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**M a r g a r e t E . M a t t a**

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**Technology Commercialization Program**

**U.S. Department of Commerce**



**UNITED STATES DEPARTMENT OF COMMERCE  
Minority Business Development Agency**

Washington Regional Office  
14th & Constitution Avenue, N.W. Room 6723  
Washington, D.C. 20230

January 30, 1989

Mr. Ronald Terry Constant  
5939 Brushy Creek  
Dallas, Texas 75252

Ref: EXAR-1

Dear Mr. Constant:

It was a pleasure meeting you on January 13 and having an opportunity to reminisce and extoll the virtues of the EXAR-1. As I'm sure you are becoming aware, Mr. Ramirez' electric car is a real one-of-a-kind electric vehicle capable of performing as purported.

Even though I have not ridden in the EXAR-1, I did ride in an earlier version when I was in Dallas and was impressed with its capabilities. I believe it was the version that was tested by the engineering staff at the Georgia Institute of Technology in response to a request by the Agency's Technology Commercialization program. Unfortunately, the Technology Commercialization program here at the Department of Commerce was discontinued at just about the same time UDAG funds were curtailed, so we weren't able to see the car produced in Berkeley. Those of us who were knowledgeable of the EXAR-1 applaud your efforts to validate its claims and look forward to seeing it in production.

If I can be of any further assistance to you in gathering supporting data, please do not hesitate to contact me.

Sincerely,

  
Margaret E. Matta



UNITED STATES DEPARTMENT OF COMMERCE  
Office of Minority Business Enterprise  
Washington, D.C. 20230

July 5, 1978

Mr. Leonard M. Apcar  
The Wall Street Journal  
22 Cortlandt Street  
New York, New York 10007

Dear Mr. Apcar:

Your article which reported the award of five research and development contracts for electric vehicles was interesting albeit not totally accurate.

The Ametran corporation, based in Dallas, Texas, developed at its own expense, an electric vehicle currently capable of exceeding the 50-mile-an-hour top speed and 100 mile range goals expressed by General Motors. I have ridden in Ametran's prototype 5-passenger vehicle at speeds in excess of 70 mph.

The Office of Minority Business Enterprise is presently working toward developing the linkages which will enable Ametran, a minority-owned corporation, to move into production. I am enclosing a recent article as well as photos of the prototype vehicle as well as the new body style which will be available in October.

Should you wish to pursue this further, may I suggest you contact Mr. Edward Ramirez directly. He can be reached at 8585 Stemmons Freeway, Twin Towers South, Suite 900, Dallas, Texas 75247, (214) 638-8631.

Sincerely,

A handwritten signature in cursive script that reads "M. E. Matta".

Margaret E. Matta  
Project Officer

Enclosures

cc: Edward Ramirez

# THE WALL STREET JOURNAL.

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SOUTHWEST EDITION

WEDNESDAY, JUNE 21, 1978

## Snail's Pace

### Electric Auto Appears Headed for Showrooms —But Not for a Decade

### And Analysts Now View It As Limited-Purpose Car; Government Aids Project

### Oil & 'Glorified Golf Cart'

By LEONARD M. APGAR

Staff Reporter of THE WALL STREET JOURNAL

DETROIT—More than 60 years ago, two titans of America's inventive age, Henry Ford and Thomas Edison, teamed up to build an electric car. Mr. Edison had just developed a new, longer-lasting battery, and Mr. Ford was excited by the prospect of mass-producing an inexpensive, innovative car.

Their work, however, came in fits and starts. They set a date to begin production on a Ford Motor Co. assembly line, then scrapped the idea at the last minute.

In the decades since then, others have tried to resurrect the electric car only to reach the same conclusion as Messrs. Ford and Edison: Until an electric car could match the cost and the performance of the conventional auto, it wouldn't sell.

Now, however, that belief is changing, and it appears that the electric car may get its day in the showroom after all. But if it does, it will be introduced with sharply reduced expectations. In the first place, its introduction won't come soon; it will take probably a decade or so. And, second, the electric car won't dominate the market; traditional autos will remain better performers and better sellers.

"The electric car will gradually come into its own," confidently predicts one marketing man for General Electric Co. "It just won't be a revolution."

#### Changing Times

The idea of a limited-purpose electric car is gaining ground for a number of reasons: improving technology, changing ways of life, and growing concerns over energy. These factors are helping the electric auto suddenly win some powerful friends in high places—the kinds of friends who are capable of pushing a new auto onto the market if anyone is.

One such friend is the world's largest auto company, General Motors Corp. After years of dabbling in research, GM has organized an internal program that, it predicts, "with a little luck" will yield an electric commuter car suitable for sale to the public in the late 1980s.

Others are major corporations with obvious vested interests, such as GE and Gould Inc., a battery maker. Such firms are stepping up their research and development on more powerful batteries, new electric motors, and special control devices suited to electric autos.

#### Aid From Washington

Finally, cheering everyone on is the federal government, which, because of its concern over dwindling oil supplies, is planning to spend \$100 million to encourage a fledgling electric-car industry. Yesterday the Department of Energy kicked off the first phase of its private electric-vehicle demonstration program. It named five companies—including American Telephone & Telegraph Co. and Consolidated Edison Co.—to use and test 165 vehicles this year. Also, the government plans to buy 35 vehicles for testing by various federal agencies.

"This is the first serious push for the electric car," says Vincent J. Esposito, an official of the U.S. Department of Energy, "and we're going to prime the pump." Mr. Esposito is the department's director of transportation-energy conservation and electric-vehicle program.

Oil is the biggest single factor behind this new push for an old idea. Estimates vary, but here's one government forecast: Assume that by the year 2000, between 10 million and 15 million electric-powered cars and commercial vans are on the road; that number represents about 10% of the country's present vehicles. Those electric-powered vehicles would lead to a saving of 100 million to 150 million barrels of oil a year, or 2% of current consumption.

#### Is Society Ready?

Moreover, some analysts believe that society is slowly becoming ready for an electric car. In the past, most buyers wanted an auto capable of comfortably carrying several passengers long distances at brisk speeds. But recently more families have added utilitarian second cars—35% of households, up from 27% a decade ago. Many of these autos, of course, are small.

So today, according to one government report, more than 90% of passenger-car trips are under 21 miles—within the range of even current electric-car technology.

In time, because of pressure for energy conservation, owning an electric car will be "perceived as a moral public service, as patriotic as collecting discarded beer cans along the roadside," predicts Amital Etzioni, a Columbia University sociologist.

Admittedly, that hasn't happened yet. In fact, what had been the nation's biggest maker of electric cars, Sebring Vanguard Inc. of Columbia, Md., finally called it quits and liquidated a few months ago after struggling for years with slow sales, inadequate financing and adverse publicity. It produced 2,100 of its tiny, battery-powered "Citicars" before folding.

One reason that people haven't lined up for those electric cars available in the past is that their reliance on off-the-shelf batteries and parts left a lot to be desired in cost, driving range and speed. They often have been what auto men derisively call "glorified golf carts."

The U.S. Postal Service has been testing a fleet of about 390 electric delivery vans for the past few years, and it gives such vehi-

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## Snail's Pace: Electric Auto Appears Headed for Reality—but Not Soon

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cles mixed reviews. Energy savings of about 25% have resulted, and there have been some small reductions in maintenance costs. But there have also been breakdowns and cases in cold weather where some vehicles have run out of juice during their rounds.

Such criticism however, doesn't discourage either the government or some of the companies that could play a role in the car's revival. GE is working on more efficient motors especially suited to electric cars. And it is participating in a federally backed program with Chrysler Corp. and Globe-Union Inc., a battery maker, to produce three test electric cars next year for use in more advanced research.

Indeed, the main hope of the new push is to spur technology—at least enough to improve electric vehicles to the point that they will be acceptable to consumers, though not necessarily equal to conventional autos.

The federal government's program consists of multimillion-dollar research and development contracts with major corporations on battery technology and electric parts, some \$60 million in loan guarantees to help fledgling electric-car makers, and backing for an eight-year demonstration program intended to put at least 10,000 electric vehicles on the road for evaluation.

#### Testing the Vehicles

This last program, which will be the most visible part of the government's plan, got rolling yesterday when the Energy Department selected five companies from a field of 49 applicants to buy small fleets of electric cars for evaluation in different climates and uses. The companies chosen yesterday, besides AT&T and Con Edison, are Long Island Lighting Co., Walt Disney World Co. and Penn-Jersey Subaru Inc., an imported-car distributor in Peensauken, N.J.

The three utilities said they plan to use the vehicles for duties such as meter reading, commuting and general maintenance work in New York City, Long Island and Southern California. Walt Disney World said it will test the cars at its amusement park in Florida. The imported-car distributor said it hopes to lease and sell electric cars through its dealers in several Eastern states.

Each of the companies will buy electric vehicles on a "shared-cost" basis with the government. In yesterday's announcement, government officials estimated that the private companies would pay a total of \$2 million to buy the 165 vehicles, with the government putting up an equal amount. Thus, each of the companies would become, in effect, a "demonstration site" for electric vehicles. In following years, the government intends to expand the number of cars and sites, reaching about 2,500 vehicles at 20 locations by 1980.

By then, federal planners hope, the stepped-up development work on technology and parts will pay off so that between 1981 and 1984, the Energy Department can order another 7,500 "second-generation" electric cars on a shared-cost basis and put them on the road for more evaluation at private sites.

#### Auto-Industry Skepticism

Predictably, many people in the auto industry are skeptical that the federal effort will produce much. "We're gung-ho for the objective, but we aren't gung-ho for pouring all that money into present-day technology," one Ford engineer says. Another auto man terms "hogwash" any hopes for an early research breakthrough that will suddenly make electric cars a success.

Ford, which ironically some years ago made much of its electric-car research, now seems the most pessimistic of Detroit's Big Three. "Until batteries get better, the electric car is going to be a pretty minor part of this company," contends Henry Stadler, manager of electric systems for the No. 2 auto maker. Ford continues to struggle with an advanced high-temperature sodium-sulfur battery that it started work on almost 15 years ago.

On the other hand, GM seems serious about making and selling an electric car, albeit a modest one. It predicts "significant numbers" of electric cars may be on the road by the late 1980s; the company most recently assigned the development work for some kind of "urban battery-powered car" to its big Chevrolet Motor Division. GM usually assigns such advanced-product work to one of its car divisions only when it is aiming at eventual production; otherwise, its research units do the testing.

GM's goal is to build a vehicle that can deliver a 50-mile-an-hour top speed and go as far as 100 miles without a recharge. For that reason, GM has ruled out the lead-acid conventional battery as a power source: "It might get you to the store and a couple of other places, but it might not get you back," explains James C. Holzwarth, technical director at GM's research labs in Warren, Mich.

Instead, GM is pinning its hopes on a new kind of zinc-nickel oxide battery that can store twice the energy of conventional batteries, weighs 60% less and takes up less than half the space. GM concedes that it still has obstacles to overcome, not the least of which is raising the number of times the battery can be recharged before it has to be replaced. Too-frequent replacement could make the car expensive and inconvenient.

Nonetheless, Thomas A. Murphy, GM's chairman, says, "I think we're on the threshold of developing a battery that can do the job."



**UNITED STATES DEPARTMENT OF COMMERCE**  
**Office of the Secretary**  
Washington, D.C. 20230

March 30, 1979

Mr. Edmond Ramirez  
President  
AMECTRAN Corporation  
8585 Stemmons Freeway  
900 Twin Towers South  
Dallas, Texas 75247


Dear Mr. Ramirez:

Enclosed are the materials I promised to send to you that were prepared for the March 14 Automobile Industry meeting with the Secretary of Commerce. I do appreciate you taking the time to join us for the meeting.

The Secretary was impressed with the work you are doing to develop your electric car. I look forward to telling her that the Department of Commerce is helping you fund the project with a multi-million dollar loan.

If I may be of assistance to you during the process of securing the loan, please let me know.

Sincerely,

  
Joseph B. Anderson, Jr.  
Special Assistant  
to the Secretary

JBA/ew  
Enclosures