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Here's a slick way to save energy \$\$

Western and several of its customers are using a product derived from National Aeronautics and Space Administration research which may save them millions of dollars.

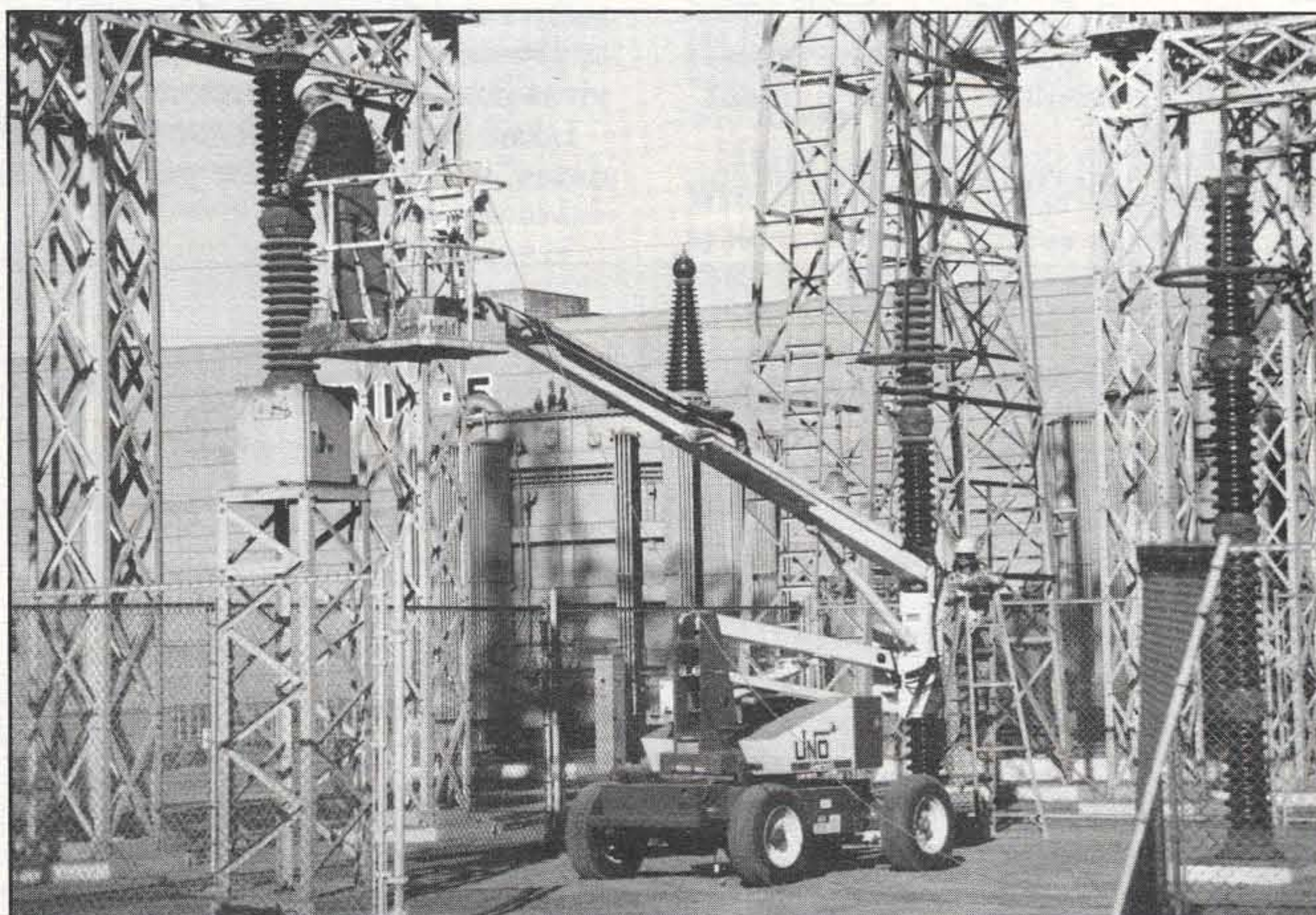
The product is a paint-like coating to protect insulators and other substation and transmission line equipment exposed to airborne contaminants.

The fluorourethane coating was originally developed to protect leading edges of aircraft wings against abrasion and ice buildup at supersonic speeds, and it is so slick it works against other types of contaminant buildup as well.

Instead of coating equipment with the former standard—silicone grease or silicone rubber compound—and possibly having to remove it and recoat every six months, the new coating is said to last as much as 30-40 years.

Western is applying it to substation insulators and more than a mile of transmission lines in and near Basic Substation, Henderson, Nevada, which serves a major industrial development where companies specialize in chemical and corrosive processes.

The Boulder City Area Office has spent over \$100,000 per year at Basic Substation for cleaning and recoating the equipment—the task seemed to be never-ending, according to Western electrical engineer Tom May. Old grease was removed from the equipment about every six months by pneumatically blasting ground corn cobs at it, then wiping the insulators down and recoating with new grease.



A contractor checks progress on cleaning insulators in the Basic Substation near Henderson, Nevada. After cleaning, insulators were coated with a substance to protect them from corrosive element build up.

Using the new substance, it is estimated that over a 30-year period, maintenance savings alone could reach more than \$1.8 million on that one substation. The projected one-time cost was bid at about \$105,000.

A Loveland Area Office customer, Poudre Valley Rural Electric Association, is also planning to use the substance to treat substation equipment near a cement plant. That substation, too, has had contaminant buildup problems and has required occasional cleaning and recoating.

When insulators are contaminated, flashover and radio/television interference problems occur, reduc-

ing energy efficiency and annoying customers and area residents.

Even though both substations are in dry areas with high ultraviolet exposure—the compound is expected to work well and not deteriorate with ultraviolet exposure. It has been used successfully in humid coastal regions as well, as pointed out in a June 1988 article in *Transmission and Distribution* written by Dennis M. Cook, Region Substation Superintendent, Golden Gate Region, Pacific Gas and Electric Co.