

CLIC at 100 Hz

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Cooling and Ventilation – 50 Hz

- The basic design was done throughout 2018, as well as a cost estimate
- Design is documented in the PiP, early presentations and long report that will soon be available in EDMS
- Total required cooling power at the cooling towers is approximately 160 MW for the two beam machine
- The total C&V cost is approximately 470 MCHF for the two beam machine

100 Hz Operation

- The operation at 100 Hz increases greatly the heat loads
  - Extra 22 MW for the drive beam injector complex
  - Extra 11 MW for the main tunnel
  - …
- A list of heat loads and fraction air/water is required for a proper CV study
  - Are the extra heat loads completely transferred to the water cooling systems?
- Will CLIC run at 100 Hz all the time or is it going to be run at 50 HZ as well?
  - Combined operational modes might be technically challenging – design is to be done for the highest load. Oversized equipment and infrastructure during 50 Hz run.

Conclusions

- The complete list of heat loads including the fraction that is emitted to air and water is required for the 100 Hz operation, even if they are only rough estimates

- A clearer picture of the work expected is required
  - Cost estimate required?
  - Impact on the current design? Level of Detail?
  - Final purpose?