

2012 Power Dissipated by the Cooling Towers

The cooling circuits at CERN use evaporative open cooling towers to discharge into the atmosphere the heat removed from equipment in the accelerators and in the experiments.

The Cooling Networks

Cooling networks at CERN are generally dedicated to one specific accelerator complex; the size and the number of cooling towers per complex depend on the amount of cooling power required.

LHC	one cooling tower per even LHC Point, one in Point 1 for ATLAS, one in Point 5 for CMS and an additional tower in Point 18
SPS	one cooling tower close to BA6
North Area	one cooling tower on the Prévessin site
PS and the Meyrin Site	11 cooling towers are installed on the Meyrin site: they are dedicated to the PS complex and some specific equipment (e.g. POPS).

The power that has been evacuated via the cooling towers during 2012 is indicated in the following tables; the values have been estimated from the monitoring data available. The values change only slightly with respect to 2011 since the operation run for accelerator and the energy required have been similar; the little increase is mainly due to a lower number of days technical stops.

2012

Power
[GWh]

1. TOTAL LHC	505
LHC Point 1	63
LHC Point 18	9
LHC Point 2	123
LHC Point 4	105
LHC Point 5	36
LHC Point 6	38
LHC Point 8	131
2. SPS	265
3. North Area	82
4. TOTAL PS –Meyrin site	139
Building 378	3.9
Building 201	8.8
AD	9.5
LEIR + Linac	4.2
PSB (demineralized and chilled water)	30
PS complex	81
POPS	2
Total CERN	991