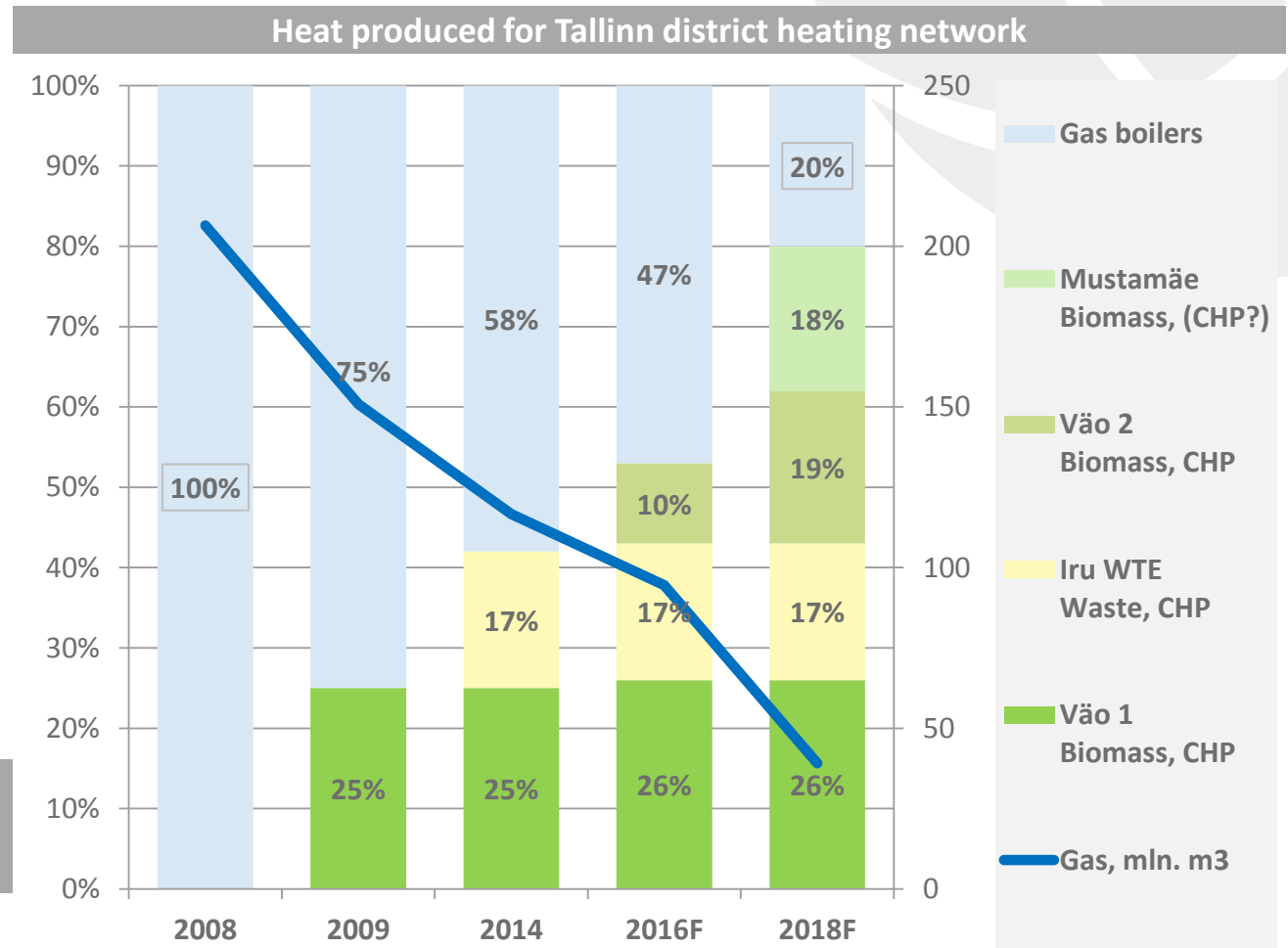


Reversing fuel mix in production

Reducing share of fossil fuels to just 20%

- Replacing natural gas with local biomass and waste incineration
 - 165 million m³ imported natural gas replaced by local fuels
 - EUR 50 million decrease in annual fuel imports to Estonia
 - Reducing annual CO₂ emissions by more than 200 thousand tons

▶ 80% produced from non-fossil fuels by 2018

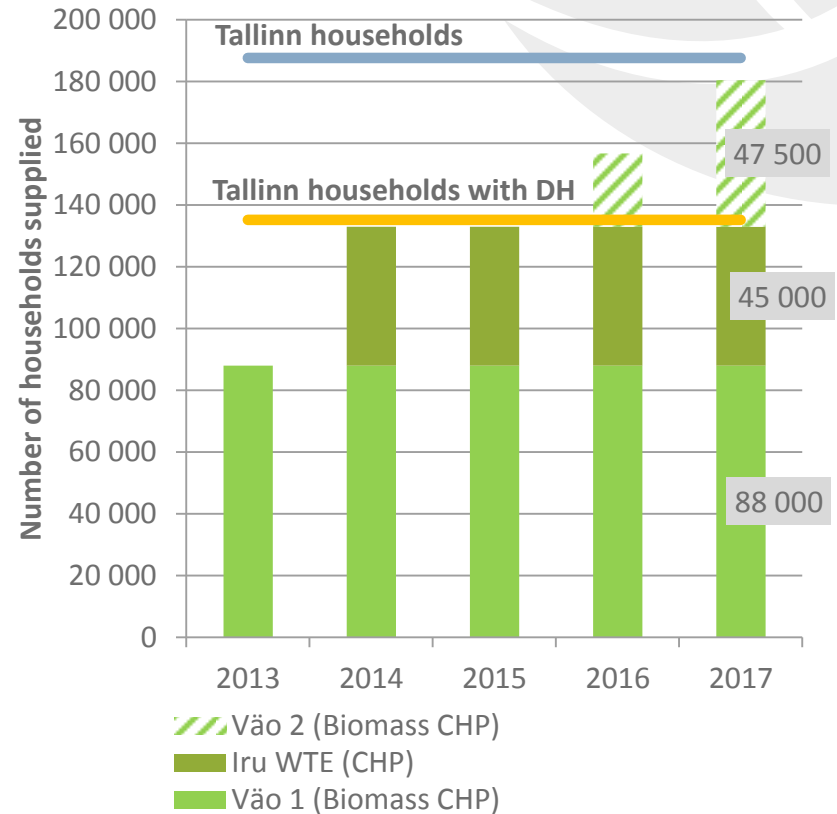


Utilizing benefits of cogeneration

Generating enough electricity to supply all households using DH, as well as all public transport needs



Electricity generated in CHPs supplying Tallinn DH network



▶ 60-70% supplied from CHPs by 2018

Future challenges

Efficiency, reliability and competitiveness

- Coping with decreasing volumes resulting from energy efficiency measures
 - 1.5% annual volume decrease in existing customer base, somewhat compensated by new connections
- Increasing system efficiency
 - Remote metering for all clients in 2015-16
 - Renovation of networks with largest diameter networks fully renovated in 2015
 - Potential introduction of capacity fee
 - Optimising flow temperatures
 - Replacement of substations in co-operation with customers
 - Exploiting cogeneration potential
- Tapping district cooling potential

Environmental

- Maximising use of local biomass in energy production
- Modernising existing production facilities to keep up with environmental standards and emission targets
- Contributing to fulfilling national and European targets in environmental protection and climate policies



City of Tallinn applying for 2018 European Green Capital award



Estonia to hold presidency of the Council of the EU in January-June 2018



info@utilitas.ee | www.utilitas.ee
Punane 36, 13619 Tallinn

Utilitas stands for usefulness and functionality. The group's mission is to provide solutions suitable both to our customers and environment, producing and distributing energy with highest possible efficiency and utilising to the largest extent possible renewable and local sources of energy.