Possible scenarios

- 3 type of scenarios expected today
  - load shedding required by EDF – few hours notice (before 21:30 the day before) – CMT activated for the first one
    Impact on Experiments minimized

  - Total blackout announced – few hours notice (before 21:30 the day before)
    CMT activated if the transfer to Swiss electricity fails
    Probability low ?

  - Total blackout not announced
    CMT activated if the transfer to Swiss electricity fails
    Probability low

Proposed power-reduced configurations

- **During Run (Mid October – End of November)**

  → Configurations with rapid, low operational impact transitions in both directions

Configuration Number	Configuration description	Active power reduction *	Time needed to implement the configuration	Time needed to recover nominal conditions
0	LHC unavailable (all injectors operating)	~ 30-40 MW	Instantaneous	4 to 5 hours
1	SPS in stand-by mode (stop beams and power converters)	~ 35-45 MW	2 hours	4 to 5 hours
2	SPS, PS and PSB in stand-by modes (stop beams and power converters)	~ 40-50 MW	2 hours	5 to 8 hours
3	SPS, PS, PSB and LHC in stand-by modes (stop beams and power converters) LHC detectors still powered	~ 70-90 MW	2 hours	12 to 16 hours
4	YETS configuration	~ 100 MW	2 hours to implement configuration 3 and 10 to 14 days for the remaining 20-40 MW	Spring 2023

Most likely obsolete following advancement of YETS by 2 weeks

→ Configurations 1, 2 and 3 can be maintained for a period of 3 hours (morning or afternoon)

* Compared to the average active power of 180 MW during normal operating conditions

Proposed power-reduced configurations

■ **During YETS (Beginning of December onwards)**

Configuration Number	Configuration description	Active power reduction *	Time needed to implement the configuration	Time needed to recover nominal conditions
5	YETS configuration with additional reduction from cryogenic installations	~ 10 MW	6 to 12 hours	1 to 2 days to recover cryogenic conditions + 1 to 3 weeks to add in Spring 2023 for ELQA tests

→ **This specific configuration can be done once every two weeks maximum and maintained for 24-48 hours (to be confirmed)**

due to the constraints to implement it and recover nominal conditions (He inventory, ELQA, shift periods)

* Compared to the average active power of 60 MW during normal YETS conditions