Despite the sudden voltage drop in the 220 kV bus bar caused by the critical grid event, the VSC was able to restore the nominal voltage in less than 4 seconds in both cases, minimizing the voltage droop and supplying the load without a frequency deviation.

The converter does not change the VSM control mode, it just maintains the desired voltage and frequency providing inertia and the system reliability. After reaching the stationary state, the converter is able to control the system frequency and voltage demonstrating its grid forming capability.

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