



sustainable energy for everyone



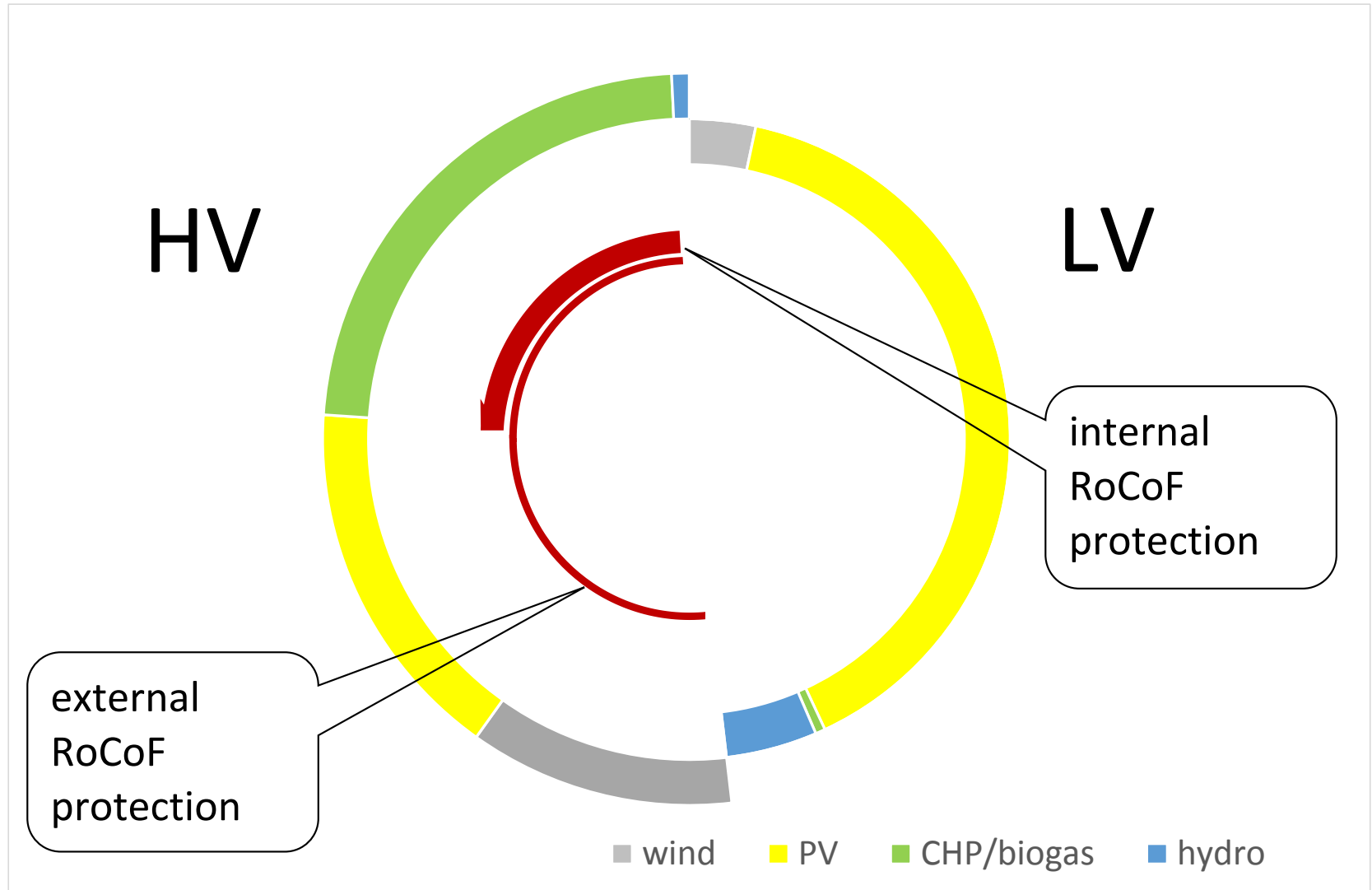
# GC0079 Frequency changes WG meeting

**Discussion points for finalisation of report**

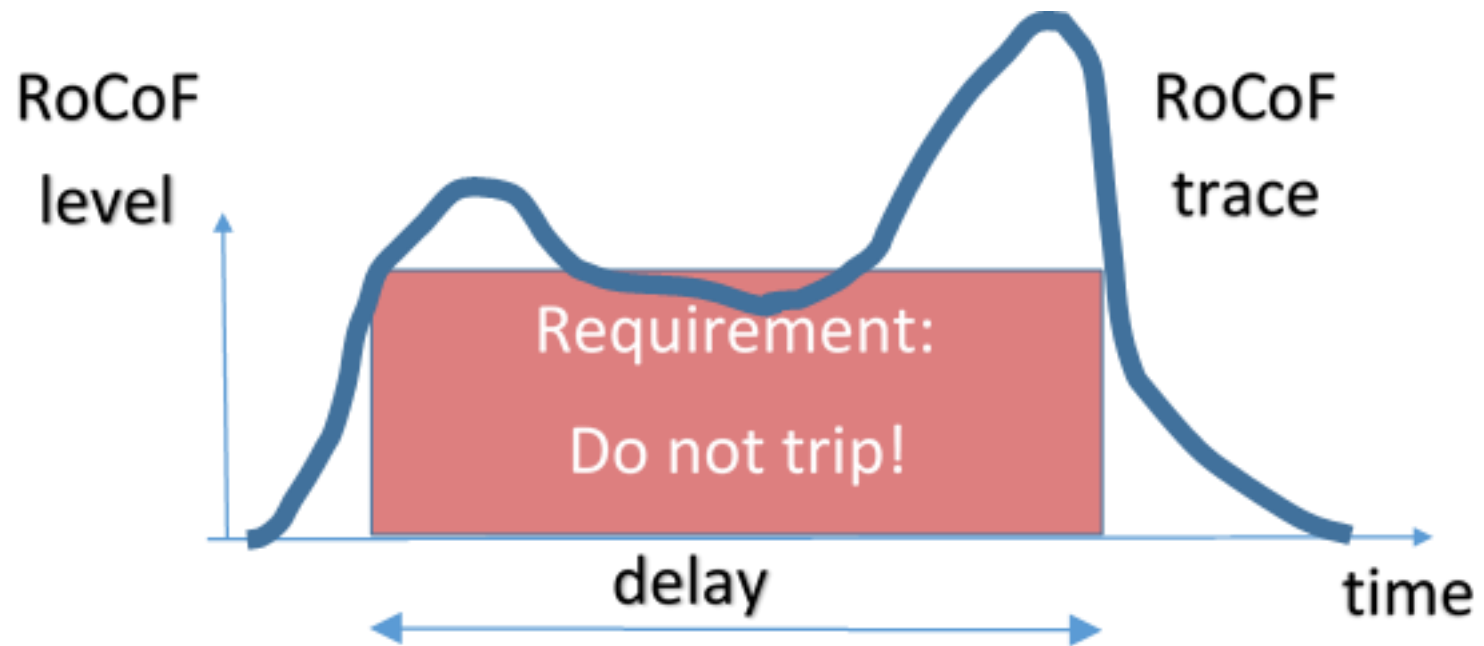
02/06/2015

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# RoCoF protection in existing plant portfolio (simplified guess)



# RoCoF withstand capability is undefined in ER G59-3



# Major uncertainties wrt more intense RoCoF events – how to deal with them?

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- > Manufacturers of **CHP/bio** express concerns with respect to duration of RoCoF events, more than magnitude of frequency gradient. They were not able to exactly explain and quantify limitations. (Restrictions of large generators may not apply.)
  - Changeover to vector shift? Vector shift detection, most likely, will not trip due to more intense RoCoF events. *But:* will secondary protection respond?
  - Derogations wrt period? *But:* most likely individual assessments would be needed.
- > Manufacturers of **PV and (modern) wind** claim that, most likely, plants will ride through more intense RoCoF events. Still, this is not certain and not quantified.
  - Sit and wait (and observe)? *But:* this needs a process as well. And there is a limited risk of massive undesired response in the course of the next larger disturbance (The error is an important part of the 'trial and error' method.)

