



PRESENT STATE OF HUNGARIAN DH SECTOR



matászs

Association of Hungarian
District Heating Enterprises

Edit Nagy Pergerné
MaTáSzSz

Project Manager for Energy and Technical Affairs

On the way from 1GDH to 4GDH in Hungarian DH Sector



1899

Was put into operation the House of Parliament DH System

1918

Was put into operation the Hotel Gellért DH system

1950

Communal waste was used for DH

1952-58

Industrial DH (354 dwellings from Kőbánya Brewery, 210 dwellings for Csepel Iron Works) Start of Communal DH (Révész PP, Kelenföld PP)

1960-92

Building mass of panel housing estates based on DH

2004

The largest biomass power plant of Central Europe in Pécs
coal
↓
biomass

2013

Was put into operation the long distance Mályi Miskolc geothermal DH project

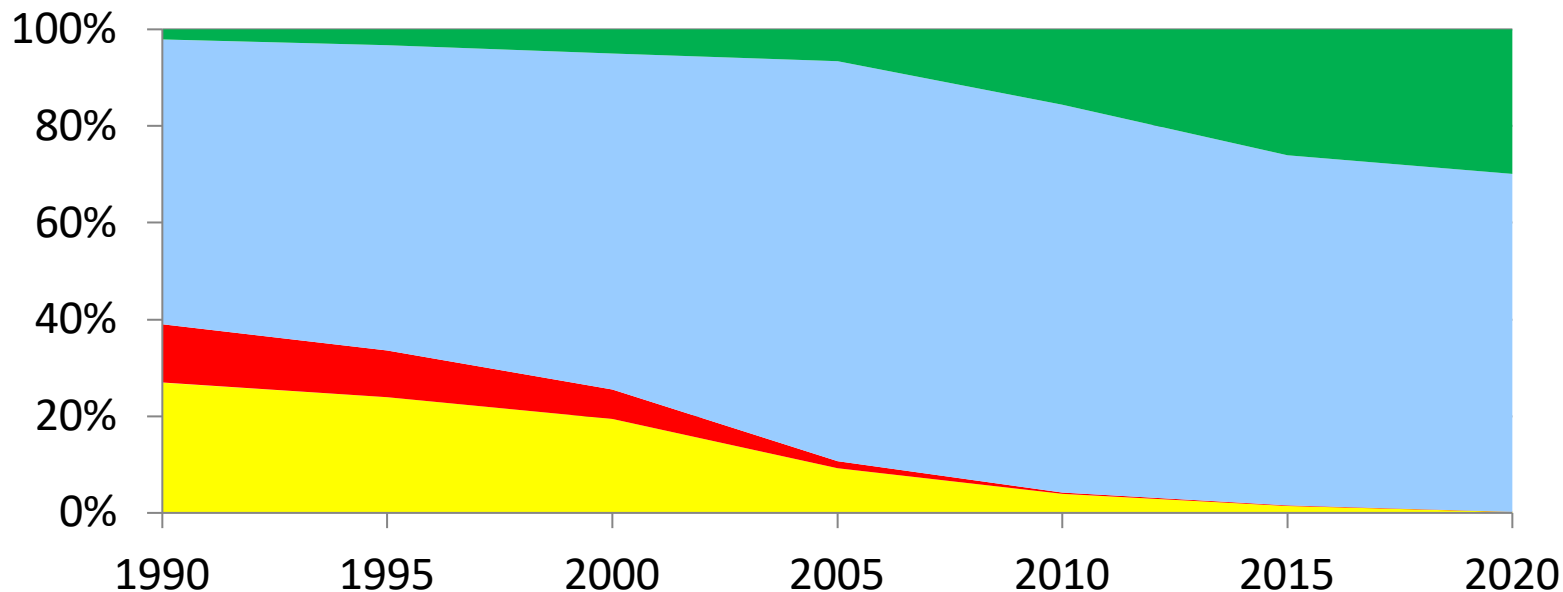
2015

Was put into operation the CNG bus charger station at Kaposvár DH plant



Fuel portfolio (1990-2020)

■ coal and coal products ■ oil and oil products ■ natural gas ■ renewables, waste, nuclear

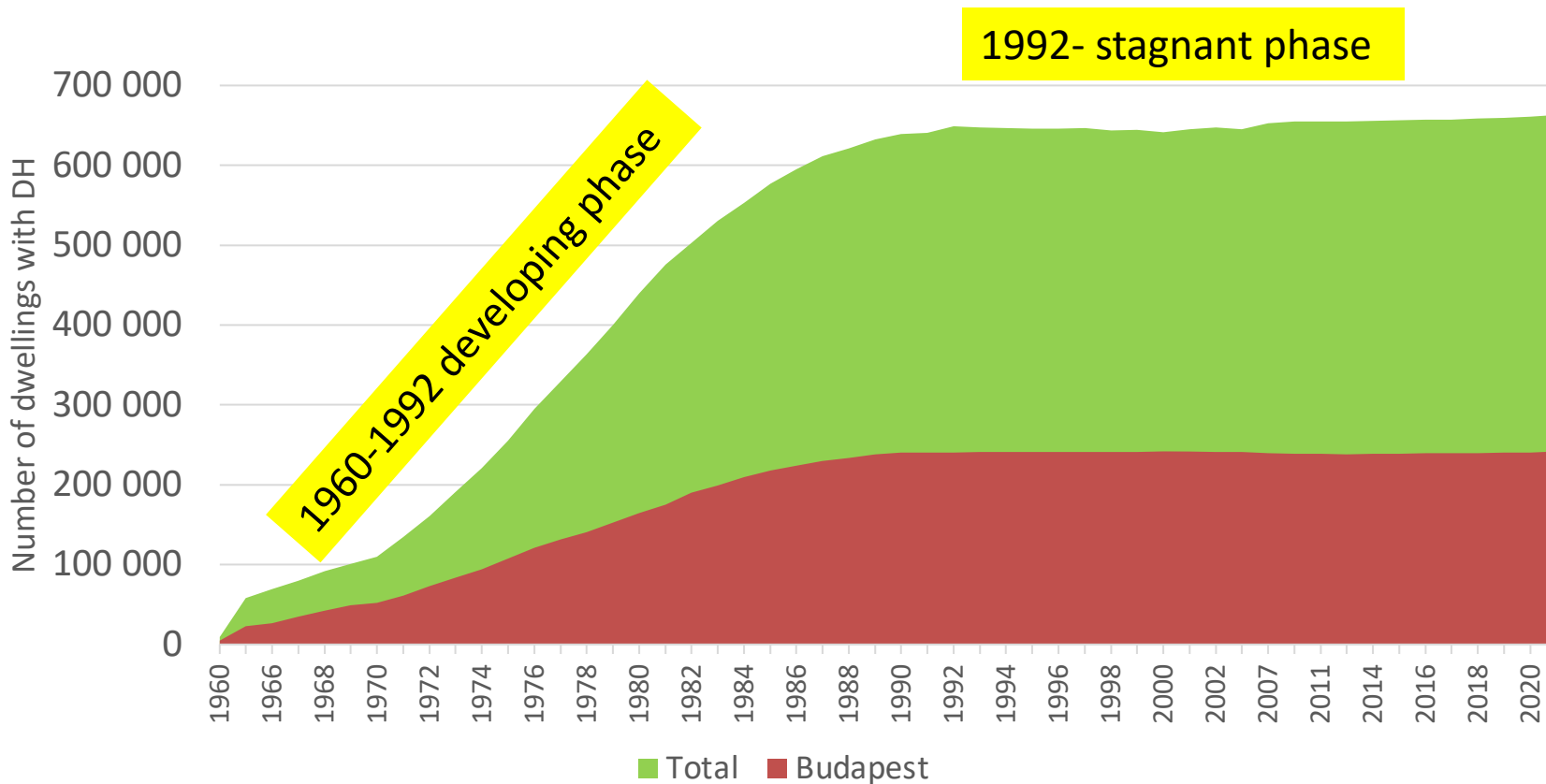


◆ coal **27%→1%** ◆ oil **12%→0%** ◆ natural gas **59%→70%**
◆ renewables+waste+nuclear **2%→29%**

Settlements with green DH

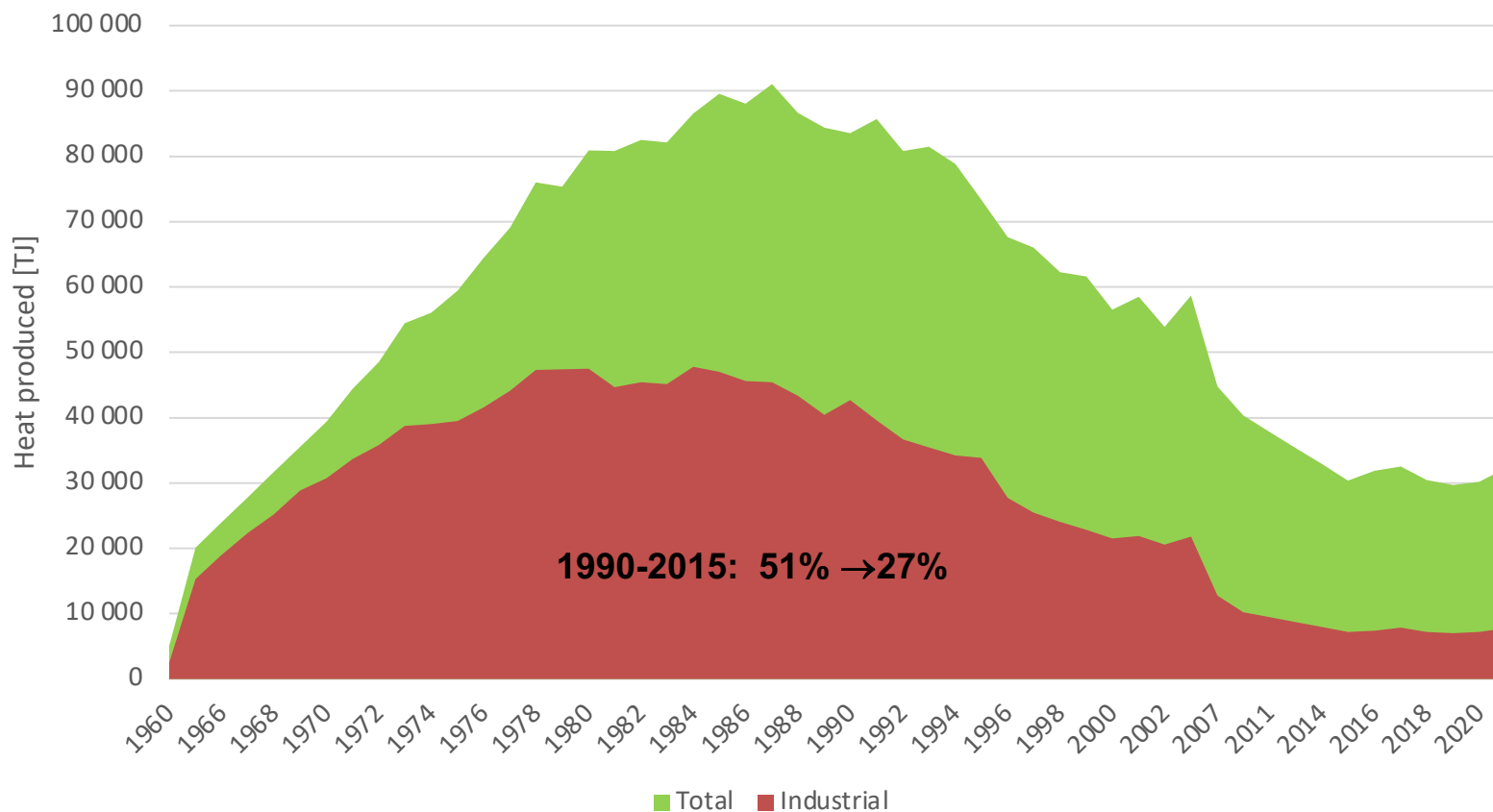
◆ geothermal energy **13** ◆ biomass **19** ◆ biogas **2** ◆ communal waste **1**

Number of Dwellings with DH (1960-2021)



- ◆ 663 117 district heated dwellings ◆ share in total 17%
- ◆ 241 456 (36%) in Budapest ◆ share of the 10 largest cities with DH 71%

Heat Produced (1960-2021)



- ◆ 1986-2014 continuously decreasing heat demands
- ◆ industrial decline ◆ heat metering ◆ energy efficiency projects in the building sector
- ◆ awareness raising of the consumers

DHC sector currently

heat storages
only in a few
cases

>70°C radiator systems

>100°C hot water

substation separation

Geotermikus | Geothermal

11%

Földgáz | Natural gas
70%

Hulladék | Waste
5%

Biomassza | Biomass
12%

Nukleáris fűtőelem |
Nuclear fuel
1%

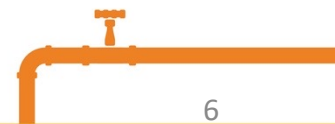
Egyéb | Other
1%

district
cooling very
rare

security of supply,
affordability, energy
savings, sustainability,
climate protection

reinforced concrete
protective canals

metering in substations

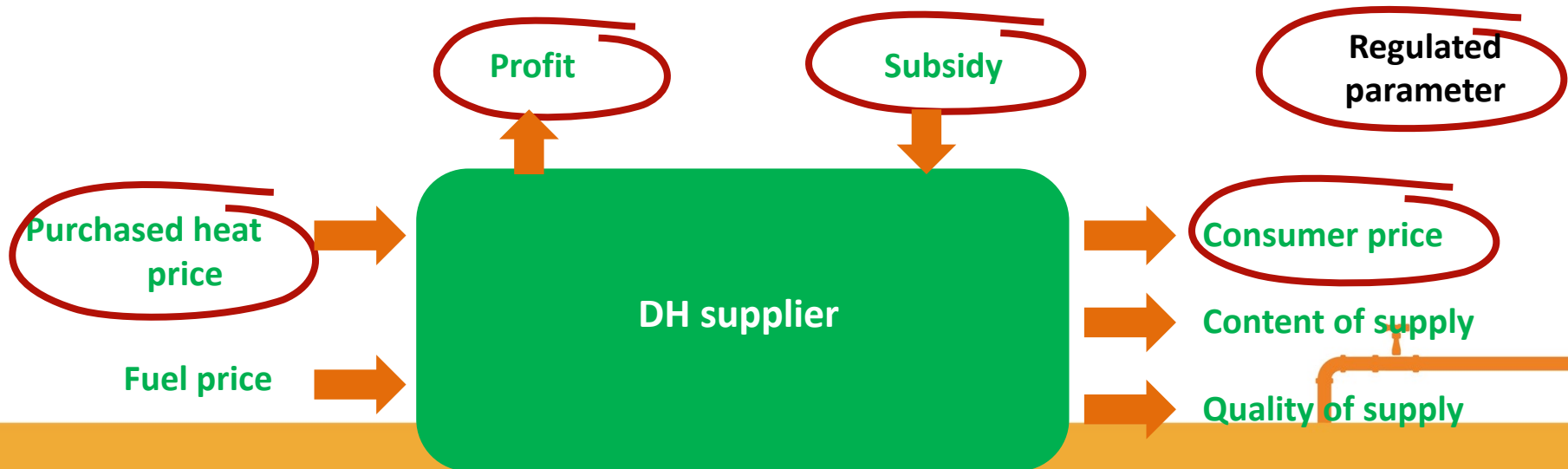




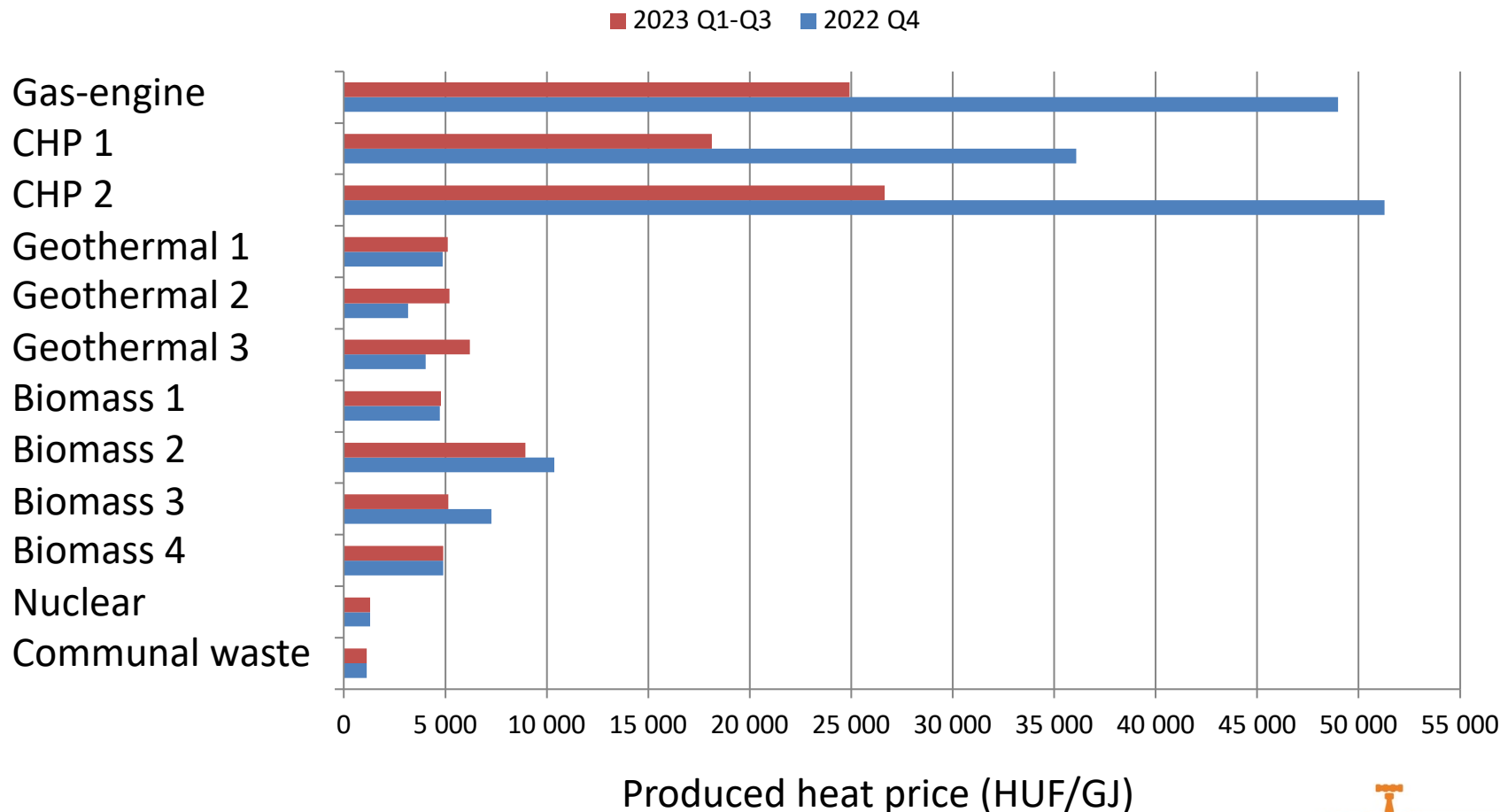
This project was supported as part of Sustainable Energy, an Interreg Danube Region Programme project co-funded by the European Union (ERDF fund) with the financial contribution of partner states and institutions

Map data © 2017 GeoBasis-DE/BKG (© 2009), Google

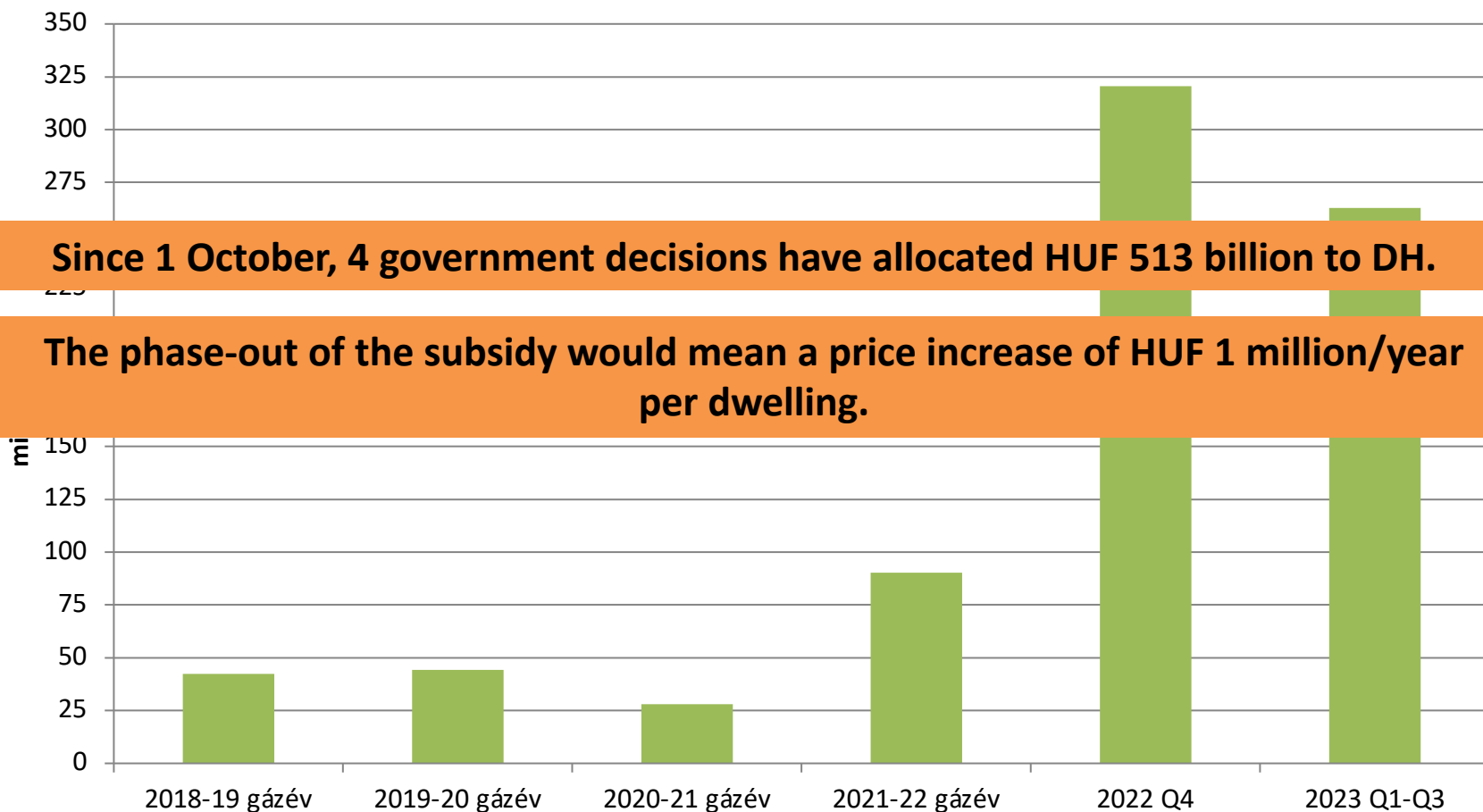
- Feed-in tariff system for CHP electricity ceased in 2011 except for renewables.
- Natural gas and electricity is purchased on the free market, and the electricity cogenerated is sold on the free market, too.
- The heat prices of the heat producers are **reviewed annually** by the Authority
- End user price for households and specially treated institutions are fixed by the Minister for National Development since 2011
- There was implemented a three-step overhead reduction of end-user prices of public services since 2013. DH price was reduced by 22 % till November 2014.
- DH suppliers receive subsidies to cover the difference between their recognised costs and incomes (~20-40% so far, this year it will be a multiple of sales)
- Profit cap of max. 2% for DH production and heat supply. Surplus profit have to be channelled into system modernization.



Producer prices fixed by authorities 2022 Q4 and 2023 Q1-Q3



Demand for support from district heating providers

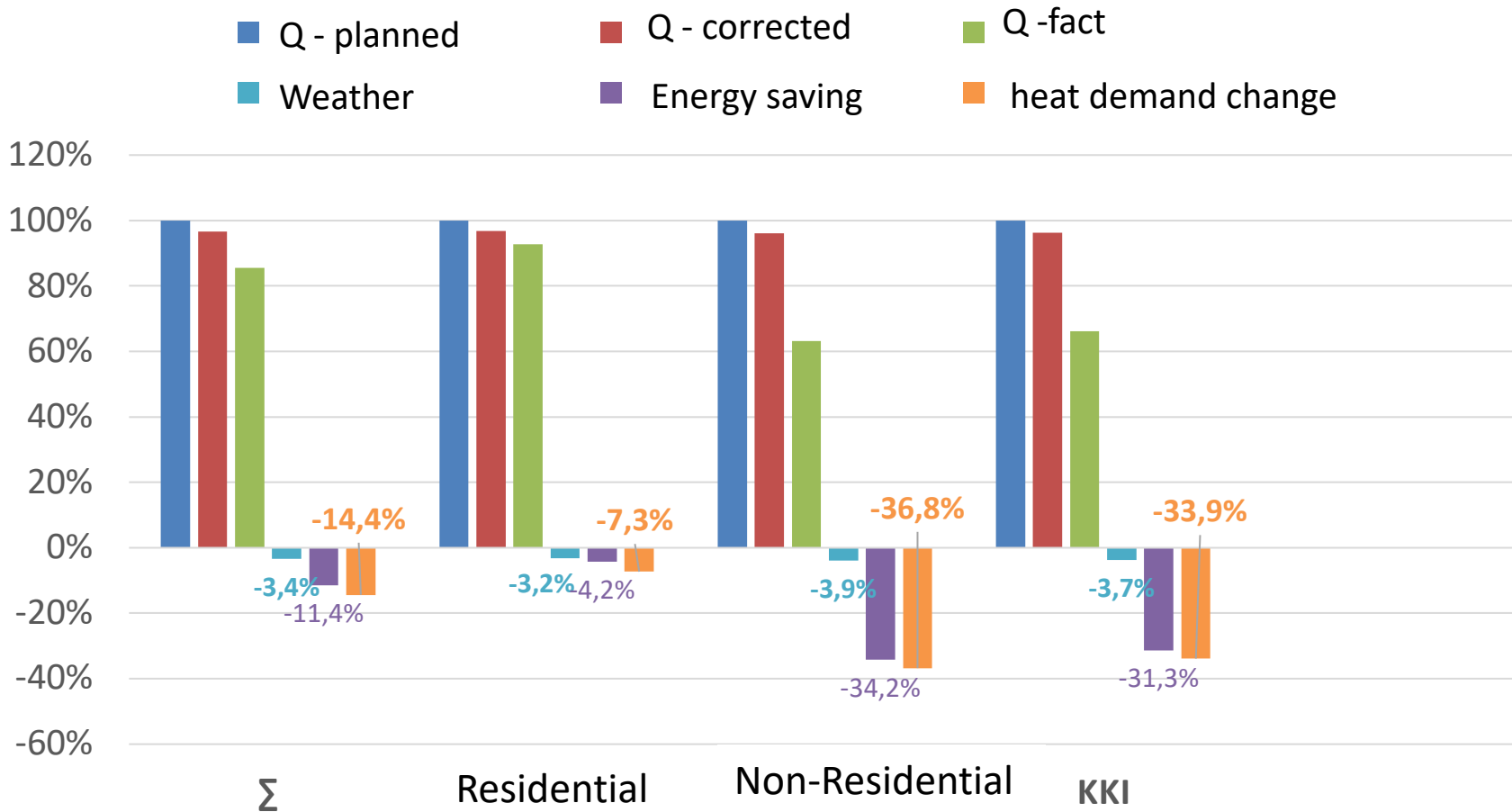


Since 1 October, 4 government decisions have allocated HUF 513 billion to DH.

The phase-out of the subsidy would mean a price increase of HUF 1 million/year per dwelling.

HUF 600 billion instead of the HUF 25-50 billion in the previous gas year
 (with a HUF 200 billion non-residential price increase)

Impact of consumer energy savings on district heating demand (October 2022 – February 2023)



Weather -3 ... -4%; **Energy savings:** residential -4,2%, KKI -31,3%, Non-residential -34,2%; s.á.: -11,4%

SUM -14,4% weather -231 T J, Energy savings -756 TJ, SUM -987 TJ

Green DH Programme

Support for thermal storage

Efficient DHC

"As a result of the implementation of the Green District Heating programme, we aim to transform district heating supply into a more energy-efficient (low temperature) service that cooperates with other energy networks, plays a key role in electricity system regulation, is customer-centric and is billed with smart cost allocation."

Geothermal, waste,
sustainable biomass

Natural gas share max.50%



Co-funded by
the European Union

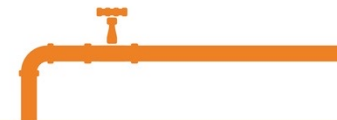


How do we see the future?

- „High efficiency district heating”
 - The heat sector has enormous potential for renewable energies (Hungary envision at least 50% renewable share in DH generation by 2030 (NECP) today: ~30%)
- Smart metering and heat storage
- Market expansion (new areas, new product (cooling))

What we need for this:

- low temperature-request building
- developing a regulatory environment to support the expansion of district heating and optimization of heat mix
- financial support





INTRODUCTION OF



Who we are



- The Association of Hungarian District Heating Enterprises (MaTáSzSz) was founded in 1993 by 14 district heating service provider enterprises.

- The Association is the **representative body** of the Hungarian District Heating sector.
- Our members provide district heating services to appr. 98 % of the 650 thousand apartments using district heating in Hungary.

Membership



83 Full members

- 72 DH provider
- 11 DH producer



3 Associate
Members



57 District
Heating Industry
Division
members



Our mission

The Association

- responds sensitively to the demands of various social actors and changes in the social environment;
- is a key player of domestic energy sector thanks to its openness, professional competence and credibility;
- has influence on the decision-making mechanisms of the sector by giving priority to the interest of DH consumers and by coordinating the professional and economic interests of DH service providers;
- is at the forefront in the fields of innovation, environmental and climate protection and energy efficiency.

idea → plan → action



Main activities

- Representation of DH sector's interests, lobbying;
- Expert consultation at sector level;
- Participation at legislative preparatory work;
- Coordination and prior technical consultation during preparatory work of government decisions;
- Forge of technical cooperations and contacts with domestic and international organizations;
- Promotion of District Heating & image development;
- Public representation of DH sector;
- Dissemination of best practices and knowledge via technical working committees;
- Organization of conferences and professional events;
- Organization of domestic professional and helpdesk competitions.

Organization of conferences and trainings

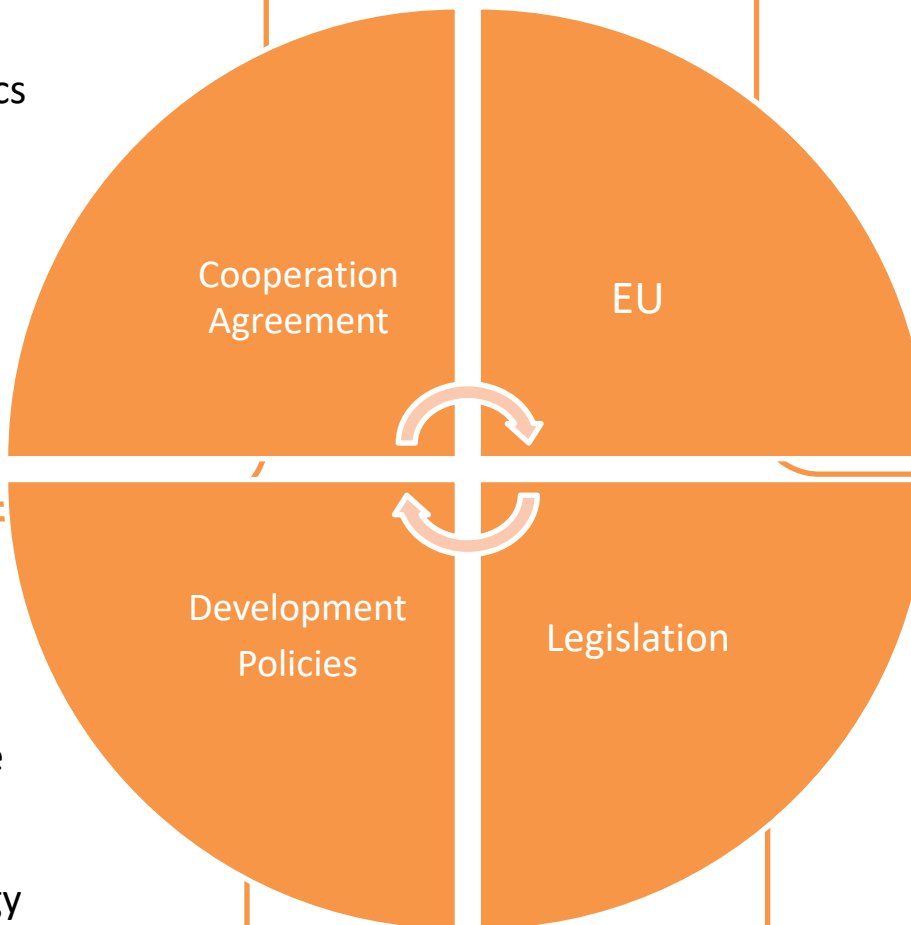
We organize for our partners and members technical trainings, competitions, study visits both inland and abroad, workshops and business clubs.

We launched our e-learning training in 2018 labelled MaTÁSzSz Online Academy.



- Hungarian Energy and Public Utility Regulation Authority
- BCCI Industrial Department - Energetics Division
- Major Hungarian universities (pl.: BUT Faculty of Mechanical Engineering)

- Associate Member of Euroheat & Power
- Cooperation with Hungary's representatives in the European Parliament
- Cooperation with the Permanent Representation of Hungary to the European Union in Brussels



- Member of the Monitoring Committee for the utilization of EU grants in frame of Environment and Energy Operational Programme

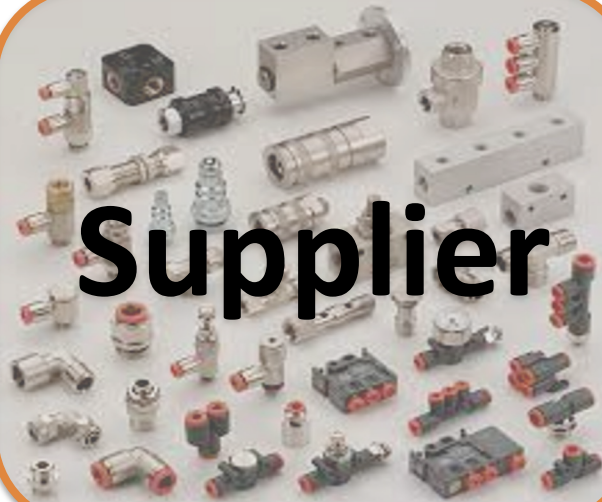
- Strategic Partnership Agreement with:
 - Ministry of Energy



District Heating Industry Division



Supplier

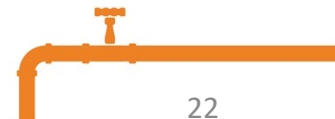


- Fittings (pl.: ISG Uniball)
- Pipes (pl.: ISOPLUS)
- (Smart) Metering (pl.: Comptech, Techem, ista, Brunata Zenner)
- Pumps (pl.: Grundfos, Wilo, KSB)
- Etc. (pl.: Dynoteq, HEXONIC Heat Exchangers)

Service provider



- Planning (pl.: Real Energo, Mannvit, MS Energy)
- Tenders (pl.: Real Energo, Mannvit, MS Energy)
- IT solutions (pl.: Arkance System, ASP,
- Energy consulting (pl.: EnergyHub)
- Maintenance (pl.: Power Szervíz)
- Etc. (Tera 21)

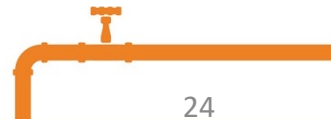


Project development in the field of geothermal energy. Arctic Green Energy is an international company, owning and operating several geothermal systems all around the World, and looking for investment possibilities in Europe to further develop its portfolio, in cooperation with local partners.

Mannvit Kft is a subsidiary of Arctic Green Energy, providing comprehensive geoscience and technical solutions in preparation, exploration, execution, commissioning of geothermal systems, for various Clients.



MANNVIT





The MS Energy is an engineering consulting company that works primarily in the field of earth sciences.

It provides permanent engineering services to O&G and Geothermal Energy sectors in Central and Eastern Europe and plays an active role in professional support for geothermal investments in the region. The MS Energy is an engineThe company's HQ is in Budapest, Hungary, and it has a subsidiary in Cluj-Napoca, Romania. The base of the company consists of geoscientists and energy specialists, as well as reservoir engineers and drilling engineers, environmental and permitting specialists. The activity is complemented by economic and project management competencies. MS Energy is the Admin Company of the Central European Energy Council, an Oil and Gas Scout Group Association with more than 300 member companies.

Pre-insulated pipe systems from the ISOPLUS Group create connections, carrying renewable energy swiftly to right where it is needed, each and every day. We are making the energy transition possible – all across Europe.



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István Huszár





Dániel Túri





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Thank you for your attention!

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