TEPLÁRENSKÉ SDRUŽENÍ
České republiky

The current state and future plans of the Czech district heating sector

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MATASZSZ delegation 2026, Prague

District heating in the Czech Republic

Basic figures:

People connected to district heating: 4 million (40 % of population)

Total heat supply: 21 TWh

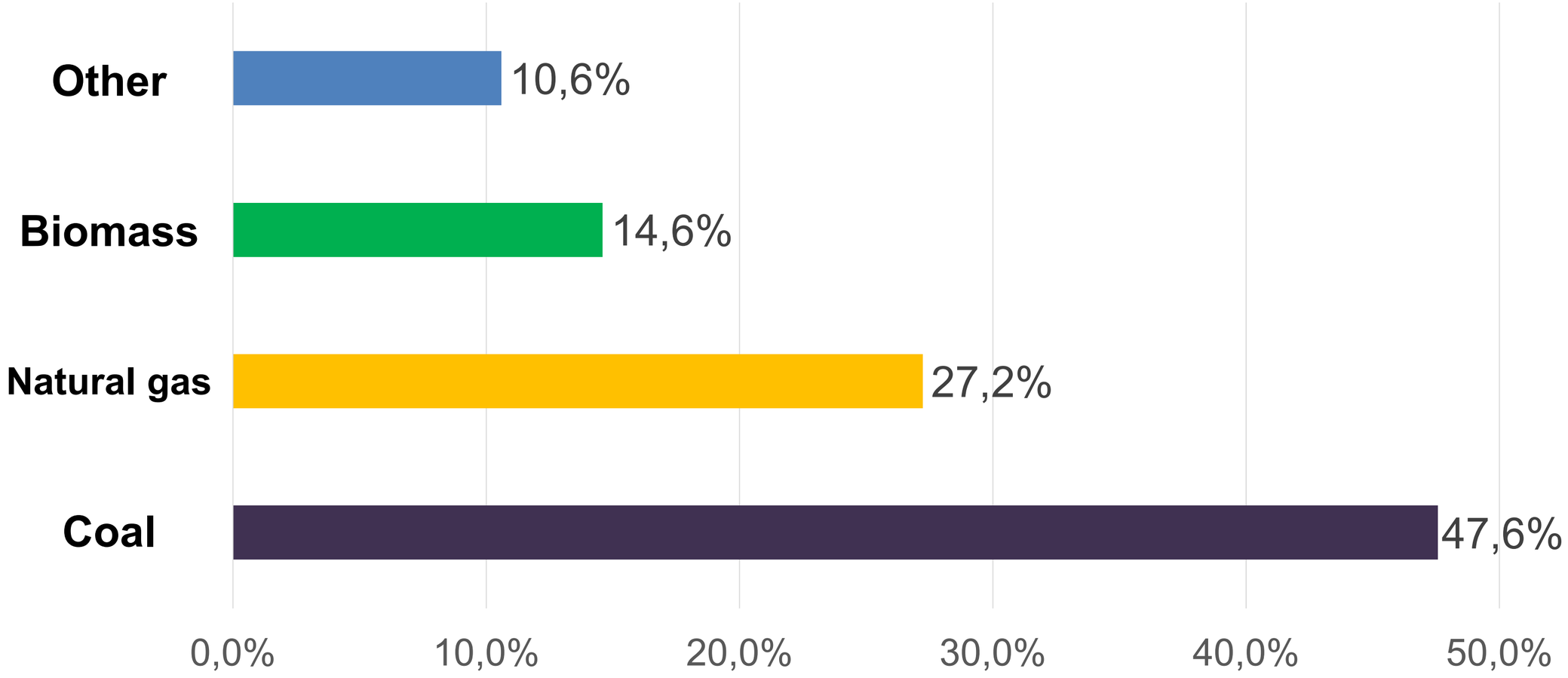
CHP electricity production 9,3 TWh

Length of heat networks: 7533 km

Hot water: 6248 km

Steam: 1285 km

Fuel mix of heat supply in 2025



Transformation of DH until 2030

Coal phase out until 2030

Replacement: biomass, waste to energy, gas CHP, heat pumps

Installed capacity in new/retrofitted CHP plants: 3 GW

Total investment cost: EUR 8 billion

Main source of investment subsidies: Modernization fund

Operating support for CHP plants awarded in auctions

Coal phase out until 2030

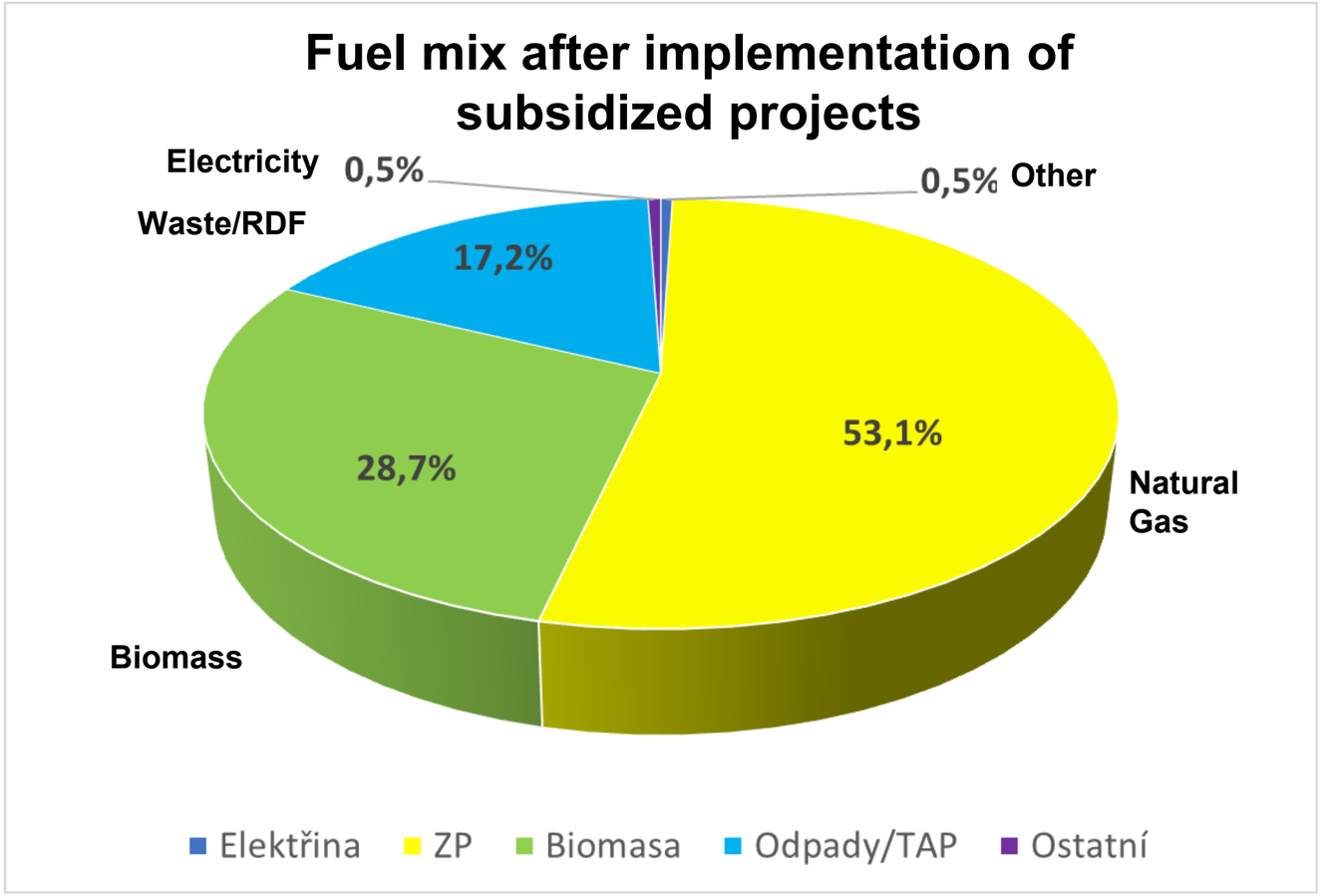
1. phase 2021-2024
10 smaller district heating systems
Investment 6 billion CZK
Coal consumption decreased by 514 ths. tons per year
CO_2 emissions decreased by 600 ths. tons per year

2. phase 2027-2030
Bigger district heating plants in regional capitals
Total investment over CZK 200 billion CZK
CO_2 emissions will decrease by 6 million tons (2/3)

Key funding source – HEAT program

The most successful program within the Modernization Fund
Allocation 92 billion CZK
101 projects submitted with a requested subsidy of 101 billion CZK
47 projects approved with a total subsidy of 75 billion CZK

Current HEAT call No. 1/2025
Start of receiving applications 7.7.2025, end 28.11.2025, allocation 6 billion CZK (240 mil. EUR)



Auction of support for electricity from CHP

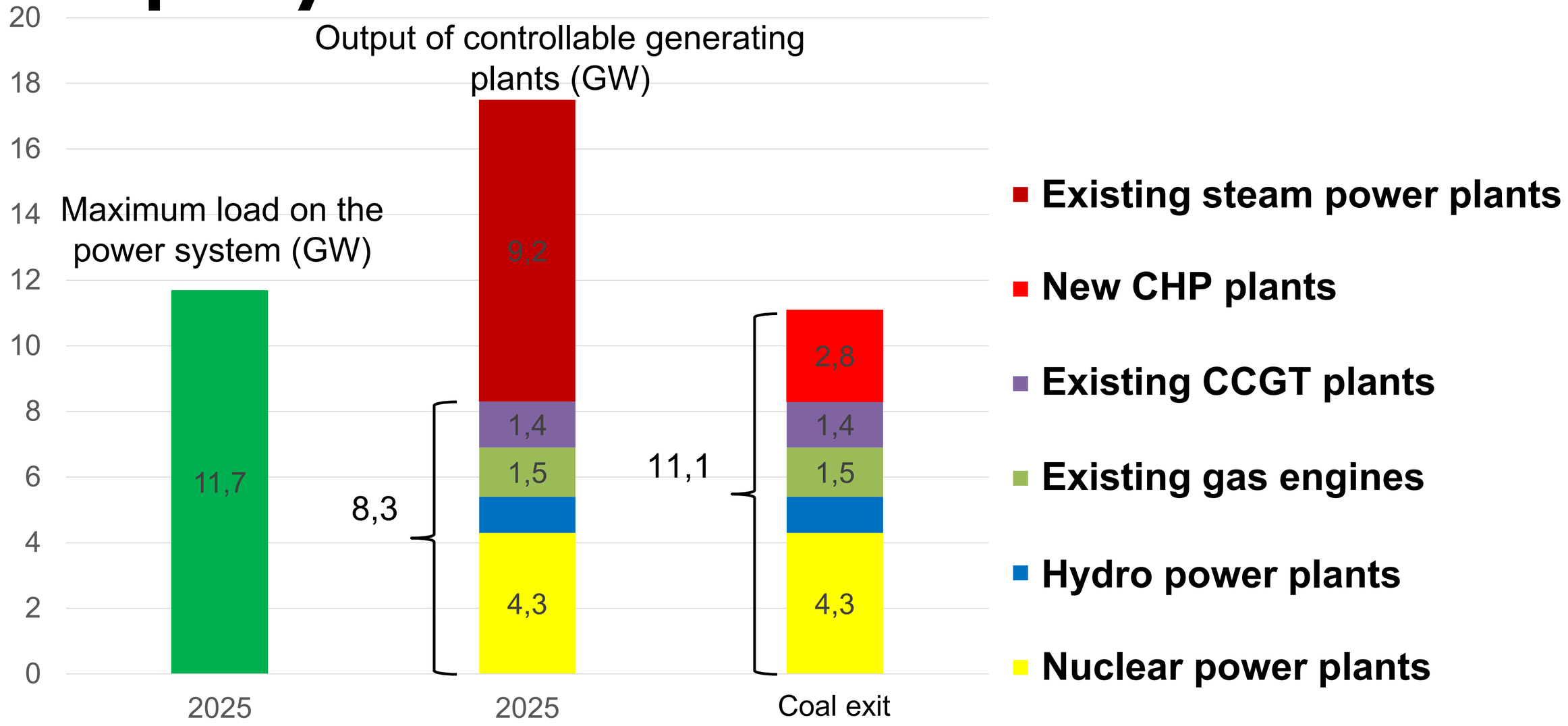
Plants over 1 MWe, new and modernisation

1st auction ended 30.9.2024	1267 MWe tendered
2nd auction ended 17.3.2025	13 MWe tendered
3rd auction ended 13.8.2025	899 MWe tendered
4th auction ended 24.2.2026	581 MWe tendered
Total	2759 MWe

Utilization of 3300 hours

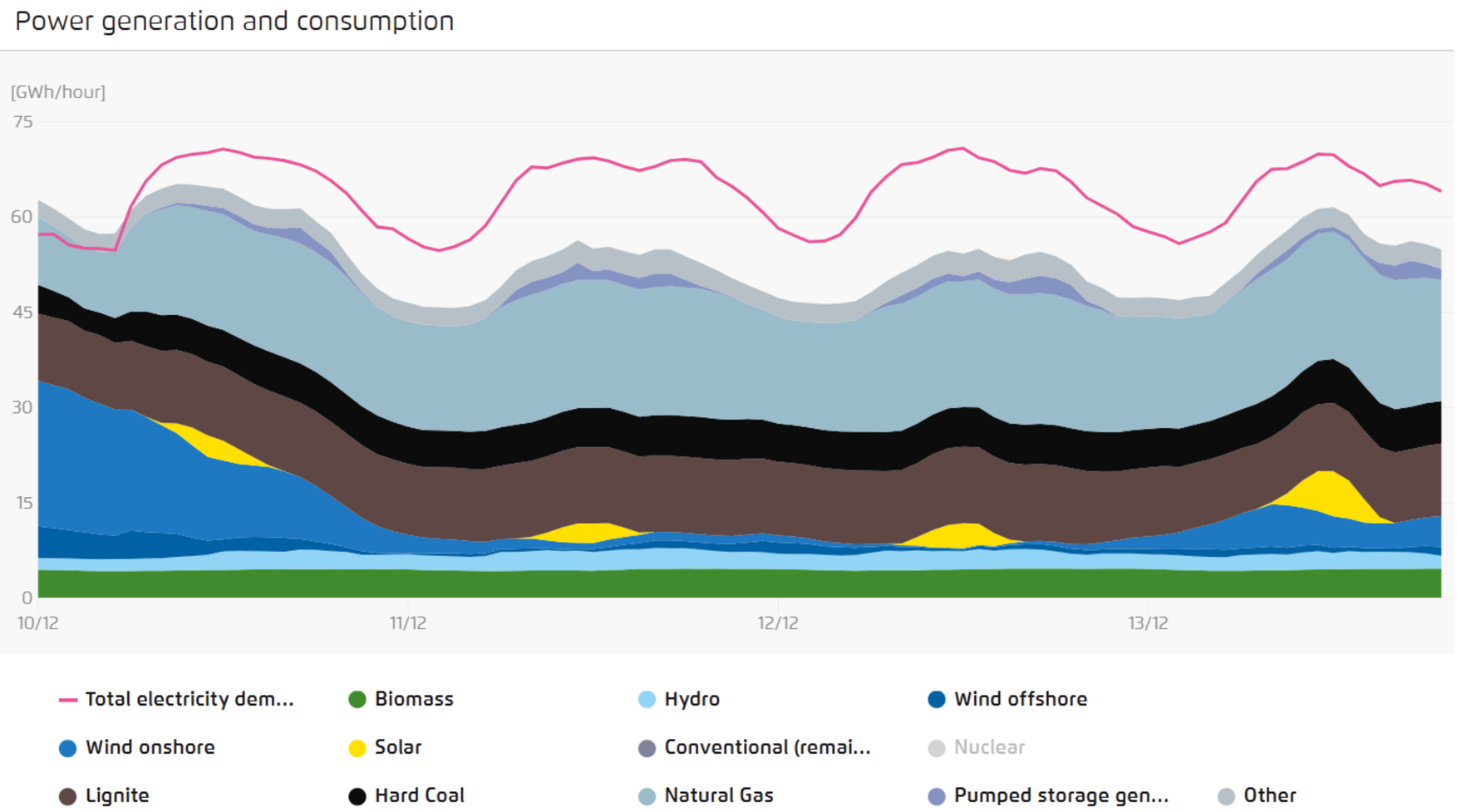
2759 MWe means production of 9.1TWh of electricity.

The role of CHP plants in ensuring resource adequacy



ERO, Annual Report on the Operation of the Electricity System of the Czech Republic, June 2025

Dunkelflaute in Dec 2024



Waste to energy in district heating

4 plants in operation (with capacity of utilized municipal waste):

ZEVO Malešice (Praha)	394 thous. t/year
SAKO Brno	248 thous. t/year
ZEVO Plzeň	120 thous. t/year
TERMIZO Liberec	96 thous. t/year
Total	**858 thous. t/year**

Planned capacity to 2030 (additional 850 thous. t/year):

ZEVO Mělník	320 thous. t/year
ZEVO Komořany (Most)	150 thous. t/year
ZEVO Planá nad Lužnicí	80 thous. t/year
~~ZEVO Písek~~	~~50 thous. t/year~~
ZEVO Vráto	150 thous. t/year
ZEVO Opatovice	150 thous. t/year

Biomass in district heating in 2025

Total installed capacity 1350 MWt

Biggest plants:

Planá nad Lužnicí	250 MW
Strakonice	205 MW
Krnov	99 MW
Příbram	92 MW
Kutná Hora	64 MW
Třebíč	55 MW
Pelhřimov	50 MW

14 plants 10 – 49,9 MW

46 plants 1 – 9,9 MW

Biomass projects under preparation/construction

Brno	43 MW (2026)
Dětmarovice	8 MW (2026)
Mladá Boleslav	57 MW + retrofitting 2x71 MW (2027)
Prunéřov	2x17,5 MW (2027)
Trmice	32 MW (2029)
Poříčí	2x25 MW (2029)
Ledvice	? (2030)
Olomouc	? (2030)

Is there enough biomass?

Main source of biomass: wood chips
1 349 ths. tons of wood chips used for electricity production mostly in inefficient electricity only plants in 2023
Operating support for electricity production will end in 2029-30, electricity only plants will close down
= no significant net increase in wood chips consumption expected after 2030 compared to 2025
Wood chips will be transferred from inefficient electricity only plants to CHP plants and heating plants

No significant direct biomass projects planned after 2030
Important source after 2030 can be biomethane (biogas stations)

Utilization of heat from nuclear plants

Since 1998, heat supplies from Temelín to Týn nad Vltavou (180 thousand GJ per year)

Temelín – České Budějovice pipeline
26 km main feeder, max temperature 140 °C, investment 2.4 billion CZK (96 mil. EUR)
commencement of operation October 2023
in the second year of operation, supplied 781 thousand GJ, saving 80+ thousand tons of CO2

Dukovany – Brno pipeline
42 km main feeder DN 700, investment 19 billion CZK (760 mil. EUR)
heat supply 2 million GJ per year
saving 77 million m3 of gas per year (135 thousand tons of CO2)
expected commissioning 2031

Use of industrial heat pumps in DH

ADH CR Project – "Potential of heat pumps in heat supply systems in the Czech Republic" – final outputs February 2024, following study in next weeks
Available on the website www.tscr.cz

Currently only one project (Děčín) – geothermal energy, in operation since 2002
First projects should be implemented by 2030
Main development in 2031 – 2040
Heat pumps can supply 26.5 PJ and cover 1/3 of heat supply in district heating in 2040
Estimated electricity consumption 2.3 TWh
Estimated investments 2 billion Euros

Necessary tools: ETS2 implementation, tariff reform, abolition of the contribution to RES

A few notes on the implementation of EU ETS2

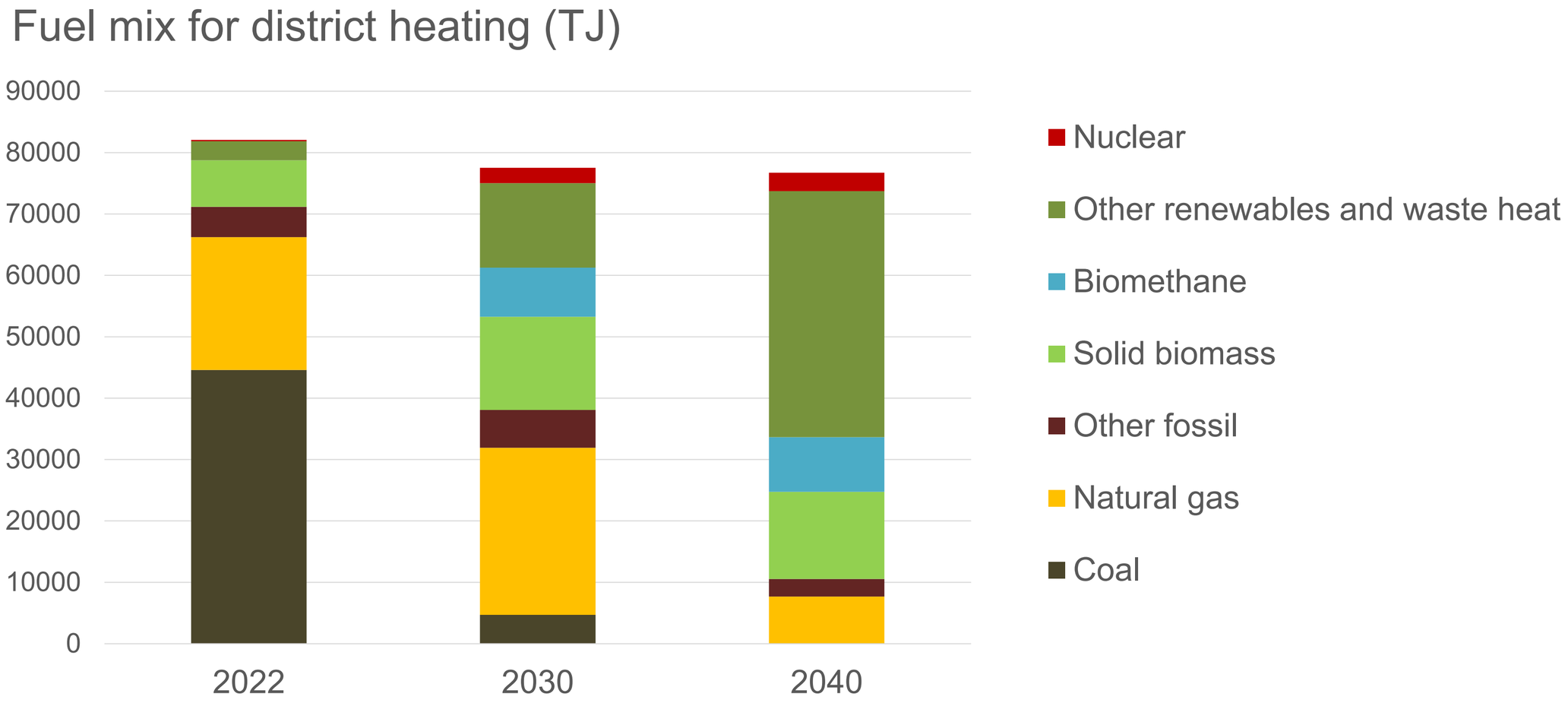
A total of 1,739 thousand households already pay ETS 1 allowances in their heating costs, which represents 39% of households in the Czech Republic.

- **Households connected to heat supply systems with sources in ETS 1 and households that use electric storage and direct heating or heat pumps. Another 9% use biomass.**
- **In the case of heat supplies from coal, the costs of ETS1 allowances in the price of heat for households account for 25%, in the case of heat supplies from gas, it is 11%.**
- **In the years 2020 to 2024, operators of heating plants in ETS1 paid more than CZK 71 billion for allowances.**

Outcome of the ENV Council on 5th Nov 2025

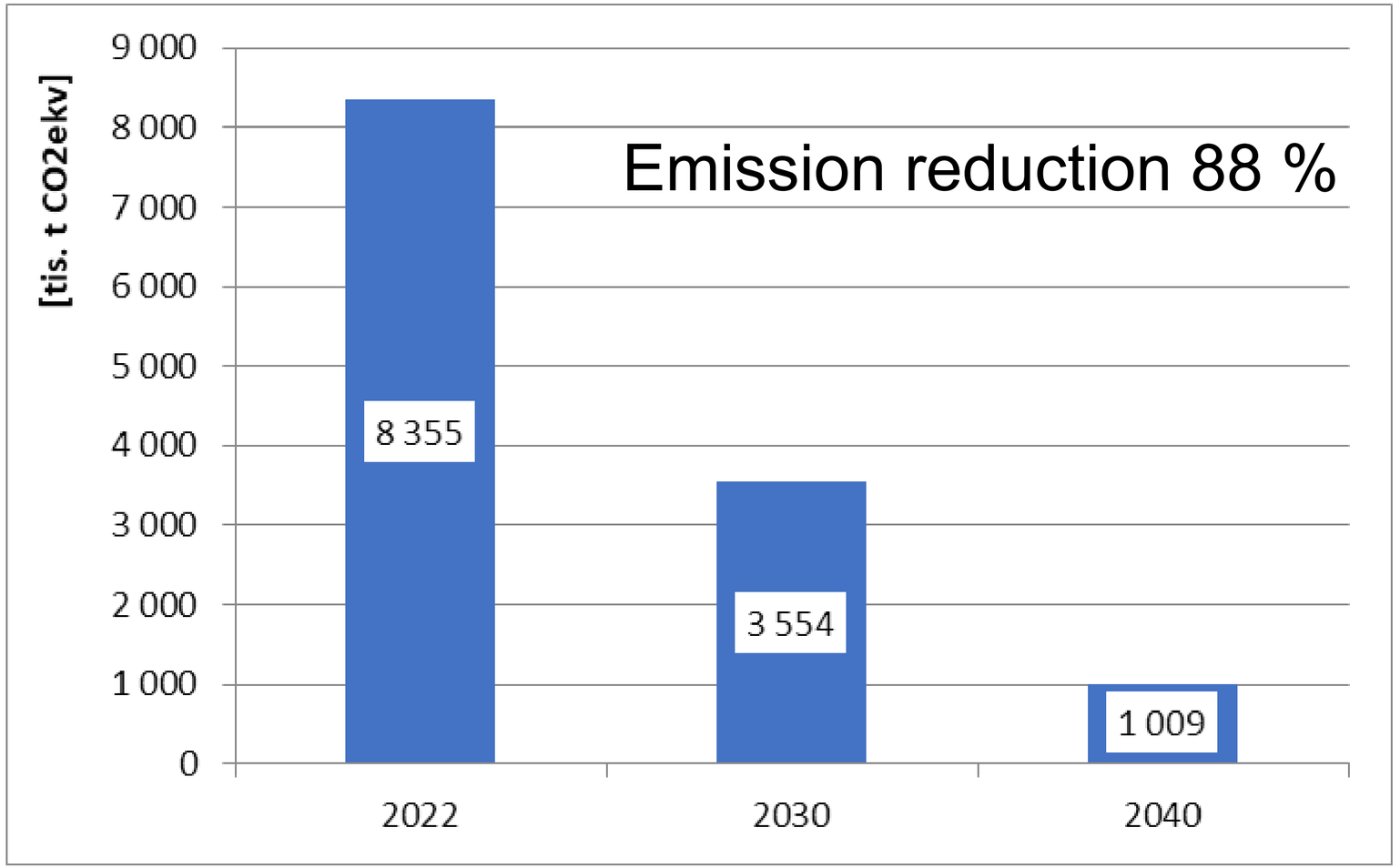
- **Postpone implementation of ETS2 from 1st Jan 2027 to 1st Jan 2028**
- **This prolongs the completely illogical advantage of households that produce their own heat from fossil fuels over households connected to district heating plants, which will invest over EUR 8 billion in decarbonization over the next five years.**

Shift happens



Ministry of Industry and Trade, Assessment of the decarbonization of district heating in the Czech Republic, September 2024

CO_2 emissions from heat production



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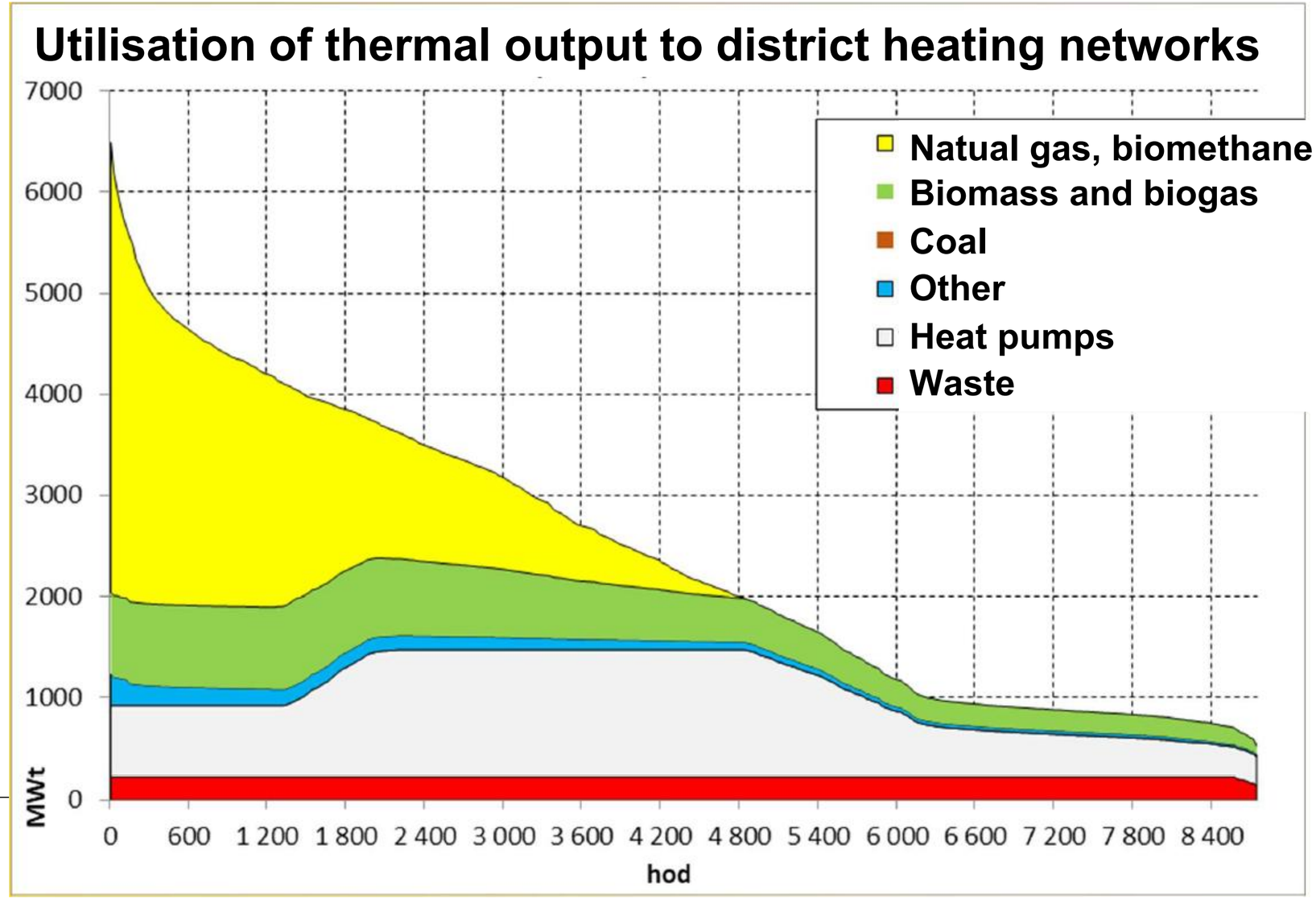
The role of (low-emission) gases in district heating

[TJ]	2022	2030	2040
Natural gas	21 607	27 214	7 688
Biogas	603	667	1 333
Hydrogen	0	200	2 604
Biomethane	0	8 013	8 910
Total gasseous fuels	**22 210**	**36 094**	**20 535**
Share on heat deliveries	27,1%	46,6%	26,8%

Ministry of Industry and Trade, Assessment of the decarbonization of district heating in the Czech Republic, September 2024

Seasonal nature of gas consumption 2040



Conditions for successful transformation

Government:

Finish approval process of projects in Modernization fund

Finish auctions of operating support for CHP plants

Implement ETS 2

Energy regulatory office:

Introduce tariff reform in electricity distribution rewarding flexibility

Technology suppliers:

Deliver on time and at reasonable price

Thank you for your attention