

How bioenergy became the most important heating source in Upper Austria

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CANADA

41.7 million

9,984,670 km²

10+3

49 %

62 %

Population

Surface area

Number of provinces

Forested area

Electricity production from hydro

AUSTRIA

9.2 million

83,879 km²

9

47 %

60 %

The province of Upper Austria



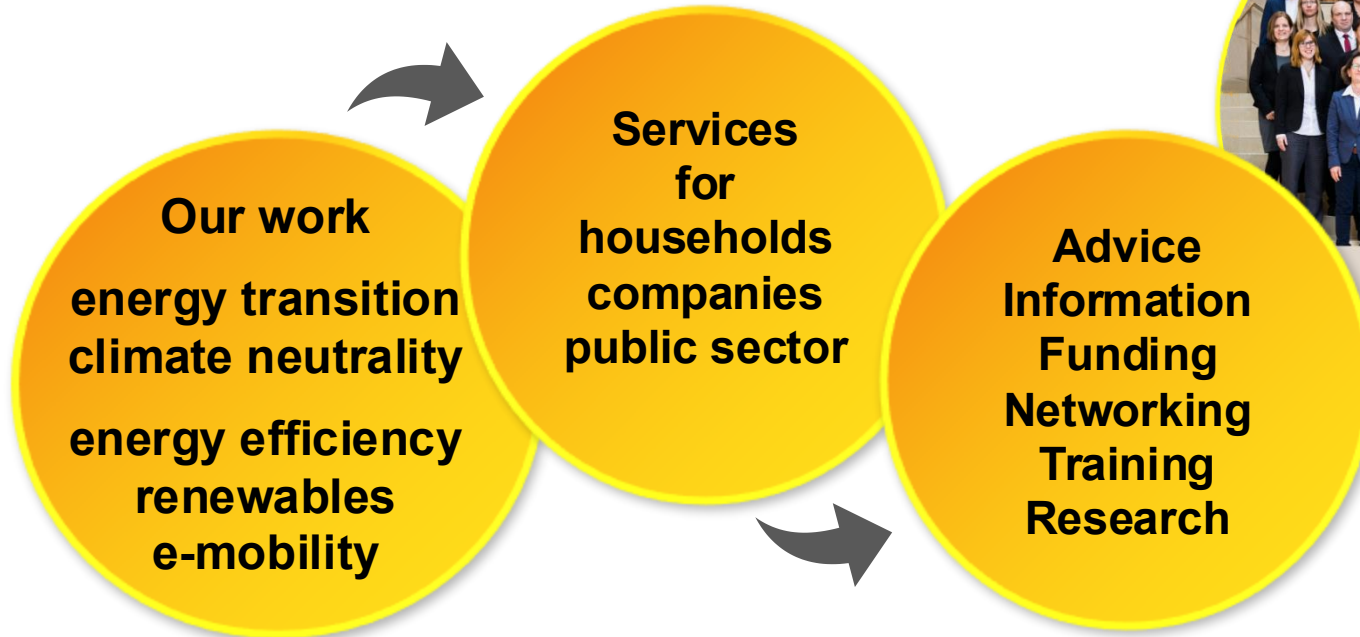
Capital: Linz
Population: 1.5 million



Industrial & rural:
25% of Austrian industrial exports
50% live in small municipalities

OÖ Energiesparverband

The Energy Agency of Upper Austria



The Cleantech-Cluster (CTC)



**The network of energy & environmental technology
companies in Upper Austria**
250 partner companies



Bioenergy boiler and equipment manufacturers in Upper Austria



froling 



GUNTAMATIC



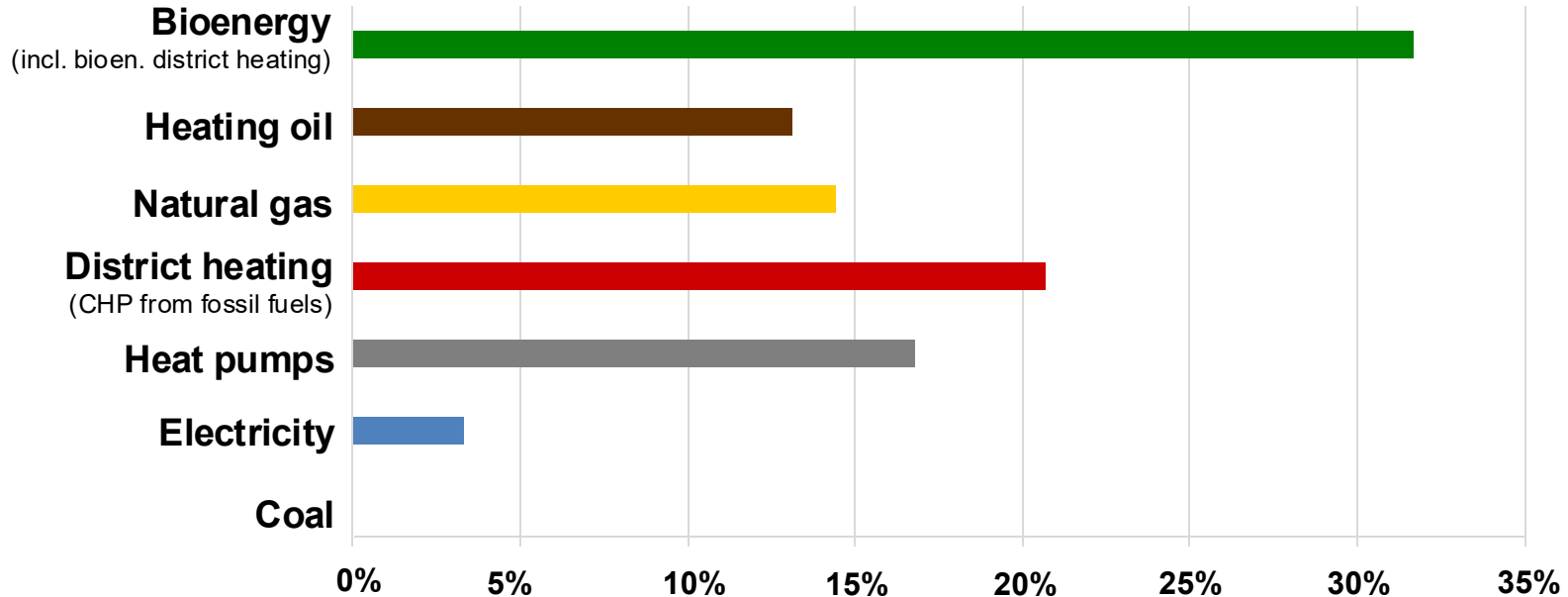
**25 % of all modern small-scale bioenergy boilers installed in the EU
are manufactured by Upper Austrian companies**

More info: www.ctc-energy.at

Heating in Upper Austria

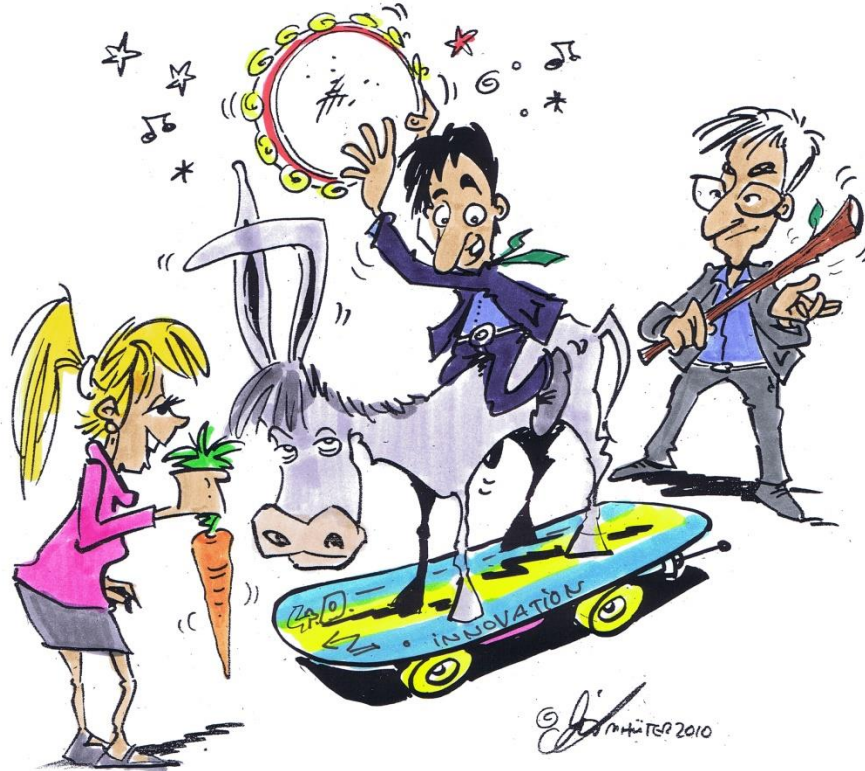
% of all dwellings

79,000 automatic bioenergy systems installed:
49,000 pellets, 30,000 wood chips,
370 bioenergy district heating plants



Upper Austria's strategy **for market transformation**

Carrots, sticks, tambourines, and a skateboard



Goodbye fossil fuels, hello pellets

Subsidies for replacement of fossil systems, for low income households up to 100 %

Banning oil and gas heating
stepwise market phaseout
(new construction)

Energy advice 10,000
face-to-face sessions/a

**Information &
campaigns** awareness
raising (e.g. AdieuÖl)

Training programmes for actors
along the value chain

**Innovation and market development
support** for businesses (e.g. product
development, joint export actions etc.)



Different wood fuels: more options and economic opportunities



pellets

mostly home heating



wood chips

mostly larger buildings
(public, commercial),
district heating



cordwood

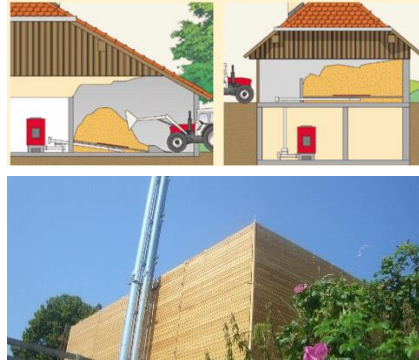
rural areas
often people who own
forests

Different wood fuels



pellets

mostly home heating
fully-automated, pellets
delivered by tank truck by
commercial suppliers



wood chips

larger buildings, district heat.
fuel supplied by local
farmers/forest owners,
chipping by chipping service
providers



cordwood

semi-automated systems
for home/farm heating, fuel
from own forests or
neighbours

District heating models

Micro-grids

- one biomass boiler supplies one other or a few of the buildings in its direct vicinity
- examples: wood chip boiler in school building also supplies city hall and sports center, pellet heating in one home also supplies its direct neighbour

Bioenergy district heating

- two wood chip boilers (larger one for winter, smaller for summer) in its own building
- typical installed capacity: a few 100 kW to a few MW, grid length: several hundred meters to a few km, heat density: 0,5–1,0 kW/750 -1,500 kWh/a per grid meter
- built and operated by cooperatives of farmers/forest owners
- typically supplying the center of villages/small towns

Larger district heating systems, partly supplied by bioenergy

- industrial-scale bioenergy CHP boilers, supplied by bark, wood chips, roundwood, other wood residues
- other sources feeding district heating: gas CHP, industrial waste heat

District heating examples



District heating Sankt Martin

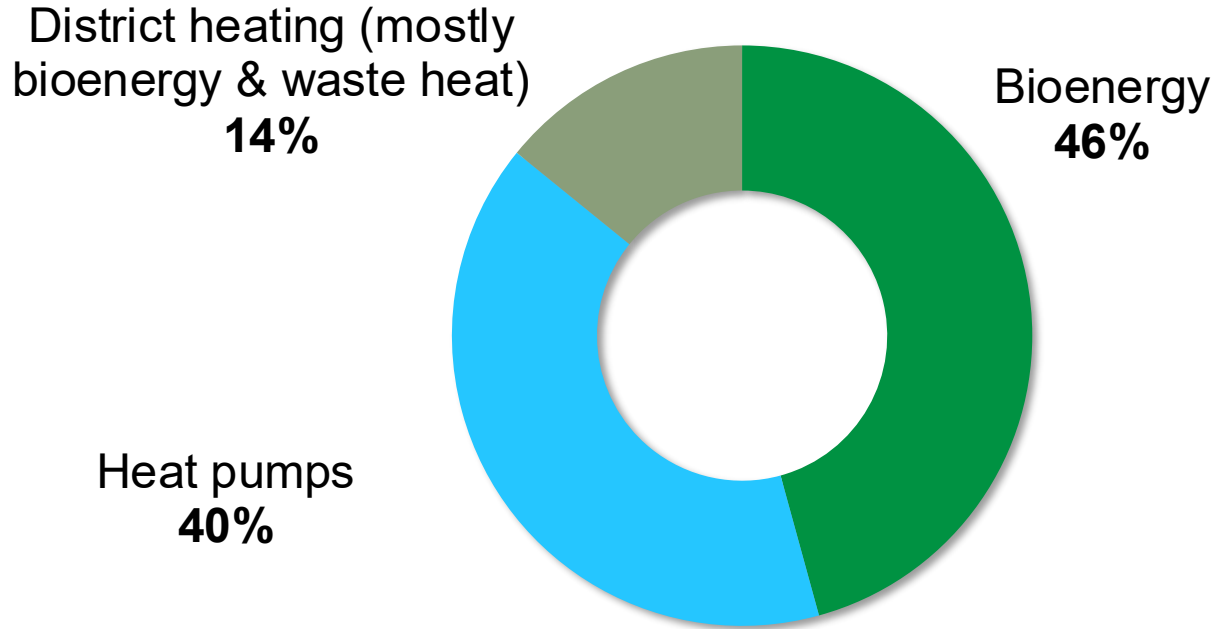
- 2.6 MW, annual heat production 5200 MWh
- grid length 7.1 km (frequently extended since 2009)
- 114 customers (most public buildings, homes, apartment buildings, some local businesses)
- built and operated by a cooperative of 15 forest owners (farmers)
- 8000 m³ wood chips supplied cooperative members



Bioenergy CHP plant Linz

- 32 MW_{th}, 9 MW_{el}, 21 MW district heating capacity
- in operation since 2006
- district heating supplies 70 % of all households (84.000)
- bioenergy 20 %, restgas CHP, waste incineration
- 400,000 m³ wood chips and other residues by rail, ship (Danube), truck
- owned and operated by the city utility of Linz

The homeowner's choice in Upper Austria 2023



Source: OÖ Energiesparverband, data from ESV-managed funding programme (sample-size: 8,000)

European Pellet Conference : 25 February 2026

- The world's largest annual pellet-related conference
- Trade show: 100+ bioenergy-related exhibitors
- Policies - Markets - Technologies
- Young Biomasse Researchers Conference
- Call for Papers 10 October
- held in Wels/Austria

www.wsed.at



Goodbye fossil fuels hello bioenergy!



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