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NEW WAYS TO KEEP ON TRUCKIN'

By **John Lowrey**

To keep fleet costs affordable, electric co-ops are pursuing group purchasing strategies, testing hybrid electric bucket trucks and alternative fuels, and installing vehicle tracking and accounting systems

Electric co-ops own and maintain 2.5 million miles, or 42 percent, of the nation's electric distribution lines—a network that would span the distance to the moon and back five times. Making sure these facilities remain in top working order requires a sturdy fleet of bucket trucks, SUVs, and specialty vehicles.

Since fleet expenses constitute a major budget item at most electric co-ops, truck purchases through NRECA's National Discounts Program have tripled since 2006, says Dale Bartholomew, NRECA contracts representative. "Volume-based incentives vary by manufacturer and vehicle type. Typically, line and service trucks have the best incentives."

Jim Huncovsky, manager of procurement for Basin Electric Power Cooperative, a generation and transmission co-op (G&T) based in Bismarck, N.D., reports his co-op received bids for four super-duty trucks, with Ford F-550s coming in as the low bid. "As we were preparing to issue the order, we reviewed the NRECA discount with Ford. We were then able to save an additional $2,900 per vehicle."

Another G&T, La Crosse, Wis.-headquartered Dairyland Power Cooperative, tapped the National Discounts Program to save on vehicle leases. "The price breaks help our local Ford dealers stay competitive against larger networked suppliers," comments Mark Dahl, Dairyland Power director of supply chain management & support services.

Several electric co-ops are testing hybrid electric vehicles or versions that burn alternative fuels such as biodiesel and propane. Adams Electric Cooperative in Gettysburg, Pa., was the first utility in the United States to own and operate a plug-in hybrid electric bucket truck. The equipment was built by DUECO, Inc. (dueco.com), in conjunction with Odyne (odyne.com), which manufactures 10-, 18-, and 35-kWh battery systems.

Hybrid electric bucket trucks, whether plug-ins or not, can cost $20,000 to $80,000 more than a conventional model depending on the vehicle's function, battery pack, and other accessories. But fuel consumption drops between 25 percent and 50 percent, providing payback in just five to seven years.

"At a job site the diesel engine can be shut off and PTO [power take-off]-driven winches and hydraulic pumps powered by the batteries," explains Ron Plank, Adams Electric vice president of operations. "Not only does this save on fuel, it's quiet and more environmentally friendly. You don't have crews working around exhaust fumes."

He adds: "Overall, our plug-in hybrid electric bucket truck works as designed, although we experienced a minor bug with two-way radio interference from one of the modules in the charging system. We're now looking at purchasing small hybrid vehicles for other departments where it makes sense."

To curb initial sticker shock and shrink the six- to eight-month order time on hybrid electric bucket trucks and digger-derricks, Plank suggests asking a vendor about the availability of demo units. "The only drawback of going that route is the added mileage."

Some co-op fleet managers are switching to alternative fuels such as biodiesel, propane, or compressed natural gas. Gasoline engines can be converted to burn propane, and the fuel can be injected into diesel engines to increase power, torque, and efficiency as well as lower emissions and boost engine life.

The Energy Cooperative in Newark, Ohio, altered a couple of GMC C-5500 trucks used by its propane subsidiary to run on propane. Bruce Sumner, The Energy Cooperative vice president of operations, points out that the distribution system serves 4,000 propane and natural gas members, and even runs a natural gas and oil exploration enterprise. "Our subsidiary sells propane vehicle conversion kits, so it seemed logical to promote the idea."

Managing vehicle fuel costs becomes especially important during outage crises such as ice storms or hurricanes. Emergency Fuel Management, a division of Macro Oil Company (macrooil.com), specializes in this service for utilities. "Having a fuel plan and agreement in place as part of an overall disaster plan will clarify prices, expectations, and requirements," remarks Clyde Guilbeau, Emergency Fuel Management division manager. "We can integrate with existing bulk fuel and fleet card programs and provide detailed recordkeeping and reporting. In addition, we are able to supply bobtail fuel trucks for mobile refueling, 1,550-gallon capacity mini-mobile fueling stations that boast a self-contained power source, or larger 12,000-gallon capacity mobile fueling stations. With good documentation, you stand an excellent chance of recovering fuel-related restoration expenses from the Federal Emergency Management Agency or insurance companies."

One of the fastest growing trends in fleet management involves automatic vehicle location (AVL) systems. AVL employs GPS to monitor and dispatch vehicles, helping co-ops lower fuel and maintenance costs, extend vehicle life, reduce outage times, and bolster worker safety.

Tim Taylor, chief operating officer for Telogis, Inc. (telogis.com), an AVL vendor, calls the technology a "mobile efficiency tool with measureable time and fuel savings. Being able to geographically visualize vehicles improves

efficiency and safety. We've enjoyed hearing about more effective storm response when multiple co-ops and contractors are working together on our platform. A co-op can find the nearest appropriate tree-trimming crew, for example, and directly coordinate efforts."

AVL can also provide co-op fleet managers with automated notification of vehicle maintenance issues, notes Michael Jakab, vice president of sales for Wireless Matrix (wirelessmatrix.com). "AVL platforms can even move data communications for work order management systems using our GPS device as a modem."

National Rural Telecommunications Cooperative, based in Herndon, Va., offers an AVL and mobile workforce management scheme from Clevest Solutions, Inc. (clevest.com). "Being focused on electric co-ops, our field-tested products are already pre-integrated with major outage management and geographic information systems," reports Robert Dreskai, Clevest Solutions regional business manager.

Having more than doubled in size after acquiring a neighboring utility, Rock Energy Cooperative in Janesville, Wis., adopted iVUE Fleet Management from Lake Saint Louis, Mo.-based National Information Solutions Cooperative to more effectively track vehicle asset information for accounting and repair purposes.

"It's like implementing a good work order, staking, and service order system," mentions Dennis Schultz, Rock Energy's director of utility operations. "You can scale it to your needs and use it to view current activity or historical information and trending. We went from using paper and white boards at two office sites to an electronic setup that lets us better handle vehicle maintenance schedules and inspections and catch problems early." ■