Background
Westinghouse has an ongoing design enhancement program to improve the operation and reliability of the Control Element Drive Mechanism Control System (CEDMCS). Printed circuit boards (PCBs) are periodically selected for a complete review and redesign. The redesign focuses on replacing obsolete components, addressing known reliability detractors and adding features to improve maintainability. Through this program, Westinghouse provides the conversion of wire-wrap boards to PCBs and an enhanced phase sync board and automatic control element drive mechanism timing module (ACTM) board.

Description
The following is a listing of new boards that are available:

- 38301 - Coil Driver Actuating Logic Board
- 38302 - Indicator CEA Enable and Pulse Count Circuits Board
- 38303 - Phase Sync Pulse and CEA Select Circuits Board
- 38304 - LED Driver Circuit Board
- 38075 - Enhanced System 80 ACTM
- 38305 - ACTM Board
- 38306 - Voltage Isolator Circuit Board
- 38307 - Manual Individual Logic (1-12)
- 38308 - Manual Individual Logic (13-24)
- 38309 - Holding Bus Logic
- 35380 - Voltage Isolator Circuit Board
- 35346 - Phase Sync Pulse and CEA Select Circuits Board
- 35976 - ACTM Board

The enhanced boards are form, fit and function replacements. No system modifications or wiring changes are required to install these.
boards. The enhancements address obsolescence and reliability issues that older boards are subject to. Additional operational improvements have also been incorporated. As presently envisioned, the components to be replaced would be the ACTM, the coil driver, phase synch, CEA enable, LED driver and voltage isolation boards for subgroup logic housings (SGLHs) in both domestic System 3410 plants and domestic and Korean System 80 plants. The phase synch boards have been upgraded so that the coil voltage can be adjusted without being placed on an extender board. The ACTM board has been upgraded to provide historical data storage and retrieval.

Benefits
This Westinghouse program has resulted in an upgrade package that is directly applicable to all 20 CEDMCS plants. The upgrade will also allow CEDMCS components to be diagnosed and tested without removing or disturbing installed components.

• Phase Sync - coil voltage adjustment without extender
• ACTM - provide historical data storage and retrieval
• Wire-wrap to PCB - easy to maintain, less expensive, higher reliability