

Contact Data

Company Name: Orbital Farm
 Country: NL
 Contact Person: Bryson
 Contact information: scot.bryson@orbital.farm

Technical input

User of Excess heat is: External use
 Type of heat recovery: HEX (separation) and HP (boost)
 Agreed Heat sales price: Data center cooling (fluid)

Excess heat available capacity: 10 MW
 Excess temp. supply side: 30 °C
 Excess temp. return side: 18 °C

Heat demanded by user: 10 MW
 Supply temp. from HP: 91 °C
 Return temp. from consumer: 32 °C

Availability and demand match: See diagram Energy & Emission

Current type of heating: Gas Boiler
 Cost of current type of heating: 0.08 EUR/kWh
 Cost of electricity: 0.08 EUR/kWh
 Agreed Heat sales price: 0.01 EUR/kWh

Disclaimer

These are calculated values for guideline purposes and as such is not guarantee. Danfoss A/S cannot be held responsible for the stated energy- or emissions saving, they are intended only for indicative purpose, before an actual project is defined.

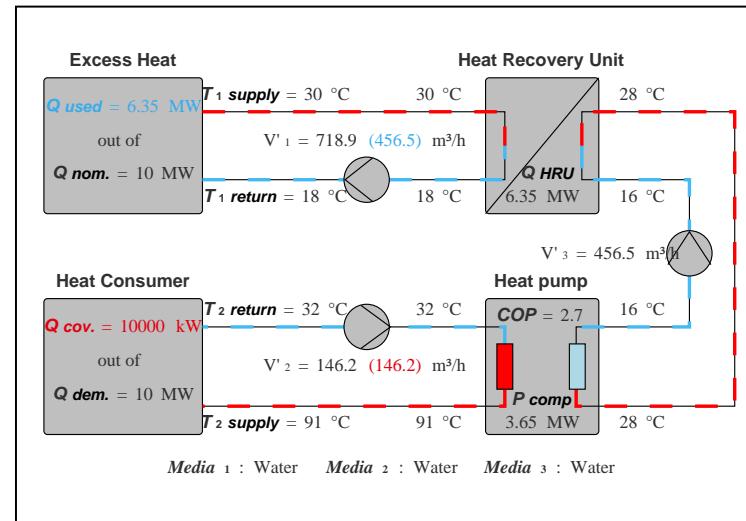
Assumptions and methodology

A simple numerical method is used, which doesn't take into account transient behaviour. Pump power calculations are based on affinity laws and typical efficiencies on pumps & motors. Heat pump performance is based on empirical knowledge from applications with medium density refrigerants and using centrifugal compressors and shell & tube evaporators. Where separation heat exchangers are used, we have assumed a 2K approach temperature. CO2 emission factor for gas, oil and electric energy is based on 2021 EIA data. For gas and oil boilers we have assumed a total efficiency of 90% based on hi [kJ/kg without condensation]. Heatloss in distribution lines are not included in calculation. Service cost estimated as a fixed percentage of CAPEX.

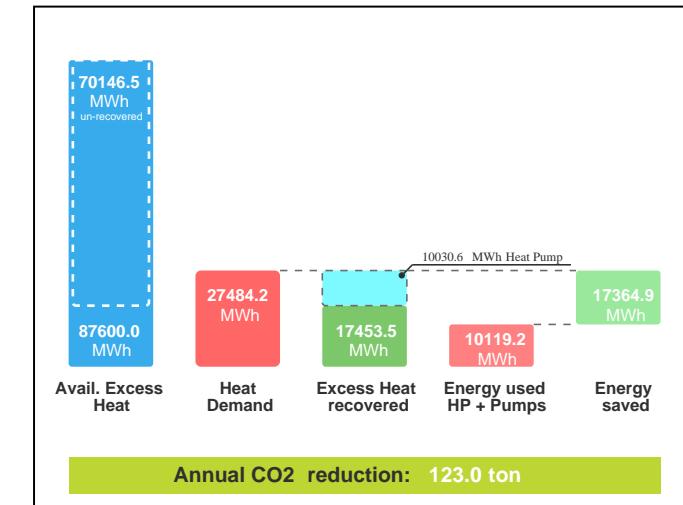
Other

SW Build: 1.1.0 Release 2025
 Date of report: Fri Dec 19 2025

System Design Conditions



Annual Energy and Emission



Financial: Supplier's Perspective

CAPEX, Initial [k€]	OPEX, Annually [k€]	TCO, Cumulative [k€]	Simple payback estimate excl. depreciation [Years]
- 1428.83 Heat recovery Unit (incl. pumps)	- 2.39 Electricity for pumps	Year 1 - 3223.43	
- 1947.54 Hydronics cost estimate	- 19.2 Service cost Heat Recovery Unit	Year 2 - 3070.49	
- 3376.38 Total CAPEX	+ 174.53 Recovered energy Revenue	Year 3 - 2917.55	
	+ 152.94 Annual balance	Year 4 - 2764.61	
		Year 5 - 2611.66	
		Year 6 - 2458.72	
		Year 7 - 2305.78	
		Year 8 - 2152.84	
		Year 9 - 1999.89	
		Year 10 - 1846.95	

22.1

Financial: Consumer's Perspective

CAPEX, Initial [k€]	OPEX, Annually [k€]	TCO, Cumulative [k€]	Simple payback estimate excl. depreciation [Years]
- 3883.65 Heat Pump (incl. pumps)	- 4.69 Electricity for pumps	Year 1 - 9476.16	
- 6133.65 Hydronics cost estimate	- 802.45 Electricity for Heat pump	Year 2 - 8935.03	
- 10017.3 Total CAPEX	- 48 Service cost Heat Pump	Year 3 - 8393.89	
	+ 1396.28 Operating cost Savings	Year 4 - 7852.76	
	+ 541.14 Annual balance	Year 5 - 7311.62	
		Year 6 - 6770.49	
		Year 7 - 6229.35	
		Year 8 - 5688.21	
		Year 9 - 5147.08	
		Year 10 - 4605.94	

18.5