

WHY ELECTRIC CARS MAKE NO SENSE

With California in the lead, a dozen states want the Big Three to sell nonpolluting battery-powered vehicles. But at \$100,000 each, who will buy them?

■ by Alex Taylor III

NOW THAT General Motors, Ford, and Chrysler are getting close to an agreement to cooperate on an electric vehicle, does that mean battery-powered cars are an idea whose time has finally come? Not by a long shot. California and some other environmentally minded states are forcing automakers to build something few consumers will want to buy: expensive, limited-use vehicles. Says Ralph Colello, a vice president at Arthur D. Little consultants who has studied electric vehicles (known as EVs): "Gasoline vehicles do everything better, cost less, and don't give you a refueling hassle. I don't think you can ever make an EV for the same cost as a gasoline vehicle."

California's worthy goal is to reduce air pollution caused by exhaust emissions in the Los Angeles basin. But the state's demands for cars that produce zero emissions demonstrate the disruptive and perverse effects of government regulation on free markets. This also shows the folly of trying to force technological advances—in this case, a stronger, longer-lasting, cheaper battery.

Electric vehicles actually predate gasoline-powered ones, but they've been in eclipse for 70 years because of limited range and speed. Their revival is almost entirely due to government efforts to cut exhaust emissions. But instead of producing pollution at the tailpipe, an EV dirties the air near the power plant where the electricity to charge the battery is generated.

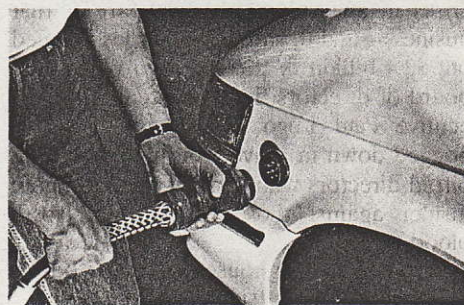
California officials concede that new cars are 12 times cleaner now than 25 years ago and are getting cleaner still, thanks to improved gasoline and computer-controlled engines. Yet state and federal clean-air laws mean they must keep raising the standards for such pollutants as carbon monoxide and nitrogen oxide. So California has ordered major automakers to convert 2% of their yearly sales—about 40,000 autos—to zero-



Yes, electric autos like this modified Chrysler van run in the rain. But batteries must be recharged on a 220-volt line every 80 miles (inset).

emission vehicles by 1998, 5% by 2001, and 10% by 2003. Eleven other states, mainly in the Northeast, Illinois, and Texas, are close to enacting similar requirements.

Since it takes four years to engineer a new car, automakers must lock in their EV designs about 12 months from today. Already it's clear that the much heralded EVs will be severely limited. Drive time, for example, will be restricted to just 90 minutes or so at a maximum 65 miles per hour, and even shorter periods if the air conditioner, heater, or headlights are also running. After that, owners will have to recharge the batteries for up to eight hours. The cost of batteries, electric motor, and other new components, as well as the small-scale production, will cause a price premium on a typical \$16,600 car of anywhere from



\$1,350 (California's estimate) to \$20,000 (one Detroit auto executive's).

At the California Air Resources Board, the state agency that dreamed up the zero-emission car requirement in 1990, no one acknowledges that battery power is impractical. Instead, the agency takes credit for setting high standards for clean air, claiming it must "create a vision" for automakers that enables them to "push back the edges of technology." When GM announced it would unveil an EV *ahead* of the California

