



The European Utility Requirements

The View of EUR Working Group on “ENTSO-E Network Code for Requirements for Grid Connection Applicable to all Generators”

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Conclusions (1/2)

- The ENTSO-E NC must consider Nuclear Safety.
- Nuclear safety considerations shall always override the ENTSO-E NC in case of conflict between nuclear safety considerations and the ENTSO-E NC.
- Increased reactive power limits. Today the majority of the European nuclear fleet is built for a much smaller variation in power factor compared to what is required in the ENTSO-E NC.
- Fault Ride Through profile is too demanding.
- Need of permission from Nuclear Regulatory Authorities for primary frequency control.
- Impossible to accommodate power variations at the end of the fuel cycle in nuclear power plants.



Conclusions (2/2)

- There should not be any retro-activity among existing units. This will make it easier to apply the ENTSO-E NC.
- It is appreciated that the voltage level ($0.80 < U < 0.85$ p.u.) has been eliminated for Continental Europe.
- The voltage level ($0.85 < U < 0.90$ p.u.) for Continental Europe is very low and should not be demanded for more than 30 minutes.
- Obstructive for modernisation of units since refurbishment might impose mandatory changes.
- Frequency and voltage intervals are too wide in table 2, 6.1, and 6.2. In addition, frequency and voltage should be considered coupled as concomitant extremes for frequency and voltage are less likely to happen. Maximal duration should be given for each combination of extreme values.
- A maximal permitted number of recurrences should be given for each combination of voltage and frequency.



Thank you for your attention!



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