

NEWS & TRENDS

CURING ARC CHUTES

Asbestos arc chutes insulate and protect circuits from shorting in circuit breakers. They are excellent insulators and are nonconductive, and utilities have used them for more than 30 years in high-voltage circuit-breakers in power plants, substations, and other facilities. A large generation substation may have as many as 1,000 chutes. The problem is that asbestos arc chutes need constant dehydration, and residue that accumulates in the chute can scar the asbestos, allowing electricity to be conducted. Also, asbestos becomes friable with age and can flake, creating a potential environmental hazard.

Moreover, asbestos arc chutes haven't been manufactured since the Environmental Protection Agency banned asbestos in 1989. You can get nonasbestos chutes, but even if you found some that fit your particular circuit-breakers, they would cost between \$12,000 to \$20,000 each—probably much more expensive than preventive maintenance. Regardless, they scar much more easily than asbestos chutes.

Under a Space Act Agreement with NASA's Lewis Research Center in Cleveland, Dynamic Coatings of Hinckley, OH, has been testing a chemical application that can permeate asbestos and bond its fibers together, making it impervious to water and humidity. The result is that the arc chute is stronger, does not scar, withstands higher temperatures, and is environmentally safe. Moreover, according to the Lewis Research Center, the processed arc chutes have an electrical resistance about 10,000 times greater than the original asbestos.

The curing process could have a huge impact on the costs of circuit-breaker maintenance and replacement. The application can be used

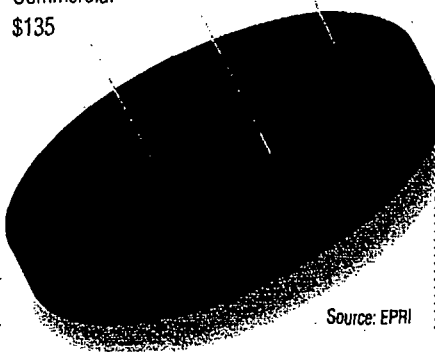
for other asbestos products as well. Right now, the process is being tested in a cooling-tower breaker in an Iowa nuclear power plant.

THE EMERGING ENERGY SERVICES MARKET

The energy services market offers attractive opportunities for utilities to find profitable new sources of revenue. It also offers ways to maintain and strengthen business relationships with key customer groups and develop customer loyalty. According to an Electric Power Research Institute report, "The Emerging Energy Services Market: A Business Planning Guide," the market (which would also include energy efficiency,

FIGURE 1
ESTIMATED ENERGY
SERVICES MARKET
POTENTIAL FOR 2000
(\$ Billions)

Residential	Industrial
\$28	\$40
Commercial	
\$135	



Source: EPRI

end-use equipment maintenance, and power quality equipment and services) was perhaps \$150 billion in 1996 and could be \$200 billion or more by 2000 in the United States alone. (See Figure 1.)

TOEING THE LINE

The North American Reliability Council (NERC) board of trustees voted unanimously on January 6 to obligate its regional and affiliate councils and their members to promote, support, and comply with all NERC reliability policies.

Previously, compliance had been voluntary, with regional councils required only to make their best efforts to comply.

This major change in member obligation is another step in NERC's restructuring of itself to accommodate the new competitive wholesale electricity market while maintaining reliability of the bulk interconnected electric systems.

"The changes to the bylaws are crucial if NERC and its members are to continue to be viewed as credible and recognized as the industry-based authorities on the reliability of the interconnected bulk electric systems in North America," said NERC chairman Richard J. Grossi, who is also chairman and CEO of United Illuminating Company. "These changes also serve to indicate that NERC is moving forward and will continue to move forward to define a new framework for ensuring reliability excellence."

The NERC board also approved a report prepared by its reliability compliance task force and submitted by the Future Role of NERC task force on options to ensure compliance with NERC and regional council policies and standards. The report proposes various methods for enforcing reliability standards and details 13 recommended next steps the board should take to ensure compliance.