

## FCR Deadband

The table 4 in Art. 10 of NC RFG determines bands for some parameters including Frequency Response Insensitivity and Frequency Response Deadband

Parameters	Ranges	
Active Power range related to Maximum Capacity $\frac{ \Delta P_i }{P_{\max}}$	1.5 – 10 %	
Frequency Response Insensitivity	$ \Delta f_i $	10 – 30 mHz
	$\frac{ \Delta f_i }{f_n}$	0.02 – 0.06 %
Frequency Response Deadband	0 – 500 mHz	
Droop $s_i$	2 – 12 %	

Table 4: Parameters for Active Power Frequency Response in FSM (explanation for figure 5)

The further text says:

- 4) *The Frequency Response Deadband of Frequency deviation and Droop are selected by the TSO and must be able to be reselected subsequently (without requiring to be online or remote) within the given frames in the table 4, subject to notification to the National Regulatory Authority. The modalities of that notification shall be determined in accordance with the applicable national regulatory framework.*

NC LFC&R determines in Table 4 a limit of 10 mHz for NE and CE - and 15 mHz for IRE and GB - in total (insensitivity + dead band) - which is in line with NC RFG, Table 4. Thus, ENTSOE does not see any inconsistency here. The value for CE and NE implies that a Frequency Response Deadband is not allowed which is consistent with the other requirements in table 4 and further requirements concerning frequency quality (it goes without saying that e.g. a Frequency Response Deadband of 500 mHz would not make sense with respect to the frequency limits in table 4).

The determined values have been a requirement for years and have been proven to be appropriate. In addition it has to be taken into account that the NC RFG is in general a code for new installations and does not cover existing ones (with possible exceptions).