

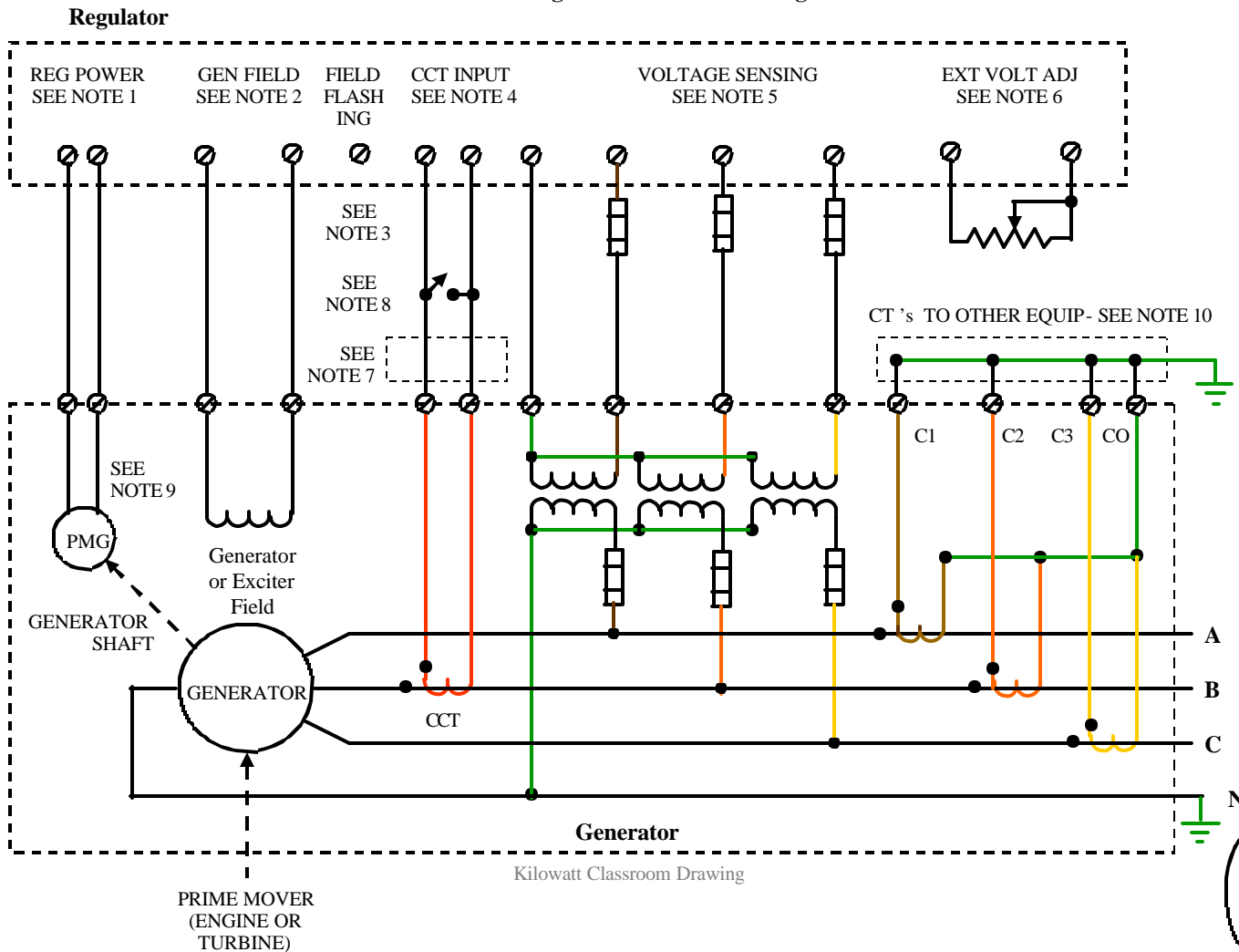
Generator Voltage Regulation Typical Connection Diagram

AC Generators

Connection Notes

1. The regulator electronics may be powered by the generator AC output (which requires a build-up circuit), or by a separate AC control power source. In the drawing below a Permanent Magnet Generator (PMG) is used.
2. The DC field current to the generator is supplied by an SCR phase-controlled power circuit in the regulator.
3. Some generators may not retain sufficient residual magnetism to permit generator build-up and require field-flashing. If required, an external field-flashing source is connected to this terminal. This is required only if the regulator power is supplied from the generator output and would not be needed in the case of a separate source of regulator supply voltage.
4. A cross-current Compensation Current Transformer (CCT) is required when paralleling generators in order to insure proper load sharing between units.
5. Generator output voltage sensing for regulators may be either single- or three-phase as shown below. On some models of regulators the sensing transformer is an integral part of the regulator.
6. External voltage adjustment can be provide by the connection of a panel-mounted potentiometer. This typically provides a $\pm 5\%$ manual voltage adjustment.
7. If a CCT is installed it should be terminated on a CT shorting block .
8. Unit-parallel switch. Open for parallel generator operation and closed (CT shorted) for single unit operation.
9. This unit uses a Permanent Magnet Generator (PMG) to supply 120 VAC to the regulator.
10. The generator may also contain current transformers which are used to supply current information to other related equipment such as generator metering, protective relaying, and the prime mover speed governor . CT's must be short-circuited if not connected to a burden. If CT's are used, terminate on CT shorting block.

Generator / Regulator Connection Diagram



Kilowatt Classroom Drawing