Bundesministerium
Klimaschutz, Umwelt,
Energie, Mobilität,
Innovation und Technologie

Innovative Energy Storage Technologies in Austria: Market Development 2020

Highlights of Energy Research 2021:
"Energy storage - key element to energy transition“

Vienna, 23 November 2021

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Project team

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commissioned by BMK

Project targets

- Empirical survey and documentation of the market development
  - PV-Storage Systems up to 50 kWh
  - large-scale heat storage in local and district heating systems
  - thermal activated building parts
  - innovative storage systems
- Target groups: Energy-, research- and environmental policy, industry, r&d institutes
- Methods: technologically specific literature research, interviews with experts, evaluations of available statistics, empirical data collection
- => basis for a future continuous storage monitoring in Austria

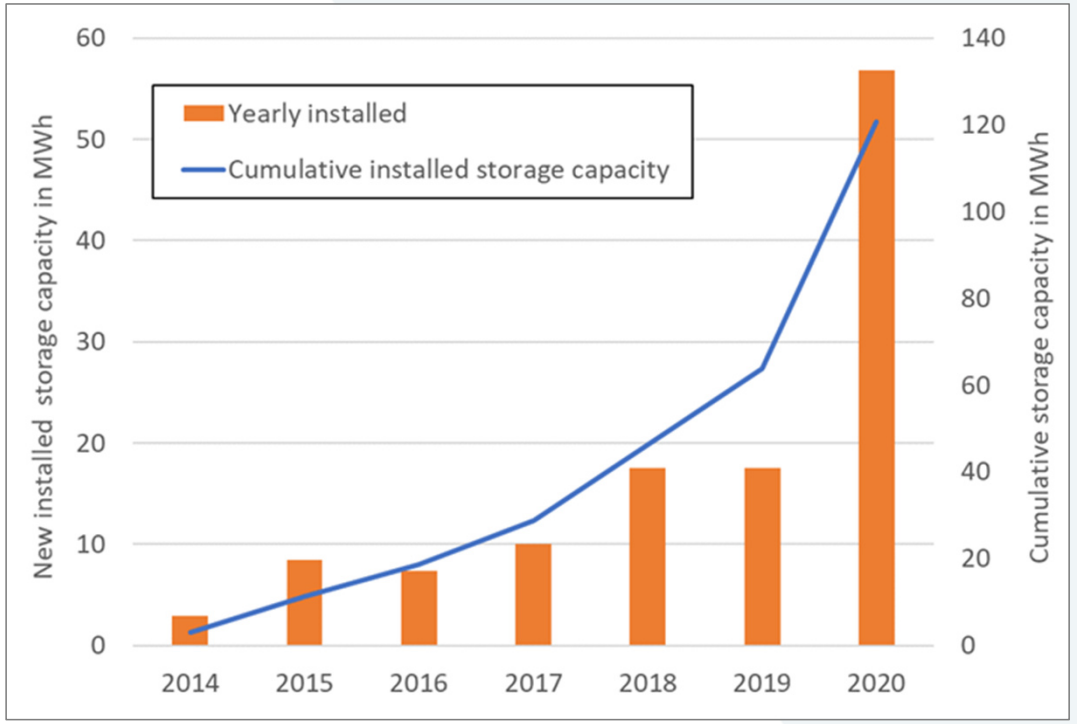
PV-Storage Systems

New installations

- 4,385 PV storage systems, representing an installed capacity of 56.8 MWh
- 2019 to 2020: +224,1 %

Stock

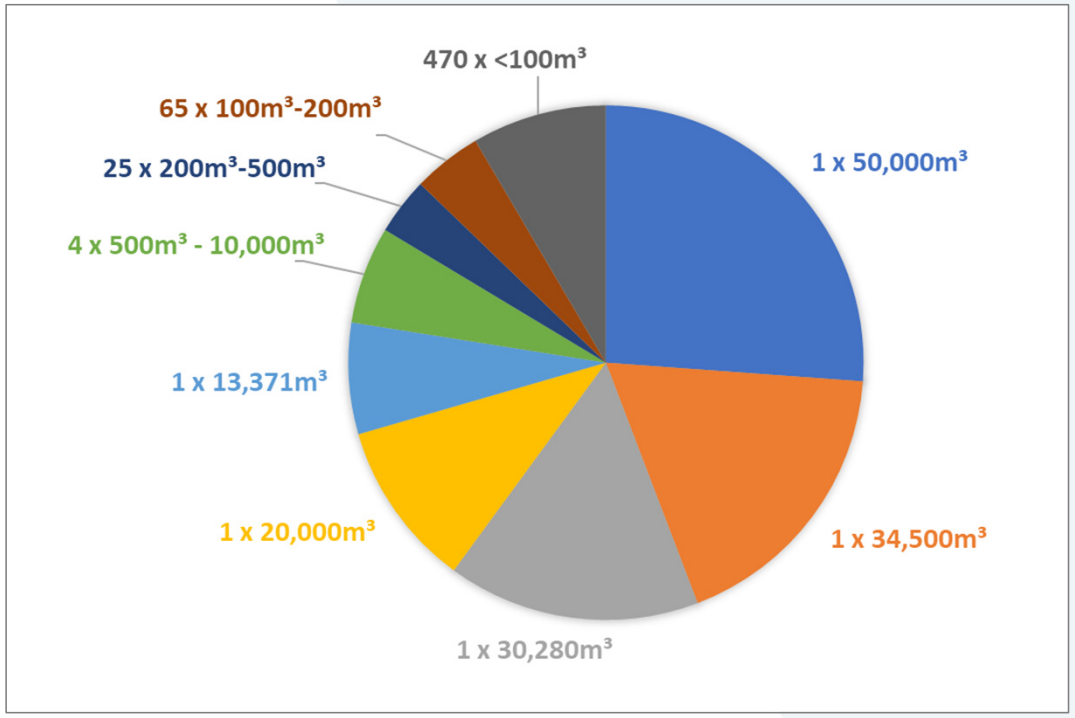
- 11,908 PV storage systems with a net capacity of 120,6 MWh
- 2019 to 2020: +89,1 %+



Market development of PV battery storage systems in Austria until 2020
Source: Technikum Wien

Large-scale heat storages in local and district heating systems

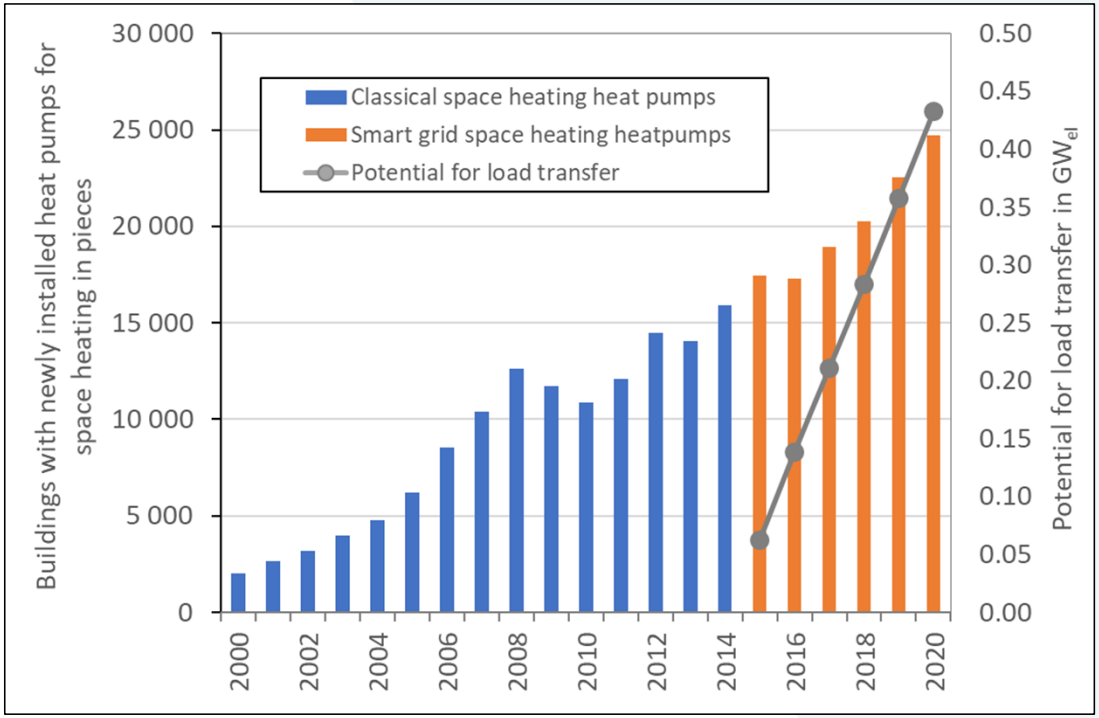
- 840 tank water storage systems
- with a total heat storage capacity of about 7.8 GWh (35 K)
- with a total volume of about 191,150 m³
- in 569 heating networks over the last 20 years
- in addition, borehole storages with a total borehole length of 53.3 km in three “cold” heating networks



Distribution of the total volume of tank water storage per surveyed heating network. Data basis: 569 heating networks. Source: AEE INTEC

Thermal activation of building parts

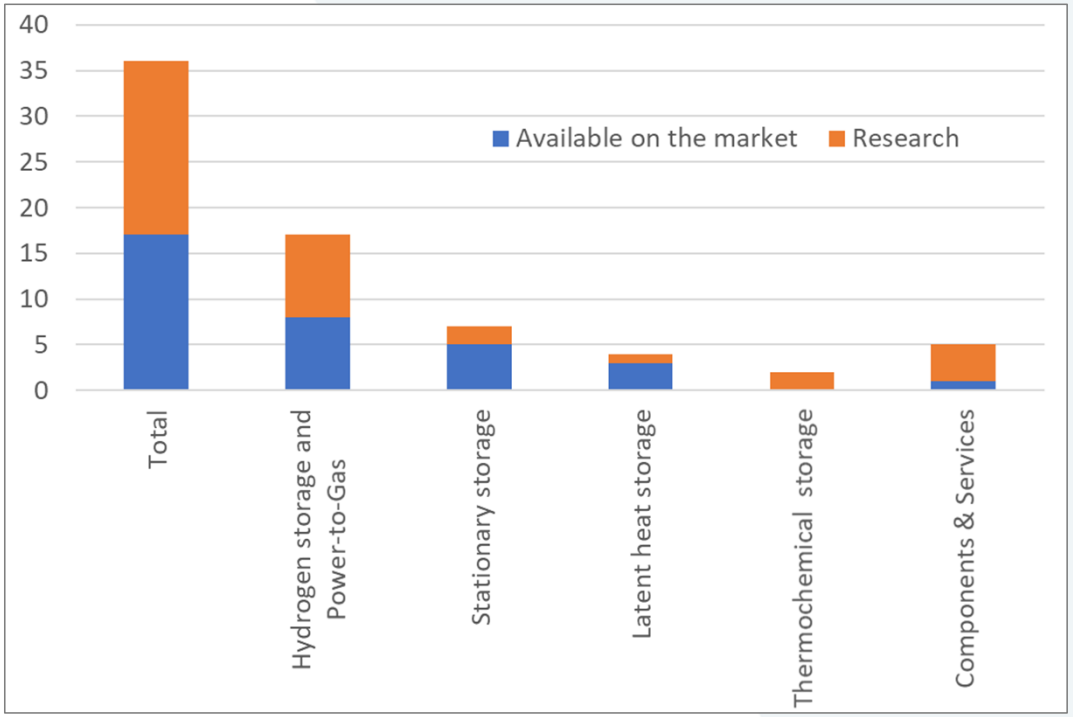
- almost all building activations are linked to the use of heat pumps
- 121,000 buildings with heat pumps for space heating with Smart Grid interfaces
- representing a theoretical maximum load transfer potential of approx. 0.43 GW_{el}
- 2019 to 2020: +20 %



Development of the grid-beneficial load shift potential
Buildings with annually newly installed classic and smart grid heat pumps in pieces and the resulting load shift potential in GW_{el}. Source: ENFOS

Innovative storage systems

- 36 Austrian companies and research institutions in the field of innovative storage technologies
- 17 already on the Austrian market
- 19 on research level
- at least 40 FTEs in 2020



Market participants innovative storage technologies in Austria
Number of companies and research institutions researching or offering innovative storage technologies for the Austrian market. Source: BEST

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Thank you for your attention!

Final report (*in German*)
https://nachhaltigwirtschaften.at/schriftenreihe/2021-35