



Cost Reduction Industrial Heat Pumps



Project Leader:
Cluster:
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OPM:

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Partners:

AkzoNobel, Bronswerk, Cosun, DOW, ECM, FME, IBK, IOILoderscrokiaan, ISPT, LambWeston, Smurfit Kappa, Tata steel

Budget:
Planning:

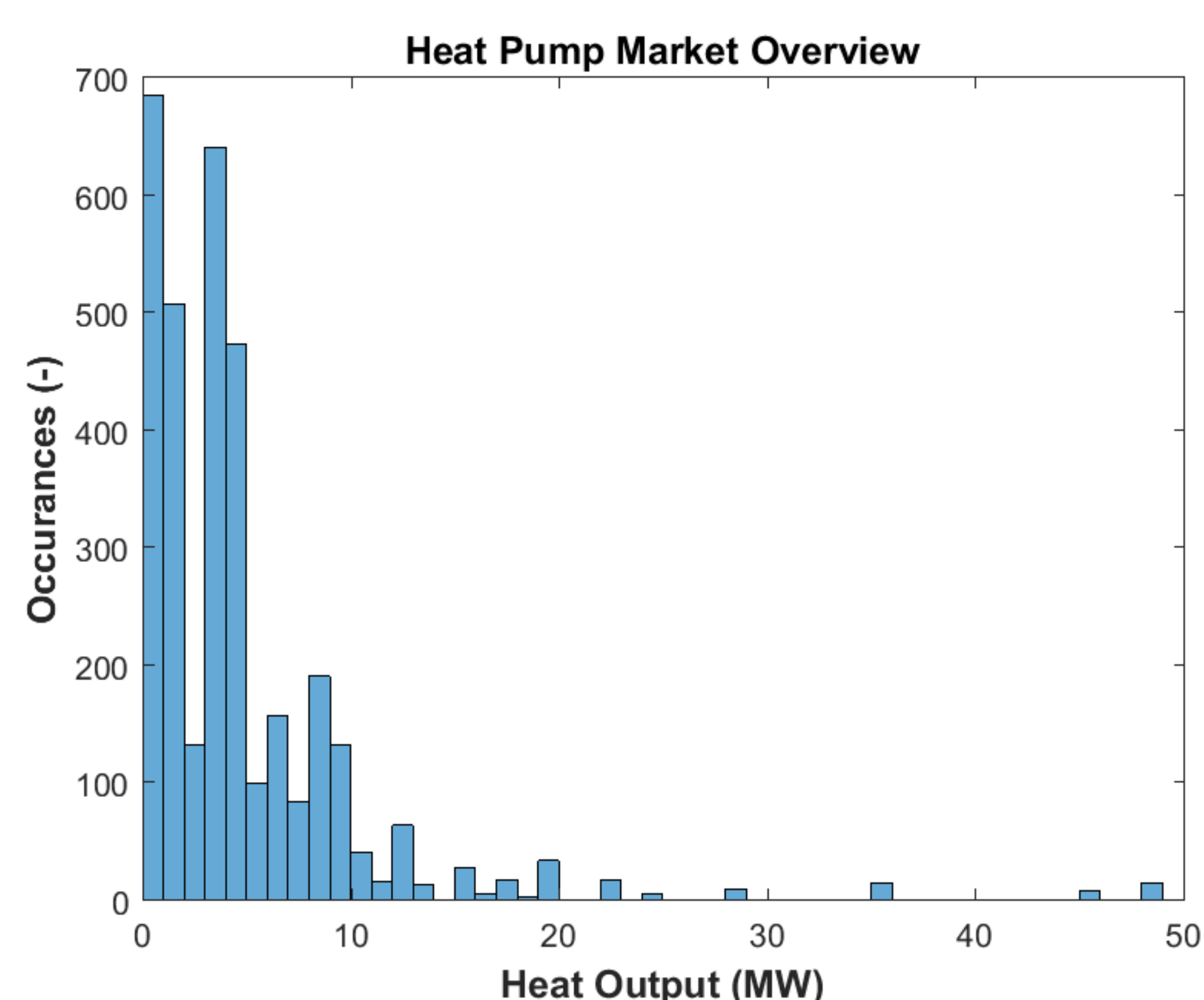
689.381€
October 2016 – June 2018

Objective:

- The overall objective is to develop and implement heat pump technology that is able to generate heat in an economically feasible way for industrial applications, using waste heat.
- More specific, this projects wants to demonstrate that a cost target of **150-200 €/kWth** can be achieved.

Motivation:

- Heat pumps allow for the recycling of waste heat, by upgrading the temperature level of this waste heat.
- The CAPEX of industrial heat pumps presently hampers the widespread implementation of this technology.
- The broad implementation of heat pumps in the Dutch industrial sector can annually save a staggering 87 PJ of energy.



Project scope:

- End-user demands & system integration
- Cost reduction options (components, engineering, manufacturing, measurement & control)
- Experimental verification of two heat pump concepts (compression, thermoacoustic)
- Market potential & consortium for follow-up



Applicability:

- Targeted markets are the refining, chemical, food, paper & pulp and steel sector.
- Temperature levels up to 200°C.
- New worldwide business opportunities for equipment manufacturers and technology providers

Status & Outlook:

- Market potential & standard sizing determined
- Investment costs < 200 €/kWth seem feasible for compression heat pumps
- Integration costs are still an issue
- Experimental activities planned for (early) 2018