For the second time in less than a week, Unit 1 of the Comanche Peak nuclear power plant in Glen Rose has shut down because of electrical problems. Plant employees shut down the unit about 8 a.m. Monday because of instrumentation failure that occurred as workers repaired a related inverter. (An inverter converts DC, or battery power, to AC, or regular electrical power, and in this case is part of a backup power supply for the plant.) A problem with a different inverter caused last week's shutdown. Neither of the problems posed any threat to public health or safety, said Nuclear Regulatory Commission spokesman Breck Henderson. Unit 2 at the plant remained at full power yesterday and was not affected by the shutdown. The plant has a team studying the problems to determine whether they were isolated incidents or in any way related, said Eric Schmitt, a spokesman for TU Electric, which owns Comanche Peak.

He said officials hope to begin building up power in Unit 1 in two or three days. Unit 1 was shut down about six hours after it had returned to full power after last week's problem. Workers were changing a fuse to the inverter when a feed water valve, associated with the inverter, shut down, affecting water flow to generators. Water flow to the nuclear side of the plant was not affected. Last week, the unit shut down automatically when another inverter malfunctioned Jan. 17. The failure caused a false instrument reading that automatically led to pumping of water into the reactor coolant system. The action is part of an emergency cooling system for the nuclear core.