

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 [MWh/year]											
	Fylls i av kund Lev. Fjärrvärme: MWh Lev Fjärrkyla: MWh											
Amount (in energy terms) and type of fuel used for heat production in heat only boilers (HOB).	1) Fuel in (all fuels) [MWh/year]											
	<table border="1"> <thead> <tr> <th>Bränsletyp</th> <th>Tillförd energi (MWh)</th> </tr> </thead> <tbody> <tr> <td>Träpulver</td> <td>157 597</td> </tr> <tr> <td>Tallbecksolja</td> <td>530</td> </tr> <tr> <td>Bioolja</td> <td>384</td> </tr> <tr> <td>Fossilolja</td> <td>2 455</td> </tr> <tr> <td>El</td> <td>271 823</td> </tr> </tbody> </table>	Bränsletyp	Tillförd energi (MWh)	Träpulver	157 597	Tallbecksolja	530	Bioolja	384	Fossilolja	2 455	El
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Amount (in energy terms) and type of fuel used in each combined heat and power (CHP) plant in the DES.	1) Fuel in (all fuels) [MWh/year]											
	<i>Norrenergi has no CHP</i>											
Specific primary energy factors, PEF, for fuels that the DES company uses compared to those suggested in Swedish DES-guide, table 5 in Appendix A. If the PEF differs an explanation why is needed.	1) PEFHOB(i) and PEFCHP(i) (specific fuels) [kWhp/kWhfuel]											
	<i>Norrenergi has no CHP</i>											
Total amount of produced heat in the specific combined heat and power plant.	1) Heat produced [MWh/year]											
	<i>Norrenergi has no CHP</i>											

Total amount of produced electricity, without deduction of auxiliary electricity, in the specific combined heat and power plant.	1) Electricity produced [MWh/year]
	<i>Norrenergi has no CHP</i>
The total delivered district heating to all customers in the district heating network.	1) Heat delivered [MWh/year]
	Total heating delivered in heating network (2022): 964 370 MWh
Information regarding district cooling	
The amount of electricity used to produce the cooling (including both the auxiliary electricity for circulation of the cold water in the DES and the electric energy needed for the heat pumps).	1) Auxiliary electricity [MWh/year]
	Hjälpel 16 149 MWh (2021)
	2) Electricity used in combined heat pumps [MWh/year]
	Combined heat pumps and refrigerating machines: 157 697 (2022)
Produced heat and cooling in heat pumps	1) Total produced Heat [MWh/year]
	880 429 MWh (2022)
	2) Total produced cooling [MWh/year]
	63 774 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]
	<i>Norrenergi does not have any absorption chillers in its network.</i>
	2) Monthly Production Scheme [Fuel type, MWh, production type]
	<i>Norrenergi does not have any absorption chillers in its network.</i>

Solna 2023-02-14