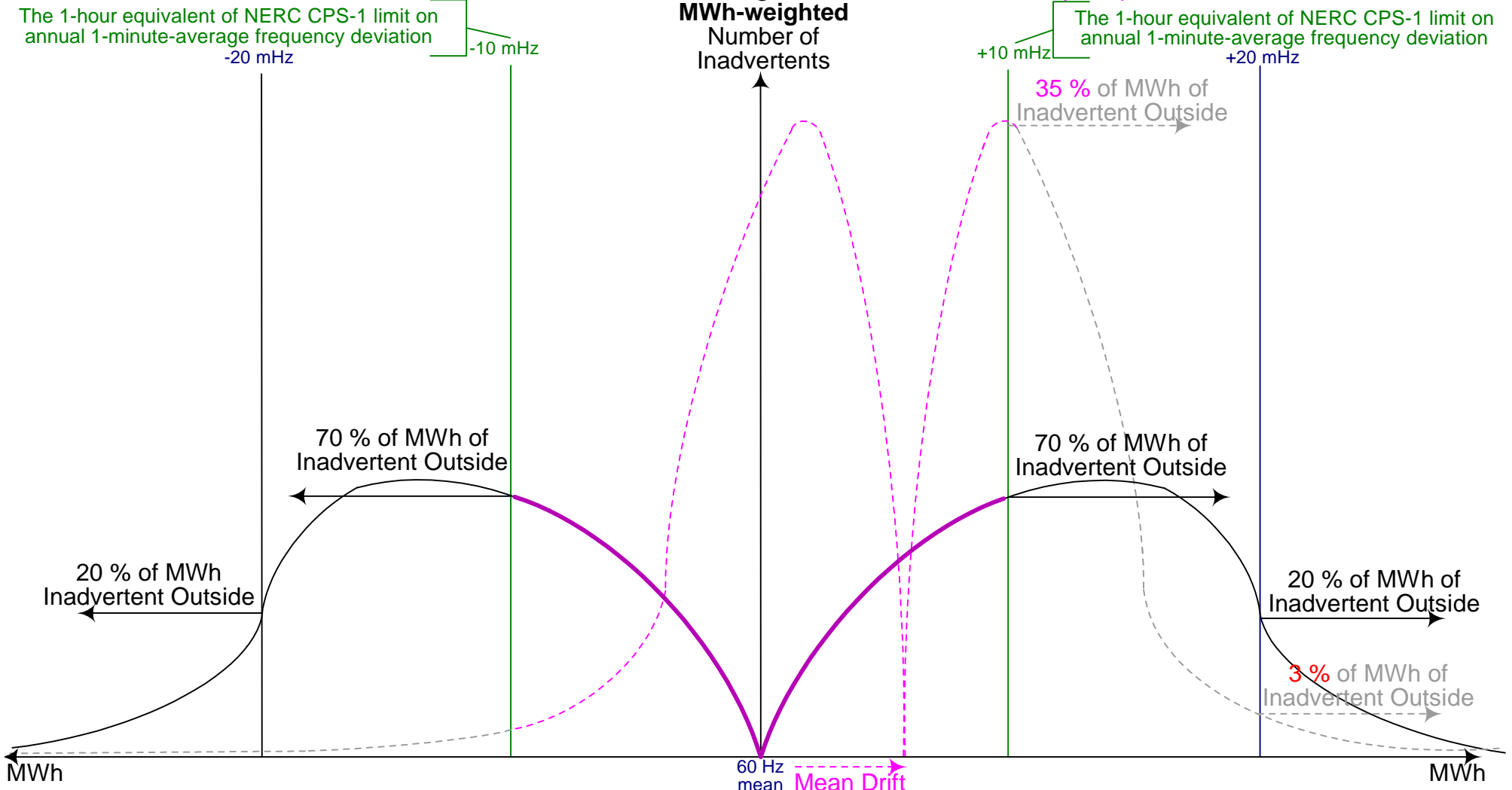


Deadbands Don't Work when Frequency Drifts too Much. ECAR's Fundamental Math Mistake:

ECAR Forgot the **Bad** Effect on Frequency-Drift of NERC's CPS1 Limit which Makes More MWh of Inadvertent Fall Inside any Deadband.

Bandwidth Fails when Mean Drift Pushes Average Frequency Error to the NERC CPS1 Limit:
 MWh Amount of Inadvertent Interchange inside Deadband **Jumps Up!**



ECAR Imagined the Whole Statistical Graph of MWh of Inadvertent Interchange is just like the **±10 MHz Rising Segment** of the Graph & Thought a Wide Deadband would Still Exclude Most of the Inadvertent MWh! The Opposite Happens: only 20 % of Total MWh of Inadvertent is outside a 20 mHz Bandwidth & Enough Frequency Drift Reduces that to **3 %** !

When the NERC CPS1 Limit is Reached Deadbands Encourage Frequency to Drift More, by **Hiding** More Inadvertent.

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 "spikes" to keep **less** of the total MWh of Inadvertent outside the limit than before the drift. That incents mean frequency to drift even more by decreasing the total MWh amount of the Inadvertent Interchange that falls outside any deadband, but this incentive is only reduced by how narrower than **±10 mHz** the deadband is.