

Lower Carbon Footprint 



LCC ANALYSIS

In 2015, on behalf of a well-known energy company, SWECO Engineering consultancy conducted a cost analysis study on district pipe networks.

The goal was to identify differences between traditional pre-insulated steel pipes and different manufactures of PEX pipes in high and low temperature networks to present a financial appraisal of the differing options.

Capital cost 3p/kWh	Unit	Steel pipe High temp	Steel pipe Low temp	PEX/Steel Lögstör	PEX Calpex	PEX Elgotherm
Investment						
- Material	[£]	28 710	28 710	29 262	63 778	52 593
- Groundwork, laying, installation	[£]	264 255	264 255	225 373	46 869	49 500
Sub total	[£]	292 965	292 965	254 634	110 647	102 093
- Substation(s)	[£]	0	35 726	35 726	35 726	35 726
Total Investment	[£]	292 965	328 691	290 360	146 373	137 819
Operation & Maintenance						
- Annual check/maintenance	[£/yr]	0	741	741	741	741
30 Yr Total	[£]	0	22 222	22 222	22 222	22 222
- Replacement circulation pumps	[£]	0	5 360	5 360	5 360	5 360
Total Operation & Maintenance	[£]	0	27 582	27 582	27 582	27 582
Lifetime Period	[yrs]	30	30	30	30	30
Heat Loss Cost						
- Annual heat loss cost	[£/yr]	5 585	2 620	2 666	3 578	1 806
Total Heat Loss Cost		167 556	78 596	79 991	107 340	54 182
Total Lifetime Cost (30yrs)	[£]	460 521	434 869	397 934	281 295	219 583
Savings						
- Annual savings	[£/yr]	0	2 965	2 919	2 007	3 779
Total Savings	[£]	0	88 960	87 564	60 216	113 373
30 Yr Total	[£]	-460 521	-345 909	-310 369	-221 079	-106 210
Total Lifetime Costs	[£]	460 521	434 869	397 934	281 295	219 583
Savings						
- Annual savings	[£/yr]	0	855	2 086	5 974	8 031
Total Cost Saving (£)	[£]	0	25 652	62 587	179 226	240 938
Total Cost Saving (%)	[%]		5,6%	13,6%	38,9%	52,3%

The LCC analysis was made in 2015, conversion from SEK to GBP according monthly average of May 2023.