
**ELECTRIC VEHICLE
COMMERCIALIZATION
PROPOSAL**

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Electric Vehicle Commercialization

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**Association Canadienne
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ABSTRACT

Successful commercialization of electric vehicles (EVs) depends on the development of a sound service infrastructure and a carefully planned marketing strategy. This paper describes the Electric Vehicle Development Corporation's work to build the EV service infrastructure and to lead EV marketing efforts. It also explains the corporation's current preparations for introduction of the new Electric G-Van, which include working with the utility and automobile industries and with government agencies to expand support for EVs.

Introduction

In the last two years, the Electric Power Research Institute (EPRI) and automobile manufacturers have developed an electric van that can compete with petroleum-powered vans in the service-fleet market. The successful introduction of this van—and future electric vehicles (EVs)—depends on the careful development of EV markets and the EV service infrastructure. Through its work to build these markets and the EV infrastructure, the Electric Vehicle Development Corporation (EVDC) will ensure that today's EVs become a permanent part of the national transportation picture. National interest in EVs is increasing as transportation-related air-quality problems continue and dependence on foreign oil rises. This paper reviews the coordinated activities of EPRI, EVDC, the government, individual electric utilities, and automobile manufacturers working together to commercialize EVs.

Background

Electric vehicle commercialization requires the parallel development and evolution of technology, market, and infrastructure. Since the mid-1970s, significant effort and resources have been committed to EV technology research and development. Until 1984, however, little attention was directed to defining and building

an initial market for EVs and establishing the support systems required to keep EVs operating and productive in the field.

Recognizing this, and the long-term potential for EVs, a group of electric utility companies formed the Electric Vehicle Development Corporation in 1984. EVDC's sole purpose is to successfully commercialize EVs in North America by consolidating the interest and activities of key stakeholders. EVDC is supported by its membership, which includes electric utility companies that collectively account for some 40% of U.S. electricity generation, as well as major automotive and component manufacturers such as General Motors Corporation (GMC), Chrysler Corporation, Ford Motor Company, Chloride EV Systems (CEVS), and Powerplex Technologies, Inc.

EV technology development is currently being performed by the U.S. Department of Energy (DOE), the Electric Power Research Institute, and private industry. EVDC works in partnership with these organizations to review market needs and technology R&D priorities. It also plays a significant role in organizing and monitoring joint development programs. Much of EVDC's success can be traced to building good working relationships with DOE, EPRI, manufacturers, user groups, and EVDC member organizations. These rela-

Through this program, the utility industry will interact with federal, state, and local agencies to develop incentives and regulatory mechanisms to help promote the use of EVs. Justification of government support for such incentives lies in the fact that EVs offer societal benefits not directly valued by individual users: fuel diversity and reduced vehicle emissions.

The implementation of government economic incentives, such as air quality credits and vehicle tax and registration waivers, could have a significant effect on getting EVs into the market and making them cost-competitive with conventional vehicles. Present economic analyses show that electric vans produced in large quantities would be roughly equivalent to conventional vans on a total life-cycle cost basis. Produced in small quantities, EVs could be more costly to own and operate than conventional vans. Government programs to encourage the acquisition and use of EVs in commercial fleets, even for an interim period, would help build an initial demand for EVs. This demand would reduce EV cost, because components and vehicles produced in larger volumes would allow production economies.

In the coming months, EVDC's Government Relations Committee will:

- Monitor legislation and public-sector initiatives that would have an impact on the EV industry. Emphasis will be placed on ensuring that EVs are included in any clean air or alternative fuel legislation.
- Publish a government relations newsletter that highlights these initiatives and promotes additional action at the federal, state, and local levels.

- Publicize the beneficial effects of EVs on air quality and the role EV technology can play in providing transportation that uses alternate fuel sources.

In addition, EVDC participates in the California EV Task Force. This group includes representatives from several state and regional government agencies. It recommends R&D funding, demonstration programs, and legislative and regulatory actions that will facilitate EV commercialization.

Success in building public sector support for and involvement in EV commercialization is critical to achieving EVDC's near- and long-term market objectives.

Closing

EVDC is putting in place all of the elements needed to foster the timely and systematic commercialization of EVs—demonstrations, infrastructure, marketing, and industry and government support. At the same time, EVDC has worked to involve all key EV stakeholders—the utility industry, the automotive industry, component manufacturers, users, and the government—in its efforts to introduce the first modern-day production EV and build a new industry.

New technical, organizational, and institutional challenges lie ahead. But EVDC is well-positioned and prepared to deal with these uncertainties and looks forward to the successful commercialization of this promising new technology—electric vehicles.