



LEED - EAc5 - Measure	LEED - EAc5 - Measurement and Verification						
Requirement	Information provided by the DES company						
Information about the measured amount of energy delivered to the building from the DES has to be given to the LEED seeking project	1) Heat delivered Fylls i av kund Lev. Fjärrvärme Lev Fjärrkyla:	):	mWh MWh				
Amount (in energy terms) and	Fuel in (all fuels) [MWh/year]						
type of fuel used for heat production in heat only boilers (HOB).	Bränsletyp	Tillför	t MWh				
(HOD).	Bioolja El		481 54 993 7				
	Fossilolja		122 3	99			
	Förädlat Trädbränsle Oförädlat Trädbränsle		116 5 695 2				
	Returbränsle Övriga		835 9 1 636 8				
Amount (in energy terms) and	Fuel in (all fuels) [	MWh/year]					
type of fuel used in each combined heat and power (CHP) plant in the DES.	Bränsletyp	Tillfört MWh					
	Avfallsbränsle	1 230 157					
	Bioolja El	4 834 265 209					
	Fossilolja	79 561					
	Förädlat Trädbränsle	335 197		97			
	Oförädlat Trädbränsle	1 585 905					
	Returbränsle		321 24	49			
Specific primary energy factors,	PEF <sub>HOB(i)</sub> and PEF <sub>CHP(i)</sub> (specific fuels) [kWh <sub>p</sub> /kWh <sub>fuel</sub> ]						
PEF, for fuels that the DES- company uses compared to those suggested in Swedish DES-guide, table 5 in Appendix	PEF Stockholm Exergi (VMK)			Swedish DES calculation method			
A. If the PEF differs an	Eo1		1,11	1,11			
explanation why is needed.	Eo5		1,11	1,11			
	Kol		1,15	1,15			
	Secondary biofuels		0,03	1,05			
	Wooden pellets etc		0,11	1,05			
	Biooil		0,04	0,03			
	Household waste  Return fuel*		0,04 0,05	0,03			
	Electricity unspec. N	Nordic mix	2,46	1,90	-		
	Liectificity unspec. I	VOLUIC IIIIX	۷,٦٥	1,30			



	Electricity origin labeled	0	-			
	Waste heat	0	0,00			
	Energy from sea and sewer	0				
	*Return fuels consist of sorted and quality-controlled paper, wood and plastic that cannot be recycled and come from offices, shops and industries					
	The biggest difference is that tiles and wood pellets according to VMK (as used by Stockholm Exergi) are considered secondary fuels while Swedish DES Calc. Moth blends biofuels into a primary fuel					
	while Swedish DES Calc. Meth blends biofuels into a primary fuel mail.					
	Additional PEF can be found in the appendix to the "Överenskommelse i värmemarknadskommittén 2023"					
Total amount of produced heat in the specific combined heat	Heat produced [MWh/year]					
and power plant.	2 099 486 MWh					
Total amount of produced electricity, without deduction of	1) Electricity produced [MWh/year]					
auxiliary electricity, in the specific combined heat and power plant.	861 615 MWh					
The total delivered district heating to all customers in the	1) Heat delivered [MWh/year]					
district heating network.	Total heating delivered in he 7 076 967 MWh	eating network	<b>&lt;</b> :			
For district cooling additional i	nformation is needed. That is	;				
The amount of electricity used to produce the cooling	1) Auxiliary electricity [MWh/year ]					
(including both the auxiliary electricity for circulation of the cold water in the DES and the electric energy needed for the	Pumpel 19 925 MWh					
heat pumps).	2) Electricity used in combined heat pumps [MWh/year]					
	Combined heat pumps and refrigerating machines: 36 778 MWh					
Produced heat and cooling in heat pumps	1) Total produced Heat [MWh/year]					
	2 325 184 MWh					
	2) Total produced cooling [MWh/year]					



	339 550 MWh			
	(Incl. Combined heat pumps, Free cooling, Cooling machines Waste cooling)			
The amount of heat energy used to produce cooling in absorption chillers. In best case monthly amounts are used and summarized for one year.	1) Heat month, Jan - Dec [MWh/month]			
	Fortum does not have any absorption chillers in its network.			
	2) Monthly Production Scheme [Fuel type, MWh, production type]			
	Fortum does not have any absorption chillers in its network.			