Case Studies

https://heatpumpingtechnologies.org/annex57/

ANNEX 57 — Flexibility by implementation of heat pumps in multi-vector energy systems and thermal networks

Demo No.: D-004	**Location/City:** Stockholm	**Country:** Sweden
Project name (short and full title): SthlmFlex		
Quotation: "sthlmflex is a research project aimed to create and test a flexibility market in "Storstockholm" (Greater Stockholm)"		
Schedule of the demo project (research study): 2020 – 2024?		**Year of realisation:** 2020
Leader organisation (owner, constructor, solution developer, research inst., etc.): Svenska Kraftnät, Ellevio and Vattenfall Eldistribution		
Participating organisations – demonstration project part (involved other organisations): Flexibility service providers, for example Stockholm Exergi		
Budget of the demo (invest/monitoring etc.):		

Summary of the project:

Svenska Kraftnät, Ellevio and Vattenfall Eldistribution have chosen to jointly find solutions to the congestion problem and the operating situation in the Stockholm region. The project guarantees the security of delivery for utility customers in the Stockholm region and enables connection of new customers, both by buying flexibility services, but also by increasing capacity with a total regional subscription thanks to increased coordination.

Stockholm Exergi participates in the project delivering flexibility in the power consumption from 17 industrial-scale heat pumps using alternative means to produce district heat when the flexibility is activated. The market place handles both short term flexibility bids and bids for long term seasonal availability products.

The total maximum electricity capacity need of Stockholm Exergi heat pumps in Hammarby and Värtan is 140 MW.

For the winter season 2021/22 Stockholm Exergi participated with 10 MW of power reduction from heat pumps and for 2022/23 Stockholm Exergi has offered 15 MW of power reduction. The result for 2022/23 is not decided when this text is written. In 2021/22 1 MW of heat pump resources from Stockholm Exergi was activated twice, in total four hours.

Expected results

- A regional market for electricity capacity
- That reduction of heat generation from large heat pumps can be used as a power capacity resource

Published articles (paper, article etc.):
N/A

Contact information

Country: Sweden	**Participating Organisation:** Stockholm Exergi AB	**Contact/name:** Anders Ångström