

# 2013 Power Dissipated by the Cooling Towers

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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 2013 is indicated in the following tables; the values have been estimated from the monitoring data available. The values have strongly decreased with respect to 2012 since during the Long Shutdown, all the plants have been stopped for several months all the equipment being out of service for maintenance or upgrade work. In addition, when the cooling towers were running, the heat load to evacuate has been very small since no system has run at full power.

2013

Power  
[GWh]

<b>1. TOTAL LHC</b>	<b>176</b>
LHC Point 1	18
LHC Point 18	9
LHC Point 2	33
LHC Point 4	31
LHC Point 5	18
LHC Point 6	19
LHC Point 8	48
<b>2. SPS</b>	<b>55</b>
<b>3. North Area</b>	<b>30</b>
<b>4. TOTAL PS –Meyrin site</b>	<b>30</b>
Building 378	3
Building 201	8.9
AD	0
LEIR + Linac	1.6
PSB (demineralized and chilled water)	4.3
PS complex	12
POPS	0.2
<b>Total CERN</b>	<b>291</b>