

R.5 Each Generator Owner shall record or have a process in place to derive the following Fault Recording data for equipment owned by the Generator Owner for the equipment identified in Table 5-1 below:

- R5.1.** The generator step-up transformer(s) (GSU(s)) three phase to neutral voltages or phase to phase voltages. The voltages can be monitored at either the high voltage side or low voltage side of the GSU(s). Generator bus voltages may be used.
 - R5.2.** The GSU(s) three phase currents at the voltage level used above.
 - R5.3.** The GSU(s) neutral current of wye connected high voltage windings.
 - R5.4.** The three phase to neutral voltages on each monitored line or bus as follows:
 - R5.4.1.** On ring buses, the voltages of bus sections connected to transmission lines
 - R5.4.2.** On breaker-and-a-half arrangements, the outer bus voltages, or the individual line voltages
 - R5.4.3.** On straight buses, common bus voltages or the individual line voltages
 - R5.5.** The three phase currents and the residual or neutral currents of each monitored line and transformer.
- R8.** Each Generator Owner shall record or have a process in place to derive the following Dynamic Disturbance Recording data for generator step-up transformer(s) (GSU(s)) at generating plants with an aggregate of 1500 or higher MVA nameplate rating and with GSU(s) high side connected at 200 kV:
- R8.1.** At least one phase-to-neutral voltage or phase to phase voltages at either the GSU(s) high side or low side voltage level. Generator bus voltages may be used.
 - R8.2.** Frequency (at least one per Dynamic Disturbance Recording location)
 - R8.3.** At least one phase current (on the same phase and at the same voltage as the voltage monitored above) or two phase currents for phase to phase voltages for the GSU(s).
 - R8.4.** Power and Reactive Power (MW and MVAR) flows expressed on a three-phase basis for the GSU(s).