

Any deadband encourages frequency drift once NERC's CPS1 limit is reached. But the tighter the deadband is set than ±10 mHz the sooner it stops economically encouraging marginal inadvertent in the direction of frequency drift when NERC is trying to discourage it. When the mean of the distribution drifts far enough away from 60 Hz to push average 1-hour frequency error against the +10 mHz or the -10 mHz equivalent of NERC's limit on 1-minute frequency error, the distribution begins "spiking" which keeps a lower % of it outside the limit, than before the drift. That incents mean frequency to drift more. The narrower the deadband is set than ±10 mHz, the lower the incentive for frequency to drift once NERC's CPS1 limit is reached and the sooner that, the more inadvertent there is in the direction of frequency drift, the more inadvertent (30 % in the graph, versus 16.5 %) falls outside the deadband, reversing a perverse additional incentive for incurring even more marginal inadvertent once the frequency distribution has spiked.