

Q. SUBSTATIONS

PUB 7.0 (RE: p. 25 & 26 of 73) Distribution System Feeder Remote Control (\$1,114,000)

PUB 7.1

In 2002 the average cost per unit installed was \$43,680 (25 units). In 2003 it was \$29,125 (40 units), while in 2004 it is anticipated to be \$33,333 (30 units). The estimate for 2004 indicates that the average cost per unit will be \$55,700 (20 units). Please explain this difference.

A. This project involves the installation of both relays and reclosers. The function of relays and reclosers is to identify that there has been a fault in the distribution system and take action to remove the faulted section before it can cause damage to other electrical equipment or affect public or employee safety.

Control of the Company's distribution system for heavily loaded urban feeders is done with relays and breakers in substations. Due to the lighter loading and lower fault levels of rural feeders, control is accomplished through reclosers, which incorporate the functions of a relay and a breaker.

Because reclosers incorporate the dual functions of relays and breakers, reclosers are more expensive than relays. In addition, unlike substations that have feeders controlled by relays, the substations with reclosers generally do not have communications equipment connecting them to the SCADA system. Because recloser replacements also include the installation of SCADA-related equipment, they are more costly than relay replacements. Consequently, the mix of relays and reclosers being installed in a given year will have an impact on the overall average unit cost associated with this project.