

Industrial Heat Pumps Cases in France



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Prepared by EDF R&D

Contact : Jean-Marie Fourmigué,

jean-marie.fourmigue@edf.fr



French IHP references database

Sources of information

- Internal EDF documents
- Own R&D developments
- Manufacturers (but poor information)
- Communication on internet
- National seminars (ATEE, Ademe)

French HP references database

New sources of information:

Internal sharepoint "heat recovery"

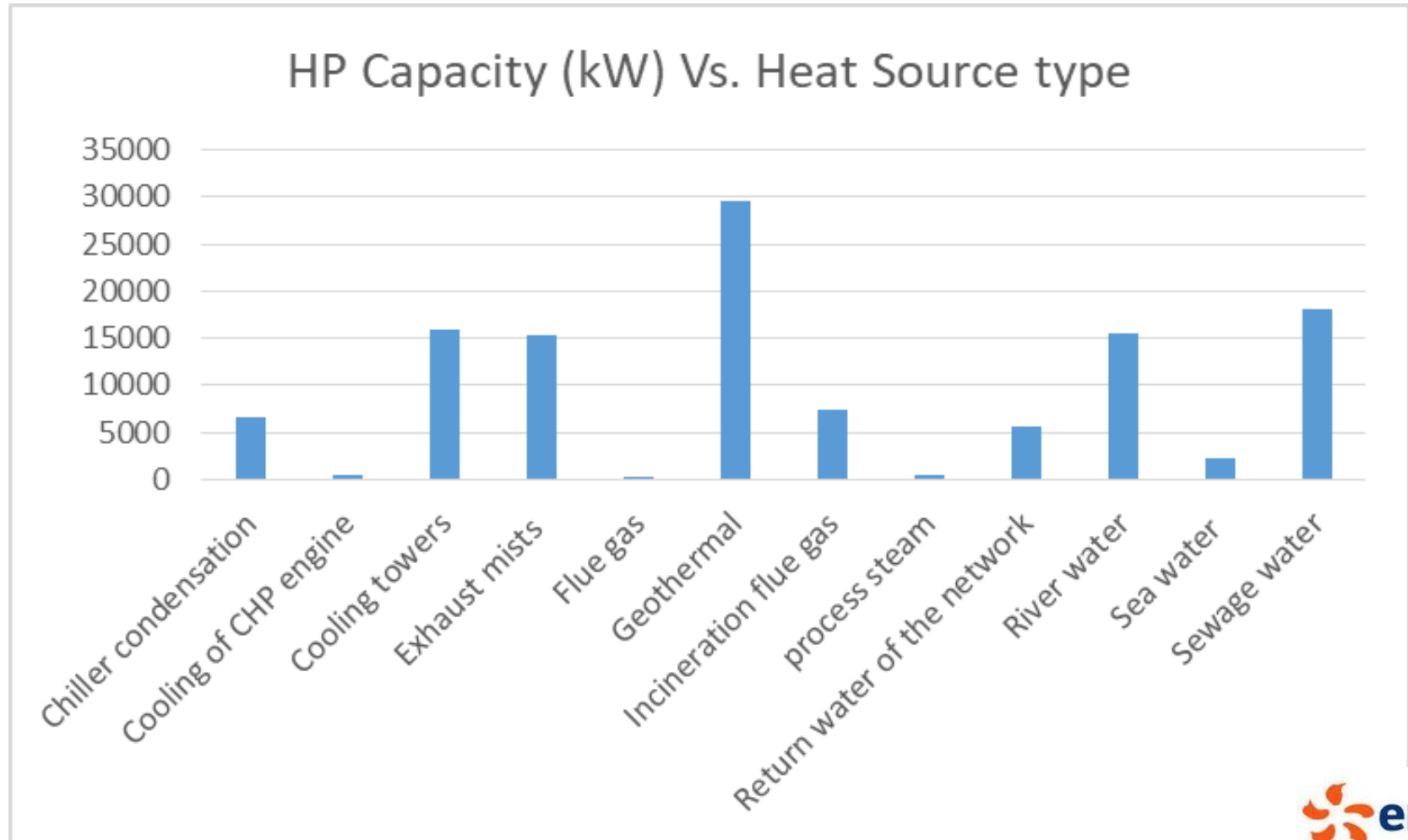
- Open within EDF Group (EDF, DALKIA)
- Share local information about réalisations and competition

Identification		Installation													
HPT Annex-#	Projects (reference)	Industry	Application	Process applied	Location	Year of installation	User (company)	HP manufacturer	Contractor	Consultant	HP technology	HP system	Working fluid	Compressor	
n.a.	District heating, Ghent, B	District heating	n.a.	Hot water supply	n.a.	2019	EDF Luminus	Johnson Controls	EDF Luminus	EDF R&D	MHP	water-water HP	R245fa	Screw	
n.a.	Rubber Industry, France	Chemical	Plastic/synthetic rubber manufacturing	Hot water supply	France	2019	n.a.	Carrier	DALKIA	EDF	MHP	water-water HP	R1234ze	n.a.	
n.a.	Malt industry, Vitry Le François, FR	Malt Industry	Malt Drying	Air heating	Vitry le François, France	n.a.	Malteurop	n.a.	n.a.	n.a.	n.a.	water-air HP	NH3	n.a.	
n.a.	District Heating, Brive, FR	District heating	n.a.	Hot water supply	Brive, FR	2019	Green Energy Brive	Johnson Controls	n.a.	n.a.	MHP	water-water HP	1234ze	n.a.	

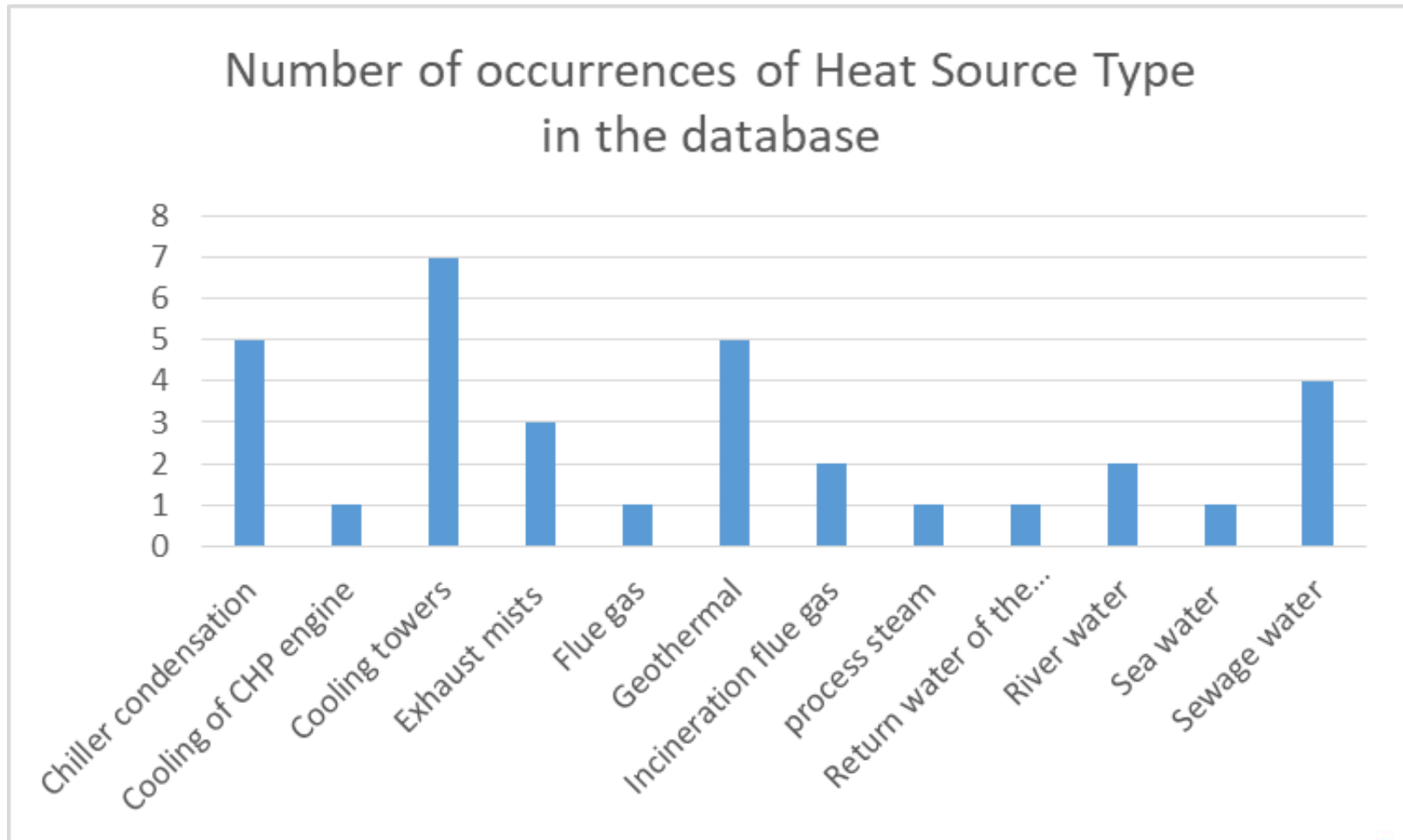
Database analysis

Industry Sector	Total installed capacity (kW)
Agriculture	440
Chemical	3 164
District heating	89 535
Education	419
Food industry	18 112
Malt Industry	4 500
Sports & Recreation -Swimming Pool	500
Total	116 700

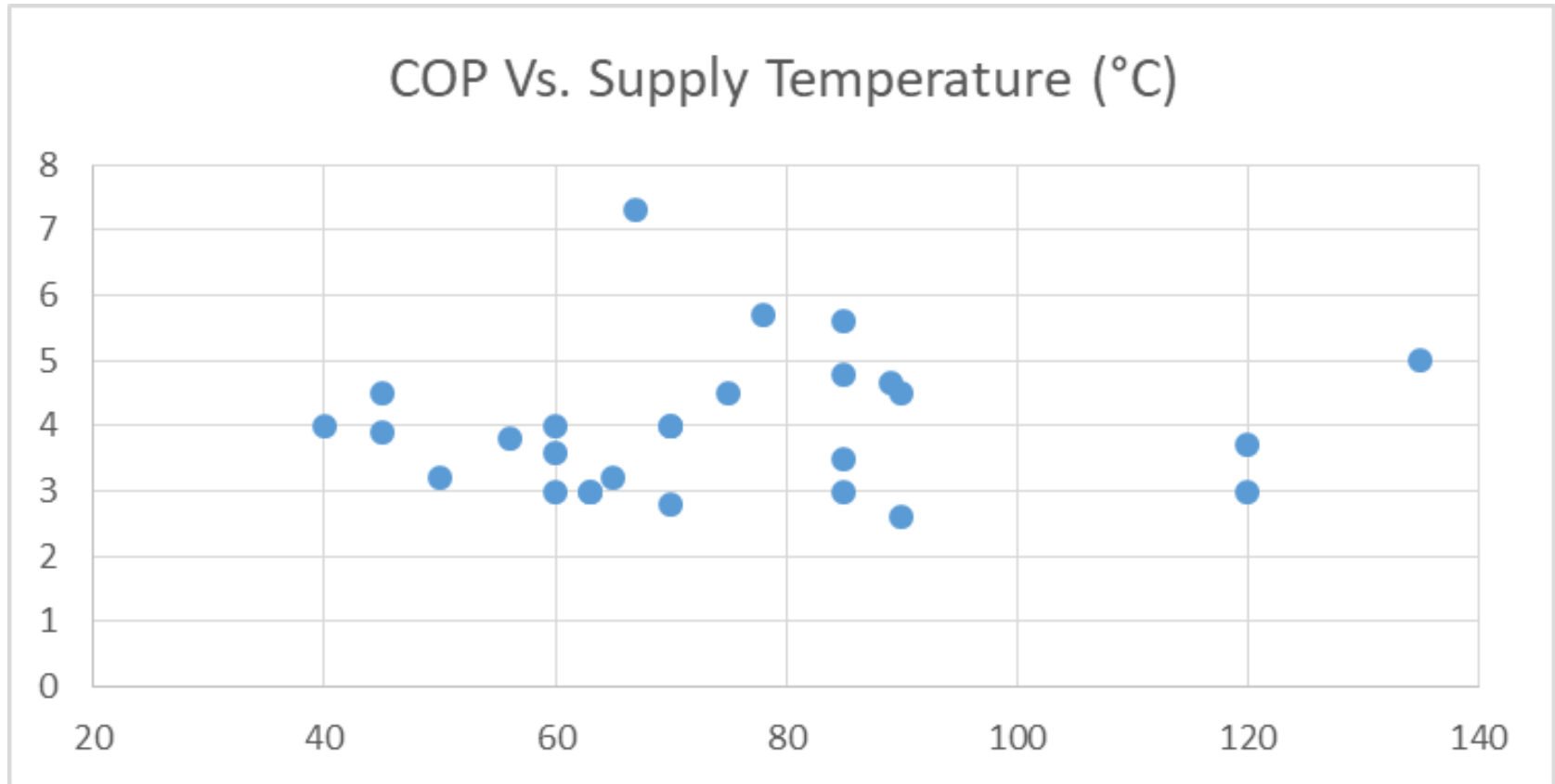
Database analysis : heat sources



Database analysis : heat sources



Database analysis : COP



Conclusion of the database analysis

- ❑ IHP plays an important role in France in Heating District network.
- ❑ For heating district network, the main sources of energy are geothermal and sewage water
- ❑ The food industry is the largest industry sector for IHP
- ❑ The heat sources are cooling towers and chillers condensers
- ❑ There is no clear correlation between the COP and the supply temperature