

# CZECH REPUBLIC

Presentation of to-be HPT TCP Member Country Report  
September 12, 2023

*„Our Heat Pumps on today's menu  
are really good choice“ 😊*

# Czechia is new member of HPT TCP as of 2022!



## **New member country of HPT TCP**

In October Czech Republic formally joined the HPT TCP, and thereby the TCP has 18 member countries. The Czech delegates attended the spring ExCo meeting as invited guests and attended the fall meeting as formal delegates.

# Current status of HP technology in CZ

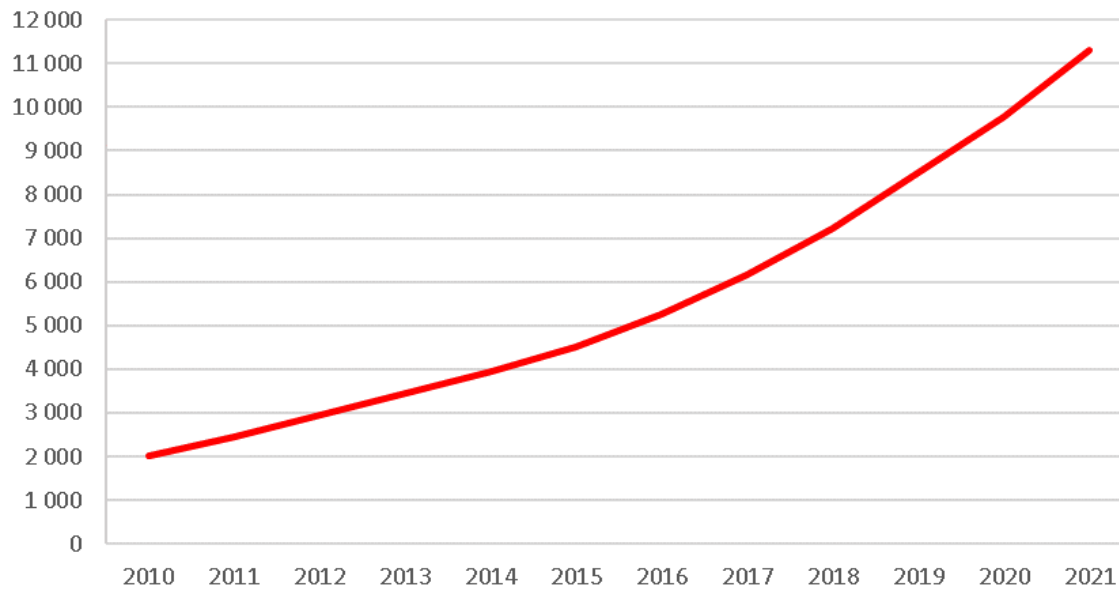
**HPs among top 3 RES in country energy mix**

**About 11 PJ of ambient energy utilized by HPs in 2021 (~ 1 % of final energy use)**

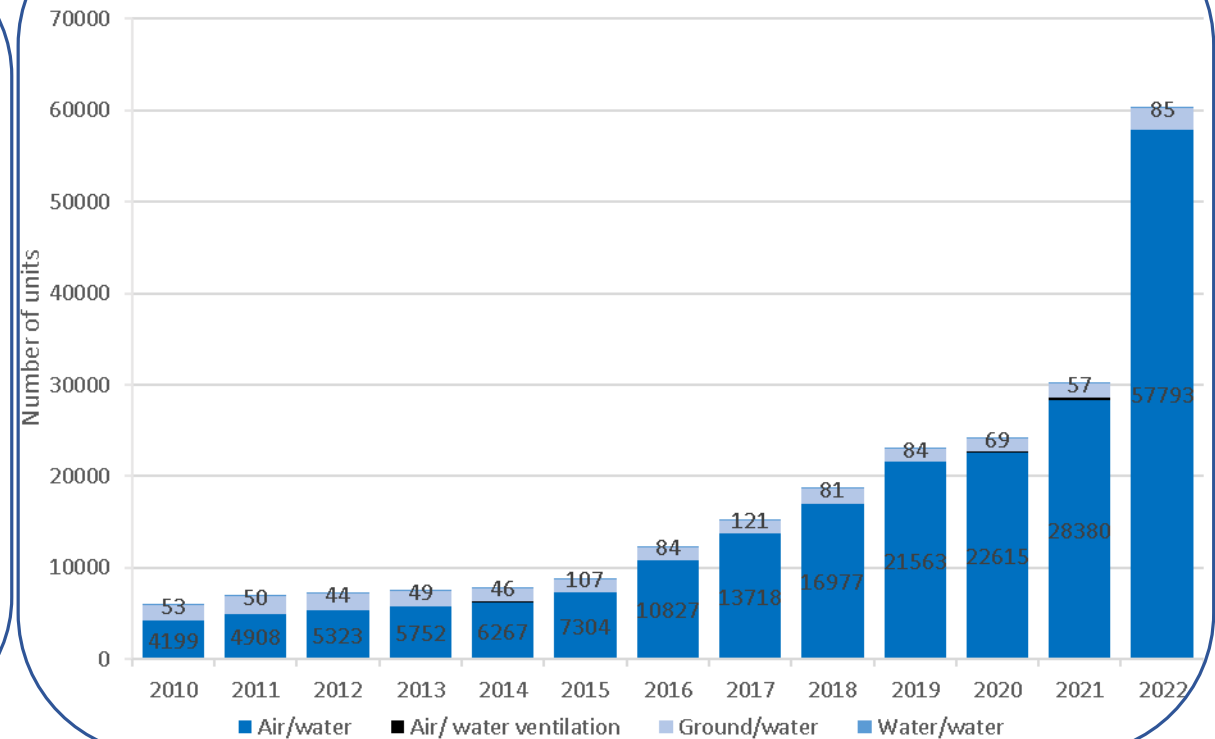
**Over 200 thous. installations estimated to be put into operation since 2010 (as of end of 2022)**

# HP energy and installations statistics since 2010

Estimation of ambient energy used by HPs (TJ/year)



Estimation of heat pumps sales by category, 2010-2022



# Since start of war in Ukraine...

- *Steep increase in number of new HP sales (~ 40 thous. by mid of 2023, ~ 75 thous. in total in 2023 is expected)*
- *Plans for large increase in capacities of HP manufacturers in CZ (Daikin and Panasonic)*

# Major HP manufacturers in CZ

- *DAIKIN*
- *Panasonic*
- *Local HP manufacturers*

**Today in total 150-200 thous. units a year manufactured.**  
**By 2030 as much as 1 mil. units/y may be expected!**

Výrobci tepelných čerpadel v Česku masivně investují. Produkce **miří k milionu kusů ročně**



Výroba tepelných čerpadel v tuzemském závodě společnosti Panasonic • ZDROJ: Panasonic



Ondřej Souček

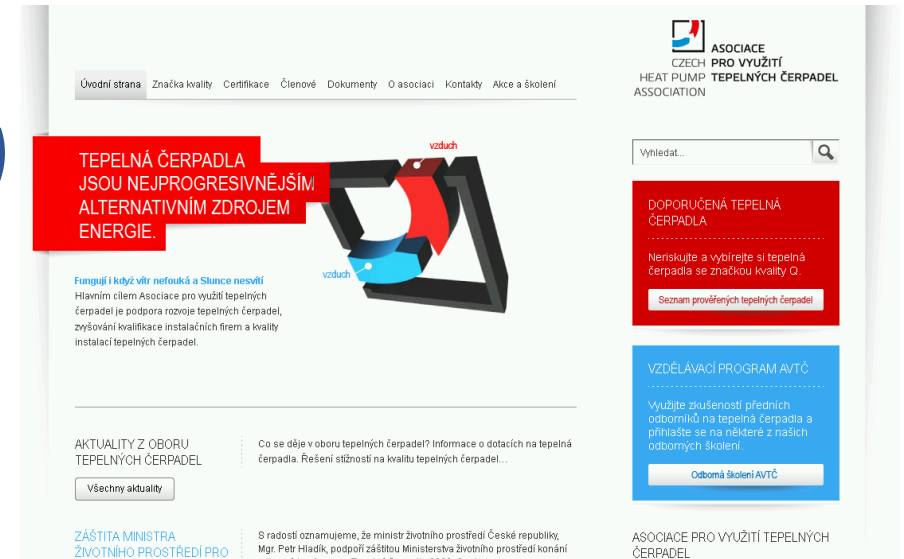
14. března 2023 • 19:00



VSTOUPIT DO DISKUZE

# Major HP market brands in CZ

- *ACOND (CZ manufacturer)*
- *Mastertherm (CZ manufacturer)*
- *Mach (CZ manufacturer)*
- *Stiebel Eltron*
- *IVT + Bosch*
- *Nibe + Alpha Innotec*
- *Viessmann*



<http://www.avtc.cz/>

# Subsidy schemes...

Residential sector: Nova zelena usporam (NZU)

Public sector: OPZP 2020

*R&D than supported via > TA of CZ* <https://www.tacr.cz/>

Large-enterprises: OPTAK

District Heating: HEAT (Modernisazion Fund)

# Major barriers...

8 High capital costs (residential HP typical price 10-20 thous. EUR inc. VAT 21 %)

Distribution tariffs (in future maximum power use, not per MWh)

Lack of power capacity in grid (phase-out of coal in Czechia by 2030s)

Long-term investment pay-back period


# HPP idea in Prague ~ 180 MW<sub>th</sub>



1  
0


1  
2

# Invitation to Prague (:



**INDUSTRIAL HEAT PUMPS**

**THE FUTURE IS ELECTRIFIED, GET READY!**



**INTERNATIONAL CONFERENCE**

## INTEREST IN LARGE HEAT PUMPS BOOMING ACROSS THE GLOBE.

A Major International Event fully dedicated to large heat pumping technology is coming to the heart of Europe, to Prague. The event agenda covers a broad range of large heat-pump related topics such as District Heating and Industrial application up to 200°C as well as Sector coupling and accumulation. Part of the main event is a high-level networking banquet to be held in the Mlynec restaurant located just beside Charles bridge and a commentary site visit of The National Theatre which is using the Vltava river as a heat source. You should not miss this unique opportunity to hear the latest trends from Top European speakers!

Keynote speaker

### DR. JAN ROSENOW

Principal and Director of European Programmes at the Regulatory Assistance Project (RAP)



Dr. Jan Rosenow was named one of the world's top 25 energy influencers. Jan has been interviewed by the New York Times, Forbes, the BBC, Welle, the Times, The Guardian, The Telegraph and Bloomberg. He acts as Principal and Director of European Programmes at the Regulatory Assistance Project (RAP) and holds a PhD from Oxford University and an MSc from the London School of Economics.

Renowned speakers



#### CORDIN ARPAGAUSS

Senior Research Engineer, Institut für Energiesysteme IES Switzerland



#### STEPHAN RENZ

Chairman International Energy Agency - Heat Pumping Technologies TCP



#### UTA WEIB

Programme Lead Buildings and Heat Grids, Agora Energiewende



#### THOMAS NOWAK

Secretary General at European Heat Pump Association

## Event agenda

All sessions will be simultaneously translated into Czech and English

**29 NOV**

O2 UNIVERSUM  
09.00 — 12.00

### STRATEGIC OUTLOOK FOR LARGE HEAT PUMPS

Session chair  
Dr. Jan Rosenow

O2 UNIVERSUM  
13.00 — 18.00

### HEAT PUMP TECHNOLOGIES FOR DISTRICT HEATING

Session chair  
Mr. Tomas Caha

MLYNEC RESTAURANT  
20.00 — 24.00

### NETWORKING BANQUET

Banquet with live music in the city centre

**30 NOV**

O2 UNIVERSUM  
09.00 — 12.00

### HIGH-TEMPERATURE HEAT PUMPS FOR INDUSTRY

Session chair  
Dr. Cordin Arpagaus

O2 UNIVERSUM  
13.00 — 18.00

### INNOVATIVE HEAT PUMP TECHNOLOGIES

Session chair  
TBD

**01 DEC**

NATIONAL THEATRE  
09.00 — 12.00

### NATIONAL THEATRE SITE VISIT

Commented Site visit of 1,5MW heat pump installation in theatre built in 1881 using Vltava river as heat source.

## Locations & Contact



Commented Site visit  
**NATIONAL THEATRE**

Venue location  
**O2 UNIVERSUM**

Banquet with live music in the city centre  
**MLYNEC RESTAURANT**



More information and event registration at [www.exergie.cz](http://www.exergie.cz)  
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Associates



# Q&A

**Tomas Vorisek**

SEVEn, The Energy Efficiency Center

(Email: [tomas.vorisek@svn.cz](mailto:tomas.vorisek@svn.cz))

*(Note: Photo on initial page originally comes from Restaurant Mlynec Photo Gallery (<https://www.mlynec.cz>))*