

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

ENOVA SYSTEMS INC
Form 10-K
March 30, 2004

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

For Annual and Transition Reports
Pursuant to Sections 13 or 15(d) of the
Securities and Exchange Act of 1934

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES
EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2003

Commission File No. 0-25184

ENOVA SYSTEMS, INC.
(Exact name of registrant as specified in its charter)

California 95-3056150
(State or other jurisdiction of (I.R.S. Employer Identification Number)
incorporation or organization)

19850 South Magellan Drive, Torrance, California 90502
(Address of principal executive offices, including zip code)

(310) 527-2800
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act: None

Securities registered pursuant to Section 12(g) of the Act:

Common Stock, no par value
(Title of class)

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Act). Yes No

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the registrant as of June 30, 2003 (the last business day of the registrant's more recently completed second quarter) was \$7,958,000. For purposes of this calculation only, (i) shares of Series A and Series B Preferred Stock have been included in the calculation, (ii) shares of Common Stock and Series A Preferred Stock are deemed to have a market value of \$0.06 per share, and the Series B Preferred Stock is deemed to have a market value of \$0.12 per share, based on the average of the bid and ask prices of the Common Stock on

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

June 30, 2003, and (iii) each of the executive officers, directors and persons holding 5% or more of the outstanding Common Stock (including Series A and B Preferred Stock on an as-converted basis) is deemed to be an affiliate.

The number of shares of Common Stock outstanding as of March 22, 2004 was 378,341,000.

ENOVA SYSTEMS, INC.

2003 FORM 10-K ANNUAL REPORT

TABLE OF CONTENTS

PART I

Item 1	Business.....
Item 2.	Properties.....
Item 3.	Legal Proceedings.....
Item 4.	Submission of Matters to a Vote of Security Holders.....

PART II

Item 5.	Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.....
Item 6	Selected Financial Data.....
Item 7	Management's Discussion and Analysis of Financial Condition and Results of Operations.....
Item 7A.	Quantitative and Qualitative Disclosures about Market Risk.....
Item 8.	Financial Statements and Supplementary Data.....
Item 9.	Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.....
Item 9A.	Controls and Procedures.....

PART III

Item 10.	Directors and Executive Officers of the Registrant.....
Item 11.	Executive Compensation.....
Item 12.	Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.....
Item 13.	Certain Relationships and Related Transactions.....
Item 14.	Principal Accountant Fees and Services.....

PART IV

Item 15.	Exhibits, Financial Statement Schedules, and Reports on Form 8-K.....
----------	---

SIGNATURES.....

PART I

The matters addressed in this report on Form 10-K, with the exception of the historical information presented, may contain certain forward-looking statements involving risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including those set forth under the heading "Certain Factors That May Affect Future Results" in the Management's Discussion and Analysis section and elsewhere in this report.

Item 1. Business

General

In July 2000, we changed our name to Enova Systems, Inc. Our company, previously known as U.S. Electricar, Inc., a California corporation (the "Company"), was incorporated on July 30, 1976.

Enova believes it is a leader in the development and production of proprietary, commercial digital power management systems for transportation vehicles and stationary power generation systems. Power management systems control and monitor electric power in an automotive or commercial application such as an automobile or a stand-alone power generator. Drive systems are comprised of an electric motor, an electronics control unit and a gear unit which power an electric vehicle. Hybrid systems, which are similar to pure electric drive systems, contain an internal combustion engine in addition to the electric motor, eliminating external recharging of the battery system. A hydrogen fuel cell based system is similar to a hybrid system, except that instead of an internal combustion engine, a fuel cell is utilized as the power source. A fuel cell is a system which combines hydrogen and oxygen in a chemical process to produce electricity. Stationary power systems utilize similar components to those which are in a mobile drive system in addition to other elements. These stationary systems are effective as power-assist or back-up systems, alternative power, for residential, commercial and industrial applications.

A fundamental element of Enova's strategy is to develop and produce advanced proprietary software, firmware and hardware for applications in these alternative power markets. Our focus is digital power conversion, power management, and system integration, for two broad market applications - vehicle power generation and stationary power generation.

Specifically, we develop, design and produce drive systems and related components for electric, hybrid-electric, fuel cell and microturbine-powered vehicles. We also develop, design and produce power management and power conversion components for stationary distributed power generation systems. These stationary applications can employ hydrogen fuel cells, microturbines, or advanced batteries for power storage and generation. Additionally, we perform research and development to augment and support others' and our own related product development efforts.

Our product development strategy is to design and introduce to market successively advanced products, each based on our core technical competencies. In each of our product / market segments, we provide products and services to leverage our core competencies in digital power management, power conversion and system integration. We believe that the underlying technical requirements shared

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

among the market segments will allow us to more quickly transition from one emerging market to the next, with the goal of capturing early market share.

During 2003, the Company experienced a shift to more development work, both commercial and military, as demand for drive systems slowed. Management believes that this trend will continue in the first half of 2004; however, many of these development programs may lead to production programs beginning in 2005.

The Company has received greater recognition from both governmental and private industry with regards to U.S. military applications of its hybrid drive systems and fuel cell power management technologies. Although the company believes that current negotiations with several parties may result in development contracts in the first and second quarters of 2004 and beyond, there are no assurances that such additional contracts will be signed.

During the year ended December 31, 2003, we completed development on several new power management and drive systems such as our High Voltage version of our 120kW drive system, Dual 8kW inverter, 380V DC/DC converter, Mobile Fuel Cell Generator, a multi-functional processor, as well as upgrades to our Battery Care Management system, Fuel Cell Management system and our High Voltage Power Converter. We continued to develop and produce electric and hybrid electric drive systems and components for Ford Motor Company (Ford), Mack/Volvo, the City of Honolulu and several domestic and international vehicle and bus manufacturers in China, Italy, the United Kingdom, Malaysia and Japan. Our various electric and hybrid-electric drive systems, power management and power conversion systems are being used in applications including Class 8 trucks, monorail systems, transit buses and industrial vehicles. Enova has furthered its development and production of systems for both mobile and stationary fuel cell powered systems with major companies such as Ford, ChevronTexaco and UTC Fuel Cells, a division of United Technologies. We also are continuing on our current research and development programs with Mack/Volvo, EDO Corporation, the U.S. Air Force and the U.S. Navy, as well as developing new programs with Hyundai Motor Company (HMC), the U.S. government and other private sector companies for hybrid and fuel cell systems.

3

For the year ended December 31, 2003, the following customers accounted for more than ten percent (10%) of the Company's total revenues:

Customer	Percent
Advanced Vehicle Systems	18.5%
Ballard Power Systems	16.9%
Hawaii Electric Vehicle Development Project	13.4%
ChevronTexaco	11.3%

Heavy-Duty Drive Systems - Buses and Truck for Urban operators

Heavy-duty drive system sales continue to be a prime focus for Enova. Although this market sector has developed more slowly than anticipated, management believes that this area will see significant growth over the next several years. Our PantherTM 120kW and PantherTM 240kW drive systems were developed completely in-house and are in production and operating in global markets giving Enova a potential edge on other competitors in this sector. Sales of our PantherTM 120kW drive systems continue to provide revenues for our company.

Eco Power Technology of Italy purchased components for our Panther 120kW hybrid electric drive systems during 2003 for both revenue service

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

operations and as service and maintenance parts for its fleet of 42 buses powered by Panther 120kW drive systems. Eco Power is one of the largest integrators of medium size transit buses for the European shuttle bus market, with key customers in five Italian cities namely Turin, Genoa, Brescia, Ferrara and Vicenza. For the year ended December 31, 2003, we billed approximately \$213,000 for these systems.

Tomoe Electro-Mechanical Engineering and Manufacturing, Inc. of Japan continues to procure our 240kW, 120kW and 90kW drive systems for integration into their industrial vehicle platforms. During the year, Enova successfully integrated its Panther drive systems into a heavy-duty Isuzu dump truck, three passenger trams and a mine tunnel crawler. The three Tomoe passenger trams are currently in service in Okinawa. Furthermore, Tomoe and Enova are working on other commercial and industrial applications for our drive systems. For the year ended December 31, 2003, we billed approximately \$146,000 for these various systems. Although we anticipate additional orders for these systems in 2004 and beyond, there are no assurances that such additional orders will be forthcoming.

Wrights Environment, a division of Wrights Bus, one of the largest low-floor bus manufacturers in the United Kingdom, has integrated our hybrid electric Panther™ 120kW drive system into two of its buses utilizing a 30kW Capstone microturbine as their power source. These buses have been in field service in several major cities throughout the United Kingdom and are performing to specifications. Wrights has purchased additional production drive systems which were delivered in early 2004 including our 240kW drive system and has notified us of additional purchase requirements for the latter half of 2004. Additionally, Wright Bus has agreed to partially fund development of our diesel generator system for diesel engines compatible with their driveline. Such development is scheduled to commence in the second quarter of 2004. At this time, however, there are no assurances that such additional orders will be forthcoming.

MTrans of Malaysia, that country's leading monorail provider, has procured and integrated our high voltage Panther 120kW systems into its monorail trains for service on new monorail systems. Each monorail train require four drive systems which may be modified to operate as pure hybrids or connected to a power rail system. Additionally, MTrans has integrated a standard Panther 120kW drive system into a hybrid 10-meter bus with a Capstone microturbine as its power source. For the year ended December 31, 2003, we billed approximately \$184,000 for these various systems. MTrans has discussed the potential of utilizing Enova drive systems for all of its hybrid and monorail requirements in 2004 and beyond. At this time, however, there are no assurances that such additional orders will be forthcoming.

Although Advanced Vehicle Systems no longer exists, we gained immeasurable experience and recognition from the programs and vehicles into which we integrated them. Enova delivered drive systems and integrated these into both 30 and 38-foot transit buses as well as a Class 8 urban delivery truck. The integration of these systems into this wide variety of vehicles assisted Enova in developing more efficient and cost beneficial integration and maintenance programs for use with other customers. Additionally, the fleet and transit operators of these vehicles are beginning to provide Enova with a new customer base for upgrades and service of the installed systems.

Hyundai Heavy Industries has been selected as a major partner for our outsource manufacturer for the Panther 120kW controller, the motor and controller for our Panther 240kW drive systems and many other Enova digital power management components. Enova's strategy is to minimize capital outlays and maximize efficiencies by utilizing proven manufacturing partners.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Light-Duty Drive Systems - Automobiles and Delivery vehicles

Our 90kW controller, motor and gear unit is utilized in light duty vehicles such as midsize automobiles and delivery vehicles. As part of our corporate strategy to outsource manufacturing, Enova selected Hyundai Heavy Industries to produce the Enova developed Panther 90kW drive system.

The City of Honolulu has contracted with Enova to upgrade several S-10 trucks in its electric vehicle fleet. During the third quarter of 2003, we completed the upgrade of 3 trucks to our Panther 90kW drive system. Two additional vehicles are currently being upgraded for delivery in March 2004. For the year ended December 31, 2003, this program generated \$81,000 in revenues.

We are beginning to receive more interest in our light-duty systems from both European and Asian customers. Eneco of the United Kingdom, a hybrid vehicle integrator which has purchased our Panther 120 for its hybrid bus applications, has notified us of its intent to purchase these systems for its light-duty vehicle conversions in 2004. Although we anticipate additional orders for these systems in 2004 and beyond, there are no assurances that such additional orders will be forthcoming.

We continue to cross-sell our systems to new and current customers in the light and medium duty vehicle markets, both domestically and globally.

Fuel Cell Technologies

The High Voltage Energy Converter (HVEC) development program with Ford Motor Company for their fuel cell vehicle was essentially completed in 2003. This converter is a key component in Ford's Focus Fuel Cell Vehicle which utilizes the Ballard fuel cell system. It converts high voltage power from the fuel cell into a lower voltage for use by the drive system and electronic accessories. Enova received a purchase order for 36 production system in the third quarter of 2003 for delivery in late March 2004 valued at approximately \$410,000. There is a potential for additional production orders from Ford in 2004; however at this time, there are no assurances that such additional orders will be forthcoming.

Furthermore, we are applying the technology and components derived from this program to other applications. The HVEC is a critical component of our Fuel Cell bus programs, noted below in development programs, and other fuel cell powered systems such as the Hyundai fuel cell vehicle noted below under research and development programs. The Company will continue to explore new applications for this versatile technology in both mobile and stationary systems.

Enova's fuel cell management and control systems work with a variety of fuel cells provided by such manufacturers as Hydrogenics of Canada, UTC Fuel Cells, part of the UTC Power unit of United Technologies Corporation and Ballard Power Systems of Canada. Our strategy is to provide power components that are impartial to the type of power source, therefore allowing our systems to work efficiently with any alternative source available such as fuel cells, diesel generators, advanced batteries, microturbines, in-line power and other advanced energy sources.

During 2003, UTC Fuel Cells purchased 32 Fuel Cell Care units from us over the course of the year. We will continue to work with both UTC Fuel Cells directly and as a partner in our alliance development programs for fuel cell applications in the future.

Research and Development Programs

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

We are aggressively pursuing several government and commercially sponsored development programs for both ground and marine heavy-duty drive system applications.

In the fourth quarter of 2003, we entered into several development contracts with major corporations for programs funded by the U.S. military. Many of these programs provide for dual-use application of the technologies developed.

Our first new program is in conjunction with Mack Truck, Inc., Powertrain division - a unit of The Volvo Group, Sweden, for the development and manufacture of a motor controller, electric motor and battery management systems for a new parallel hybrid drive system using Mack Trucks' MD11 diesel engine. The new parallel hybrid vehicle program is part of the Air Force's efforts to improve efficiency, reduce fuel and maintenance costs, provide re-generative brake energy and reduce emissions. The refueler fleet consists of approximately 300 vehicles and, upon successful completion and evaluation of the refueler vehicle, there is the potential for additional upgrades to the parallel hybrid drive system. As part of the program, Mack Trucks will also evaluate the applicability of the drive system to commercial vehicle commencing with its Class 8 Refuse Hauler. Mack Trucks currently produces approximately 3,000 refuse vehicles per annum for major customers such as Waste Management. This development program will be completed in late 2004 followed by an evaluation period of approximately three to six months. The program generated \$75,000 in revenues for us in the fourth quarter of 2003 with the remaining \$175,000 to be billed in 2004. There is a potential for additional production orders for both military and commercial application of this technology. However at this time, there are no assurances that such additional orders will be forthcoming.

We also entered into a development contract with EDO Corporation of New York for the design and fabrication of a high voltage DC-DC power conversion system utilizing a Capstone microturbine as the primary power source for the U.S. Navy unmanned minesweeper project. The electronics package will include Enova's advanced power components including a new, enhanced 50V,

5

700A DC-DC power converter, our Battery Care Unit and Hybrid Control Unit which will power the minesweeper's electromagnetic detection system. Our power management and conversion system will be used to provide on-board power to other accessories on the platform. We believe that the aggregate value of the program will be approximately \$420,000 of which \$75,000 was billed in the fourth quarter of 2003. Although this program also has the potential for additional system sales following the demonstration phase, there are no assurances that such additional orders will be forthcoming.

Enova's program with the U.S. Air Force and the State of Hawaii to integrate a Panther 120kW hybrid drive system into a second 30-foot bus for the Hickman Air Force base was amended to develop this propulsion system as a hydrogen fuel cell hybrid vehicle teaming with Hydrogenics of Canada. In integrating this new system for Enova, our engineers developed several new power management systems including our dual 8kW inverter, 380V DC/DC converter and our Mobile Fuel Cell Generator that utilizes our HVEC from our Ford development program. This latest fuel cell vehicle application utilized a Hydrogenics 20kW fuel cell power generation module underscoring our technologies ability to optimize fuel cell performance across a range of fuel cell products. The program was completed in the fourth quarter of 2003 and the bus has met all performance requirements. As a result of this program meeting schedule, cost and performance benchmarks, we are experiencing a notable increase in interest from both government and military organizations for our products and integration services.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

For the year ended December 31, 2003, we billed approximately \$550,000 for this program.

The all-electric Hyundai Santa Fe SUV demonstration project in Honolulu Hawaii has been extended for another two years for three of the vehicles. Fast-charging capabilities and performance will be the primary focus of this continued evaluation. This is a continuation of the State of Hawaii and Hyundai Motor Company's program for pure electric vehicle performance.

Enova commenced development for Hyundai Motor Company of fuel cell power management and conversion components for Hyundai's latest fuel cell hybrid electric vehicle, the Tucson, which was unveiled at the Geneva Auto Show in March 2004. Enova will develop this next generation hybrid-electric drive-train, motor and control unit based on its prior development work on both light and heavy-duty power-trains for both electric and hybrid-electric vehicle platforms. Enova is working in conjunction with UTC Fuel Cells, part of the UTC Power unit of United Technologies Corporation, to develop the power electronics for this vehicle. For the year ended December 31, 2003, Enova billed approximately \$271,000 for this program. This program will continue through the second quarter of 2004 and is estimated to generate approximately \$400,000 in revenues for Enova. Although we believe there is potential for further production of these drive system components in the future, there can be no assurances at this time that such orders will be realized.

Several other programs are in negotiation or discussion in conjunction with Hyundai Motor Company, the U.S. Air Force and several other government agencies and private corporations. We anticipate commencing work on these contracts during 2004. There can be no assurances at this time, however, that any of such contracts will be realized.

We anticipate establishing new development programs with the Hawaii High Technology Development Corporation in mobile and marine applications as well as other state and federal government agencies as funding becomes available.

Stationary Power Applications

Enova continues to attract new partners and customers from both fuel cell manufacturers and petroleum companies. It is our belief that utilizing our power management systems for stationary applications for fuel cells will open new markets for our Company.

We completed the design and fabrication of our process controller for ChevronTexaco Technology Ventures (CTTV) for their fuel reformer for a stationary fuel cell application. The first prototype of the controller board for this system performed to customer requirements. The process controller is now in final integration and test phases at CTTV which will last through the first half of 2004. For the year ended December 31, 2003, Enova has billed CTTV \$492,000 for this program. We believe there may be additional follow-on development and production for this program. However, there are no assurances that such orders or contracts will be realized.

We believe the stationary power market will play a key role in our future. We continue to pursue alliances with leading manufacturers in this area. There are, however, no assurances that this market will develop as anticipated or that such alliances will occur.

Environmental Initiatives and Legislation

Because vehicles powered by internal combustion engines cause pollution, there has been significant public pressure in Europe and Asia, and enacted or pending legislation in the United States at the federal level and in

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

certain states, to promote or mandate the use of vehicles with no tailpipe emissions ("zero emission vehicles") or reduced tailpipe emissions ("low emission vehicles"). We believe legislation requiring or promoting zero or low emission vehicles is necessary to create a significant market for electric vehicles. The California Air Resources Board (CARB) is continually modifying its limits for low emission vehicles. Recently, CARB proposed additional amendments to the regulations. Furthermore, several car manufacturers have challenged

6

these mandates in court and have obtained injunctions to delay these mandates. There can be no assurance that further legislation will be enacted or that current legislation or state mandates will not be repealed or amended, or that a different form of zero emission or low emission vehicle will not be invented, developed and produced, and achieve greater market acceptance than electric vehicles. Extensions, modifications or reductions of current federal and state legislation, mandates and potential tax incentives could adversely affect the Company's business prospects if implemented.

Our products are subject to federal, state, local and foreign laws and regulations, governing, among other things, emissions as well as laws relating to occupational health and safety. Regulatory agencies may impose special requirements for implementation and operation of our products or may significantly impact or even eliminate some of our target markets. We may incur material costs or liabilities in complying with government regulations. In addition, potentially significant expenditures could be required in order to comply with evolving environmental and health and safety laws, regulations and requirements that may be adopted or imposed in the future.

Strategic Alliances, Partnering and Technology Developments

Our continuing strategy is to adapt ourselves to the ever-changing environment of alternative power markets for both stationary and mobile applications. Originally focusing on pure electric drive systems, we believe we are now positioned as a global supplier of drive systems for electric, hybrid and fuel cell applications. Enova is now entering stationary power markets with its power management systems and intends to develop other systems to monitor and control the complex fuel cell and ancillary device systems being developed for distributed generation and mobile applications.

Enova continues to seek and establish alliances with major players in the automotive, stationary power and fuel cell fields. For instance, the Hyundai Group of Korea and Enova are partnering in the development of advanced hybrid and hydrogen fuel cell drive-train technology and related systems.

Our recent joint venture alliance with Hyundai Heavy Industries (HHI) is a prime example of our partnering strategy to maximize the utilization of Enova's knowledge and expertise in power management and control. Teaming with HHI may lead to other additive technologies and products which Enova can market to current and prospective customers. The joint venture corporation, Hyundai-Enova Innovative Technology Center (ITC), commenced operations in the second quarter of 2003. The advanced technology center focuses on leading-edge technologies in power management and power conversion for industrial, commercial, residential and vehicle applications. The ITC's first development program focuses on an advanced parallel hybrid drive system for Hyundai Motor Company which is currently in the initial evaluation phases. Another major project for the ITC is the commercialization of Enova's diesel genset. Other projects slated for development for the ITC include commercial inverters and other power management systems which build on Enova's and HHI's technology base. It is our intent to utilize the resources provided through the ITC to optimize

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Enova's current product line for greater performance and production cost efficiencies, while we continue new research and development for the next generation of digital power management systems for mobile and stationary applications.

Enova's alliances with other major OEMs in the automotive, transit, commercial and energy sectors continue to expand. During 2003, we formed new alliances with Mack/Volvo, EDO, MTrans of Malaysia, CARTA (Chattanooga Area Rapid Transit Agency), Eneco, Hydrogenics of Canada and other commercial and industrial intermediaries and OEMs to find new markets and applications for our products and technologies. We continue our strategy as a "systems integrator" by establishing relationships to utilize other independently developed technologies such as those provided by HHI, UTC Fuel Cells, Hydrogenics and national universities. We have implemented our plans to outsource manufacturing of our components to companies such as HHI, Ricardo, and other Asian manufacturers. We believe that one of our competitive advantages is our ability to identify, attract and integrate the latest technology available to produce state of the art products at competitive prices.

Our products are "production-engineered," meaning they are designed so they can be commercially produced all formats and files are designed with manufacturability in mind from the start. For the automotive market, Enova designs its products to QS9000 manufacturing and quality standards. We believe that our redundancy of systems, robustness of design, and rigorous quality standards result in higher performance and reduced risk. For every component and piece of hardware, there are detailed performance specifications. Each piece is tested and evaluated against these specifications, which enhances the value of the systems to OEM customers.

Enova performs low-volume production in-house and assembly and out-sources manufacturing for mass production. Outsourcing enables us to keep our capital investment to a minimum, reducing expenditures for hardware, installation and training, to avoid the problems of manufacturing equipment obsolescence. Outsourcing also enables Enova to search out and work with a number of the best QS 9000-certified manufacturers worldwide. We believe our strategy ensures that our OEM customers have confidence in our products and receive quality products.

7

Products

Enova's focus is digital power management, power conversion, and system integration. Our proprietary software, firmware and hardware manage and control the power that drives a vehicle or device. They convert the power into the appropriate forms required by the vehicle or device, whether DC to AC, AC to DC or DC to DC, and they manage the flow of this energy to protect the battery, the vehicle or device, and the driver or operator. Enova's systems work "from drive train to drive wheel" for both vehicle and stationary applications.

The latest state-of-the-art technologies, such as hybrid vehicles, fuel cell and micro turbine based systems, and stationary power generation, all require some type of power management and conversion mechanism. Enova, utilizing our enabling technologies, supplies these essential components. We believe our drive train systems will work with any kind of fuel/power source, from electric to hybrid to fuel cell to turbine. They are essential components for any vehicle, system or device that uses power.

Enova is moving to expand its product base into new markets outside of the traditional electric and hybrid-electric automotive fields. Key areas which

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Enova has begun to penetrate include energy management in distributed generation in the utility industry, and stand-by/backup power generation in the commercial electronics industry. Both of these markets can be served with our existing energy management and power control products. Enova has entered into agreements or begun discussions with various alternative power generation manufacturers such as Capstone Turbine, UTC Fuel Cells and Hydrogenics as well as others. We believe our enabling technologies will prove beneficial to these types of companies in their strategies to bring these new power systems to commercialization.

Enova has embraced fuel cell technology and has begun to develop various power management and control systems to enable fuel cell manufacturers and their ancillary industries to achieve greater efficiencies from their systems. These systems are also designed to provide added reliability and safety by monitoring, adjusting and reporting on operation of the unit.

Panther™ Electric and Hybrid-Electric Drive Systems

Enova's Panther electric drive system provides all the functionality one would find under the hood of an internal combustion engine powered vehicle. The Panther system consists of an enhanced electric motor and the electronic controls that regulate the flow of electricity to and from the batteries at various voltages and power to propel the vehicle. In addition to the motor and controller, the system includes a gear reduction/differential unit. The system is designed to be installed in a "drop in," fully integrated turnkey fashion, or on a modular, "as-needed" basis for OEMs.

Enova's family of light-duty drive systems includes 30kW, 60kW, 90kW all-electric drives, 90kW fuel cell powered series-hybrid drive and combinations of these systems based on customer requirements. Our family of heavy-duty electric drive systems includes a 120kW all-electric drive, a 120kW turbine or diesel genset powered series-hybrid drive, and a new 240kW turbine powered series-hybrid drive system with our 120kW and 240kW diesel genset powered series-hybrid drive systems anticipated to be introduced in mid 2004.

Electric Drive Motors

The electric drive unit is essentially an electric motor with additional features and functionality. The motor is liquid-cooled, environmentally sealed, designed to handle automotive shock and vibration, and includes parking pawl, which stops the vehicle when the driver parks the car. It also permits regenerative braking to provide power recovery, in which the mechanical energy of momentum is converted into electrical energy as the motor slows during braking or deceleration. The optional gear reduction unit takes the electric motor's high rpm and gears it down to the lower rpm required by the vehicle's conventional drive shaft. As the revolutions per minute (rpm) go down, the torque of the electric motor increases.

The Panther drive systems exclusively utilize induction AC motors for their high performance, power density, robustness and low cost. The AC drive system is scaleable and can be customized for different applications. Due to the large operating range that these propulsion systems offer, all parameters can be optimized; the user will not have to choose between acceleration, torque or vehicle speed.

Electric Motor Controllers

The controller houses all the components necessary to control the powering of a vehicle, in one easy-to-install package. Our main component is an inverter, which converts DC electricity to AC electricity. Enova also offers optional controllers for the air conditioning, power steering and heat pump, 12VDC/24VDC DC-to-DC converter for vehicle auxiliary loads such as cell phones,

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

radio, lights, and a 6.6kW AC-to-DC on-board conductive charger which allows for direct 110 VAC or 220 VAC battery charging. These are located in the same housing as the controller, thus extra interconnects are not required. This approach simplifies the vehicle wiring harness and increases system reliability.

8

Using our proprietary Windows(TM) based software package, vehicle interfaces and control parameters can be programmed in-vehicle. Real-time vehicle performance parameters can be monitored and collected.

Hybrid Drive Systems

The Enova Panther hybrid-electric drive systems are based on the component building blocks of the electric drive family, including the motor, controller and optional components. As an example, the 120/30 kW series hybrid system uses the 120kW electric drive components to propel the vehicle, and uses a 30kW Capstone micro-turbine to generate power while the vehicle is in operation. This synergy of design reduces the development cost of Enova's hybrid systems by taking advantage of existing designs. Accessories for these drives include battery management, chargers and 12-volt power supplies for the electric drive family.

Enova's hybrid systems are designed to work with a variety of hybrid power generation technologies. In our 120/60kW hybrid system, an internal combustion engine connected to a motor and motor controller performs the power generation. Other power options include liquid fueled turbines, such as the Capstone system, fuel cells, such as the UTC Fuel Cell, Ballard or Hydrogenics system, and many others. In all of these examples, Enova's battery management system provides the power management to allow for proper power control.

Battery Care Unit

We place a great amount of focus on our power management systems. Enova's Battery Care Unit "BCU" monitors, manages, protects, and reports. It controls and manages battery performance, temperature, voltage and current to avoid harm to the batteries, to the entire system, and to the driver, operator and passengers. It also allows for monitoring for service to the battery and drive system. This battery management system is capable of providing communication to both inductive and conductive chargers simultaneously and managing the on-board and off-board charging systems with multiple technologies. The versatility of this system allows us to adapt the hardware and software for a variety of power sources such as batteries, turbines and fuel cells.

The BCU monitors the battery pack voltage and 28 additional individual voltages with a range of 0 to 18vDC. Optional expansion modules allow 28 additional inputs per module, with up to 16 modules permitted. The BCU has eight user-programmable outputs and four user-programmable inputs to allow full integration into the vehicle. These can be used to customize input and output parameters, and to provide for other custom monitoring and battery pack control.

The BCU directly interfaces with the Panther family of drive systems as well as others, and controls the Safety Disconnect Unit (see description below). It is capable of supporting any battery technology, and provides each type with optimized charging and protection algorithms. An internal real-time clock allows the BCU to wake up at user-specified times to initiate battery charging or pack monitoring. A precision shunt allows it to offer a wide dynamic range for monitoring charging and motoring current, without errors commonly associated with other types of sensors.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

The on-board memory allows the BCU to update, store and report key battery pack parameters such as amp hours, kilowatt-hours and state of charge. Using Enova's proprietary Windows(TM)-based diagnostic software, the BCU control parameters can be programmed in-vehicle. Additionally, battery performance can be monitored in real-time. Reports can be output to a laptop computer.

Hybrid Control Unit

We have reconfigured our BCU to perform the critical role of hybrid controller. The Hybrid Control Unit "HCU" continuously monitors the condition of the battery pack through communications with the BCU, monitors the driver commands through communications with the motor controller, and the state of the hybrid generator. Based upon the data received, the HCU provides continuous updates to the hybrid generator with instructions on mode of operation and power level. The purpose of this innovative control loop is to ensure that the entire system is optimized to provide quick response to driver commands while providing the best possible system efficiency.

Safety Disconnect Unit

The Safety Disconnect Unit "SDU" is under the control of the BCU, and allows vehicle systems to seamlessly connect and disconnect from the battery pack when necessary to prevent damage or harm. It also disconnects the battery pack during charging, protects it from surges, and constantly verifies that the battery pack is isolated from the vehicle chassis. In the event a ground isolation fault is detected, the BCU commands the SDU to break the battery connection. The SDU is available in two configurations to match the requirements of the drive systems.

9

Fuel Cell Power Conditioning Unit

Enova has developed and is now producing a 30kW bi-directional Fuel Cell Power Conditioning System. This system has been designed to meet the demands of an automotive Fuel Cell propulsion system. This unique unit, not much larger than a conventional briefcase, provides a transparent interface between the Fuel Cell or Turbine, the battery pack, accessory loads, and the output load. Fast response time allows the output load to be serviced without interruption while the Fuel Cell or Turbine ramps up.

This unit is designed to interface directly with the master controller of the vehicle over a CAN bus. Other communications protocols supported are SAE J-1850, RS-232, and RS-485. This proprietary package allows all key parameters of the Power Conditioner to be monitored and control boundaries to be adjusted.

50kW ICE Generator Unit

Enova provides a complete 50kW Internal Combustion Engine Generator Set. This unit is powered by a 4-cylinder direct injection diesel engine and is controlled over the common CAN bus shared with the rest of the Panther product line. The same HCU that controls the Capstone micro-turbine in other Enova series hybrid configurations provides power command, start command, and stop commands.

Fuel Cell Management Unit

Enova has added a Fuel Cell Control Unit "FCU" to broaden our market in the power management field. The FCU is designed to manage fuel cell powered systems whether stationary or mobile, such as automobiles. The FCU can be

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

adapted to regulate the input and output to and from the fuel cell as well as regulate temperature and communications. We continue to develop our current systems for new products and markets.

Enova has reconfigured its Battery Management Unit to perform the functions required to monitor, manage, and report on the status of a Fuel Cell Stack. This new unit, the FCU, is currently being used by UTC Fuel Cells as a Fuel Stack Management System.

An internal real-time clock allows the FCU to wake up at user-specified times to initiate battery charging or pack monitoring. A precision shunt allows it to offer a wide dynamic range for monitoring charging and motoring current, without errors commonly associated with other types of sensors. The built-in memory allows the FCU to update, store and report key battery pack parameters such as amp hours, kilowatt-hours and state of charge. Using Enova's proprietary Windows(TM)-based diagnostic software, the FCU control parameters can be programmed in-system. Additionally, fuel cell performance can be monitored in real-time. Reports can be output to a laptop computer.

Distributed Power Generation for Industrial / Commercial / Residential Applications

Enova's distributed generation products are virtually identical in system configuration to that of a series hybrid vehicle, including a controller and battery management. For this market segment, we intend to provide DC-DC and DC-AC power conversion components to convert power supplied by batteries, fuel cells, generators and turbines to AC power that will be used by the end customer. Additionally, our BCU will provide power management functions to control the entire system. The main difference is that the 3-phase AC power typically supplied to the motor for propulsion power is, in this case, sent to the customer to supply power for their household or business.

Competitive Conditions

The competition to develop and market electric, hybrid and fuel cell powered vehicles has increased during the last year and we expect this trend to continue. The competition consists of development stage companies as well as major U.S. and international companies. Our future prospects are highly dependent upon the successful development and introduction of new products that are responsive to market needs and can be manufactured and sold at a profit. There can be no assurance that we will be able to successfully develop or market any such products.

The development of hybrid-electric and alternative fuel vehicles, such as compressed natural gas, fuel cells and hybrid cars poses a competitive threat to our markets for low emission vehicles or LEVs but not in markets where government mandates call for zero emission vehicles or ZEVs. Enova is involved in the development of hybrid vehicles and fuel cell systems in order to meet future requirements and applications.

Various providers of electric vehicles have proposed products or offer products for sale in this emerging market. These products encompass a wide variety of technologies aimed at both consumer and commercial markets. The critical role of technology in this market is demonstrated through several product offerings. As the industry matures, key technologies and capabilities are expected to play critical competitive roles. Our goal is to position ourselves as a long term competitor in this industry by focusing on electric, hybrid and fuel cell powered drive systems and related sub systems, component integration, technology application and strategic alliances. The addition of new strategies to penetrate stationary power markets with current technologies will assist in

creating a more diversified product mix. We believe that this strategy will enhance our position as a power management and conversion components supplier to both the mobile and stationary power markets.

Research and Development

Enova believes that timely development and introduction of new technology and products are essential to maintaining a competitive advantage. We are currently focusing our development efforts primarily in the following areas:

- *Power Control and Drive Systems and related technologies for vehicle applications;
- *Stationary Power Management and Conversion and related technologies;
- *Heavy Duty Drive System development for Buses; Trucks, Industrial, Military and Marine applications
- *Fuel Cell Generation system power management and process control
- *Systems Integration of these technologies;
- *Technical and product development under DOE/DOT/DOD and Hyundai Group Contracts
- *OEM Technical and Product development.

For the years ended December 31, 2003, 2002 and 2001, we spent \$799,000, \$1,152,000 and \$879,000, respectively, on internal research and development activities. Enova is continually evaluating and updating the technology and equipment used in developing each of its products. The power management and conversion industry utilizes rapidly changing technology and we will endeavor to modernize our current products as well as continue to develop new leading edge technologies to maintain our competitive edge in the market.

Intellectual Property

Enova currently holds four U.S. patents and has one patent pending, in power management and control, with an additional patent in crash management safety, which was originally issued in 1997. We also have trademarks or service marks in the United States and have been filing for international patents as well. We continually review and append our protection of proprietary technology. We have placed renewed emphasis on the development and acquisition of patentable technology in 2003 and will continue to do so in future years. We maintain an internal review and compensation process to encourage our employees to create new patentable technologies. The status of patents involves complex legal and factual questions, and the breadth of claims allowed is uncertain. Accordingly, there can be no assurance that patent applications filed by us will result in patents being issued. Moreover, there can be no assurance that third parties will not assert claims against us with respect to existing and future products. Although we intend to vigorously protect our rights, there can be no assurance that these measures will be successful. In the event of litigation to determine the validity of any third party claims, such litigation could result in significant expense to Enova. Additionally, the laws of certain countries in which our products are or may be developed, manufactured or sold may not protect our products and intellectual property rights to the same extent as the laws of the United States.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Enova's success depends in part on its ability to protect its proprietary technologies. Enova's pending or future patent applications may not be approved and the claims covered by such applications may be reduced. If allowed, patents may not be of sufficient scope or strength, others may independently develop similar technologies or products, duplicate any of Enova's products or design around its patents, and the patents may not provide Enova with competitive advantages. Further, patents held by third parties may prevent the commercialization of products incorporating Enova's technologies or third parties may challenge or seek to narrow, invalidate or circumvent any of Enova's pending or future patents. Enova also believes that foreign patents, if obtained, and the protection afforded by such foreign patents and foreign intellectual property laws, may be more limited than that provided under United States patents and intellectual property laws. Litigation, which could result in substantial costs and diversion of effort by Enova, may also be necessary to enforce any patents issued or licensed to Enova or to determine the scope and validity of third-party proprietary rights. Any such litigation, regardless of outcome, could be expensive and time-consuming, and adverse determinations in any such litigation could seriously harm Enova's business.

Enova also relies on unpatented trade secrets and know-how and proprietary technological innovation and expertise which are protected in part by confidentiality and invention assignment agreements with its employees, advisors and consultants and non-disclosure agreements with certain of its suppliers and distributors. These agreements may be breached, Enova may not have adequate remedies for any breach or Enova's unpatented proprietary intellectual property may otherwise become known or independently discovered by competitors. Further, the laws of certain foreign countries may not protect Enova's products or intellectual property rights to the same extent as do the laws of the United States.

Employees

As of December 31, 2003, we had 28 full time employees. Additionally, we employ three individuals as independent contractors, engaged on an hourly basis, one of whom is domiciled in South Korea. The departmental breakdown of these individuals includes 3 in administration, 1 in sales, 20 in engineering and research and development, and 7 in production.

11

Item 2. Properties

Enova's corporate offices are located in Torrance, California, in leased office space of approximately 20,000 square feet. This facility houses our various departments, including engineering, operations, executive, finance, planning, purchasing, investor relations and human resources. This lease terminates in February 2008. The monthly lease expense is \$13,500. Enova also has a leased office in Hawaii which is rented on a month-to-month basis at \$1,500 per month and an office in South Korea which is also rented on a month-to-month basis at \$500 per month. We believe that these offices are suitable and adequate for our current and readily foreseeable needs.

Item 3. Legal Proceedings

We may from time to time become a party to various legal proceedings arising in the ordinary course of business.

In April 2003, one of our customers, Advanced Vehicle Systems, Inc., filed for bankruptcy protection under Chapter 11 of the U.S. Bankruptcy Code. At the time of filing, AVS had an outstanding account balance with Enova of

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

approximately \$595,000, of which approximately \$564,000 is for components delivered during the first quarter of 2003. During the second quarter, Enova was informed by AVS that various vehicle manufacturing contracts which were anticipated to be completed by AVS were terminated by AVS customers and was therefore we were unable to collect on post-filing offset agreements. Enova's Audit Committee chairman has been appointed chairman of the creditor's committee formed by the Bankruptcy Court. Enova believes it will recover a portion of the funds now owed Enova by AVS. However, there are no assurances that we will recover any or all of the amounts owed to us. As of December 31, 2003, we have reserved \$595,000 against these balances owed as an allowance for uncollectible receivables.

Item 4. Submission of Matters to a Vote of Security Holders

No matters were submitted to a vote of security holders during the fourth quarter of fiscal 2003.

(REMAINDER OF PAGE INTENTIONALLY LEFT BLANK)

12

PART II

Item 5. Market for Registrant's Common Equity, Related Shareholder Matters and Issuer Purchases of Equity Securities

Our Common Stock is presently traded in the over-the-counter market and quoted on the National Association of Securities Dealers (NASD) "Bulletin Board" under the symbol "ENVA." The following table sets forth the high and low bid prices of the Common Stock as reported on the NASD Bulletin Board by the National Quote Bureau for the fiscal quarters indicated. The following over-the-counter market quotations reflect inter-dealer prices, without retail mark-up, markdown or commission, and may not necessarily represent actual transactions.

	Common Stock		Average Daily
	High Price	Low Price	Volume
Calendar 2002			
First Quarter	\$ 0.23	\$ 0.14	265,875
Second Quarter	\$ 0.19	\$ 0.10	111,600
Third Quarter	\$ 0.15	\$ 0.09	38,861
Fourth Quarter	\$ 0.13	\$ 0.07	146,977
Calendar 2003			
First Quarter	\$ 0.09	\$ 0.06	172,237
Second Quarter	\$ 0.09	\$ 0.06	119,057
Third Quarter	\$ 0.10	\$ 0.05	465,683
Fourth Quarter	\$ 0.14	\$ 0.07	463,240

On March 22, 2004, the last reported high bid price of the Common Stock was \$0.14 and the last reported low asking price was \$0.14. As of March 22, 2004, there were approximately 9,600 holders of record of our Common Stock. As of March 22, 2004, approximately 111 shareholders, many of who are also Common Stock shareholders, held our Series A Preferred Stock. Approximately 34 shareholders as of March 22, 2004 held our Series B Preferred Stock. The number of holders of record excludes beneficial holders whose shares are held in the name of nominees or trustees.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Stock Issuances

In September 2003, the Company issued 23,076,923 shares of common stock to Hyundai Heavy Industries Co., Ltd. in exchange for \$1,500,000 in cash. \$1,000,000 of the proceeds from this issuance was used to fund Enova's \$1,000,000 joint venture interest in the Hyundai-Enova Innovative Technology Center as previously noted, with the \$500,000 balance of proceeds to be used for general operations and working capital. The Company relied upon Regulation D, Rule 506 promulgated by the Securities and Exchange Commission as the exemption from registration for the issuance of these shares.

During 2003, we issued an aggregate of 754,167 shares of Common Stock to our directors in consideration for attendance at Board meetings and Board committee meetings during fiscal 2003. We relied on Rule 506 of Regulation D and Section 4(2) of the Securities Act of 1933, as amended, for the exemption from registration of the sales of such shares. See Item 10, "Compensation of Directors."

Dividend Policy

To date, we have neither declared nor paid any cash dividends on shares of our Common Stock or Series A or B Preferred Stock. We presently intend to retain all future earnings for our business and do not anticipate paying cash dividends on our Common Stock or Series A or B Preferred Stock in the foreseeable future. We are required to pay dividends on our Series A and B Preferred Stock before dividends may be paid on any shares of Common Stock. At December 31, 2003, Enova had an accumulated deficit of approximately \$97,077,415 and, until this deficit is eliminated, will be prohibited from paying dividends on any class of stock except out of net profits, unless it meets certain asset and other tests under Section 500 et. seq. of the California Corporations Code.

Item 6. Selected Financial Data

The following selected financial data tables set forth selected financial data for the years ended December 31, 2003, 2002, 2001 and 2000, the five month period ended December 31, 1999 and the fiscal year ended July 31, 1999. The five-month period is related to a change in the fiscal year end which was effective December 31, 1999. The statement of income data and balance sheet data for and as of the end of the years ended December 31, 2003, 2002, 2001 and 2000, the five month period ended December 31, 1999 and the fiscal year ended July 31, 1999 are derived from the audited financial statements of Enova. The following selected financial data should be read in conjunction with "Management's Discussion and Analysis of Financial Condition and Results of Operations" and the Financial Statements, including the notes thereto, appearing elsewhere in this 10K.

13

	As of and for the year ended December 31 (in thousands, except per share data),			
	2003	2002	2001	2000
	-----	-----	-----	-----
NET SALES	\$ 4,310	\$ 4,455	\$ 3,780	\$ 2,883
COST OF SALES	3,304	3,784	2,783	2,013
	-----	-----	-----	-----

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

GROSS MARGIN	1,006	671	997	870
	-----	-----	-----	-----
OTHER COSTS AND EXPENSES				
Research and Development	799	1,152	879	626
Selling, general and administrative	2,919	2,837	2,894	1,999
Interest and financing fees	234	199	113	174
Other expenses (income)	200		(7)	6
Gain on Warranty Reevaluations				
Equity in losses	40			
	-----	-----	-----	-----
Legal Settlements		81	900	75
	-----	-----	-----	-----
Total other costs and expenses	4,192	4,269	4,779	2,880
	-----	-----	-----	-----
LOSS FROM CONTINUING OPERATIONS	(3,186)	(3,598)	(3,782)	(2,010)
GAIN ON DEBT RESTRUCTURING			354	1,551
	-----	-----	-----	-----
NET LOSS	\$ (3,186)	\$ (3,598)	\$ (3,428)	\$ (459)
	=====	=====	=====	=====
PER COMMON SHARE:				
Loss from continuing operations	\$ (0.01)	\$ (0.01)	\$ (0.01)	\$ (0.01)
Gain on debt restructuring				0.01
	-----	-----	-----	-----
Net loss per common share	\$ (0.01)	\$ (0.01)	\$ (0.01)	\$ 0.00
	=====	=====	=====	=====
WEIGHTED AVERAGE NUMBER				
COMMON SHARES OUTSTANDING	334,840	326,390	275,189	235,199
Total Assets	\$ 4,870	\$ 6,224	\$ 4,340	\$ 3,094
	=====	=====	=====	=====
Long-term debt	\$ 3,347	\$ 3,332	\$ 3,332	\$ 3,332
	=====	=====	=====	=====
Shareholder's equity (deficit)	\$ (864)	\$ 287	\$ (232)	\$ (1,648)
	=====	=====	=====	=====

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

You should read this Management's Discussion and Analysis of Financial Condition and Results of Operations in conjunction with our 2003 Financial Statements and Notes thereto. The matters addressed in this Management's Discussion and Analysis of Financial Condition and Results of Operations, with the exception of the historical information presented contains certain forward-looking statements involving risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including those set forth under the heading "Certain Factors That May Affect Future Results" and elsewhere in this report.

Cautionary Note on Forward-looking Statements

Some of the matters discussed under the caption "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Business" and elsewhere in this Form 10-K include forward-looking statements. We have based these forward-looking statements on our current expectations and projections about future events.

In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "could," "predicts," "potential," "continue," "expects," "anticipates," "future," "intends," "plans," "believes," "estimates" and similar expressions. These statements are based on our current beliefs, expectations and assumptions and are subject to a number of risks and uncertainties. Actual results, levels of activity, performance, achievements and

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

events may vary significantly from those

14

implied by the forward-looking statements. These forward-looking statements are made as of the date of this Form 10-K, and, except as required under applicable securities law, we assume no obligation to update them or to explain the reasons why actual results may differ.

OVERVIEW

Enova Systems develops and produces advanced software, firmware and hardware for applications in the growing alternative power industry. Our focus is digital power conversion, power management, and system integration, for two broad market applications - vehicle power generation and stationary power generation.

Enova's products and systems are the enabling technologies for power systems. Without them, power cannot be converted into the appropriate form required by the vehicle or device; and without them, power is not properly managed to protect the battery, vehicle or device, and user.

Specifically, we develop, design and produce drive systems and related components for electric, hybrid-electric, fuel cell and microturbine-powered vehicles. We also develop, design and produce power management and power conversion components for stationary power generation - both on-site distributed power and on-site telecommunications back-up power applications. These stationary applications also employ fuel cells, microturbines and advanced batteries for power storage and generation. Additionally, Enova performs significant research and development to augment and support others' and our internal related product development efforts.

The financial statements present the financial position of Enova Systems, Inc. as of December 31, 2003 and 2002 and the results of operations and cash flows for the year ended December 31, 2003, 2002 and 2001.

Critical Accounting Policies

Financial Reporting Release No. 60 requires all companies to include a discussion of critical accounting policies or methods used in the preparation of financial statements. Note 1 of the notes to the financial statements includes a summary of the significant accounting policies and methods used in the preparation of our financial statements. The following is a brief discussion of the more significant accounting policies and methods that we use.

Our discussion and analysis of our financial condition and result of operations are based on our financial statements, which have been prepared in conformity with accounting principles generally accepted in the United States of America. Our preparation of these financial statements requires us to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the dates of the financial statements and the reported amounts of revenues and expenses during the reporting periods. We based our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. The most significant estimates and assumptions relate to revenue recognition and potential allowances for doubtful accounts. Actual amounts may differ from such estimates under different assumptions or conditions. The following summarizes our critical accounting policies and significant estimates used in preparing our consolidated financial statements:

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

- o The first-in, first-out (FIFO) method to value our inventories;
- o The intrinsic value method, or APB Opinion No. 25, to account for our stock options;
- o Review of customers' receivable to determine the need for an allowance for credit losses based on estimates of customers' ability to pay. If the financial condition of our customers were to deteriorate, an allowance may be required.

These accounting policies are applied consistently for all years presented. Our operating results would be affected if other alternatives were used. Information about the impact on our operating results is included in the footnotes to our financial statements.

LIQUIDITY AND CAPITAL RESOURCES

We have experienced cash flow shortages due to operating losses primarily attributable to research, development, marketing and other costs associated with our strategic plan as an international developer and supplier of electric propulsion and power management systems and components. Cash flows from operations have not been sufficient to meet our obligations. Therefore, we have had to raise funds through several financing transactions. At least until we reach breakeven volume in sales and develop and/or acquire the capability to manufacture and sell our products profitably, we will need to continue to rely on cash from external financing sources. Enova is seeking new investment capital to fund research and development and create new market opportunities. In order to fuel our growth in the stationary power market, we will need additional capital to further these development programs and augment our intellectual properties. The

15

Company believes that at least through fiscal 2004, assuming there are no unanticipated material adverse developments and no material decrease in revenues, its cash flows from operations and through credit facilities will be sufficient to enable the Company to pay its debts and obligations as they mature. The Company will benefit in fiscal 2004 from expense reductions through reduced number of employees and other expenses undertaken in fiscal 2003. However, the Company's current sources of funds are not sufficient to provide the working capital for material growth, and it would be required to obtain additional debt or equity financing to support such growth. As of March 22, 2004, we continue to seek private accredited investors to purchase Enova common stock. Currently, we are seeking up to \$10 million in new investment funding. As of March 30, 2004, Enova has entered into three and received one verbal commitment for \$700,000 to enter into Stock Purchase Agreements with several accredited investors to purchase 15,833,333 shares of our common stock through a private placement offering at \$0.12 per share for a total cash purchase of \$1,900,000. These investors represented that they were accredited investors. We relied on Rule 506 of Regulation D and Section 4(2) of the Securities Act of 1933, as amended, for the exemption from registration of the sale of such shares. Although we believe that we will execute a written Stock Purchase Agreement with respect to the one verbal commitment, there can be no assurance that such an Agreement will be executed and that such funds will be made available. Enova continues to seek additional investment capital to fund its operations, development and expansion plans. As of March 30, 2004, there were no other firm commitments than those noted. Enova also has a commitment from Hyundai Heavy Industries to invest, in June 2004, an additional \$1,500,000 in Enova under the same terms as the initial investment, subject to stock price adjustments, in accordance with the terms of the Joint Venture Agreement as

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

noted below.

Throughout 2003, management reassessed its current resource allocations and overhead costs. Due to the loss of the Advanced Vehicle Systems (AVS) programs - please refer to Part II, Item 1, Legal Proceedings - and an overall slowdown in heavy-duty drive system purchases, Enova's management analyzed current processes and budgets for potential targets for cost reduction. As a result of this analysis, management implemented several cost reduction programs including personnel reductions, work-week modifications and other cost restraint endeavors to achieve these goals. Personnel levels have been reduced to 28 employees at December 31, 2003 from 45 at December 31, 2002. In early October 2003, management discontinued its modified compensation plan for full-time salaried employees as well as work-week reductions for other employees. These employees have had their prior pay levels re-instated. Management believed these pay level reinstatements appropriate based on increasing research and development business. Because of the workforce reductions and other cost containment policies, the Company continues to realize a reduction in monthly cash outlays of approximately \$120,000 via these cost reductions compared with the monthly average for the first six months of 2003 without impact to our current operations.

In 2003, we expanded our sales and development efforts to capture additional global market share for our product line and our technical expertise. Enova expanded further into U.S., European and Asian markets with our heavy duty drive systems and added to our development programs with Ford, Hyundai and the U.S. Department of Transportation with major customers such as Mack Truck / Volvo, EDO Corporation, MTrans of Malaysia, the U.S. Navy and others. We continue to focus on building our product line, increasing our market share and developing the next generation of advanced power management and conversion systems.

Our operations during the year ended December 31, 2003 were financed by development contracts and product sales, as well as from working capital reserves.

During the year ended December 31, 2003, our operations required \$1,378,000 more in cash than was generated. Enova continues to increase research and development spending, as well as increased sales, marketing and administrative expenses necessary for expansion to meet customer demand. Accounts receivable increased by \$142,000 from \$1,256,000, or approximately 11% from the balance at December 31, 2002 (net of write-offs). Including the AVS write-off, accounts receivable were \$803,000 at December 31, 2003 or 36% lower than comparable balances at December 31, 2002. To a large extent, the decrease is due to write-offs caused by the bankruptcy of AVS, as noted below, and the overall slowdown in new business in the third and fourth quarters of 2003. Enova began several new development contracts in the fourth quarter, as noted throughout this Form 10-K, which we anticipate will increase receivables in future quarters. During the twelve months ending December 31, 2003, we charged off approximately \$595,000 primarily for sales made to AVS in 2002 and 2003. We continually monitor our receivables and have had immaterial charge-offs during the years, other than AVS, due to this policy. Inventory decreased slightly by \$46,000 from \$1,652,000 or less than 3% from December 31, 2002 balances. During late 2002, we increased our inventory stock to meet forecasted customer demand from AVS and other heavy-duty drive systems customers. In 2003, several of these customers experienced slower demand than anticipated which resulted in fewer purchases from Enova. We have been selling these systems throughout 2003 and anticipate additional sales of such in 2004. Additionally, included in our inventory are raw materials and equipment related to the Ballard/Ford Think city program, as noted below under Ballard Power Systems, which have a book value of approximately \$180,000 based on our negotiated settlement with Ballard. These materials have an original cost value of over \$700,000. It is our intention to resell these materials during 2004.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Fixed assets increased by \$112,000 or 7%, before depreciation and a write-down of \$200,000 for our Hawaii demonstration tram, for the year ended December 31, 2003 from the prior year balance of \$1,668,000 primarily due purchases of test equipment, production machinery, software and tooling for programs and products developed during the year. The Hawaii tram was originally booked as an asset at a value of \$350,000 based on then applicable market conditions for such pure electric vehicles. Management has determined that, after allowing for depreciation of \$100,000, the tram has a net realizable value in the range between \$50,000 and \$100,000. It is our intent to sell the tram in 2004.

Investments increased by \$960,000 during 2003, net of our pro-rata share of losses attributable to the investment, which reflects our forty percent (40%) interest in the Hyundai-Enova Innovative Technology Center as noted elsewhere in this Form 10-K. For the year ended December 31, 2003, the ITC generated a net loss of approximately \$100,000, resulting in a charge to Enova of \$40,000 utilizing the equity method of accounting for our interest in the ITC. Based on contractual obligations of our Joint Venture Agreement with Hyundai Heavy Industries Co., such investment is anticipated to increase by \$1,000,000 in 2004.

16

Other assets decreased by \$105,000 during 2003 from \$542,000 in 2002 as we continued to amortize the asset relating to the Ford Value Participation Agreement. Intellectual property assets, including patents and trademarks, increased by \$11,000 in 2003 from \$78,000 at December 31, 2002 as we continued to capitalize new intellectual property rights on our technology.

The future unavailability or inadequacy of financing to meet future needs could force us to delay, modify, suspend or cease some or all aspects of our planned operations.

RESULTS OF OPERATIONS

Years Ended December 31, 2003 and 2002

Net sales of \$4,310,000 for the twelve months ended December 31, 2003 decreased \$145,000 or 3% from \$4,455,000 during the same period in 2002. Our sources of revenue for 2003 came primarily from product sales. Product sales as a percentage of total revenues of 56% in 2003 were consistent to the 2002 product sales to total revenues percentage of 59%. Sales of our Panther 120kW drive systems accounted for a majority of our product sales in 2003. We believe this trend will continue over the next several years. However we will continue to seek out and contract for new development programs with both our current partners such as Ford, Mack/Volvo, UTC, Hyundai and our other U.S., Asian and European alliance partners, as well as with new alliances with other vehicle manufacturers and energy companies.

Cost of sales consists of component and material costs, direct labor costs, integration costs and overhead related to manufacturing our products. Product development costs incurred in the performance of engineering development contracts for the U.S. Government and private companies are charged to cost of sales for this contract revenue. During 2003, we continued our trend of establishing new customers and strengthening current alliances with customers, such as Tomoe and MTrans in the heavy-duty drive system market. Because the market is relatively nascent, our customers require additional integration and support services to customize, integrate and evaluate our products. We believe these costs to be initial, one-time costs for these customers and anticipate

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

similar costs to be incurred with respect to new customers as we gain additional market share. Cost of sales for the year ended December 31, 2003 decreased \$438,000, or 12%, from \$3,784,000 for the year ended December 31, 2002. This decrease is attributable to follow-on orders from existing customers such as EPT and MTrans, which no longer require as much integration support, and from decreased pricing from our contract manufacturers as our order quantities rise. As we increase our sales volume, we believe the costs associated with manufacturing and integrating these products should continue to decrease, improving our gross margins.

Research and development expenses consist primarily of personnel, facilities, equipment and supplies for our research and development activities. Non-funded development costs are reported as research and development expense. Research and development expense decreased in 2003 to \$799,000 from \$1,152,000 for the same period in 2002, a decrease of \$352,000, or 31%. During 2003, we reduced non-essential expenses for internal research and development without sacrificing that development necessary to maintain our competitive edge in our markets. We supplemented this reduction by teaming with other companies in our sector such as Mack/Volvo, Hyundai, and the U.S. Government to offset the costs of development for new products in the areas of mobile and stationary power management and conversion. Programs included our advanced power management systems for fuel cells, our diesel generation engine/motor system for our heavy-duty drive systems, a dual 8kW inverter, and upgrades and improvements to our current power conversion and management components. Additionally, we continue to enhance our technologies to be more universally adaptable to the requirements of our current and prospective customers. By modifying our software and firmware, we believe we should be able to provide a more comprehensive, adaptive and effective solution to a larger base of customers and applications. We will continue to research and develop new technologies and products, both internally and in conjunction with our alliance partners and other manufacturers as we deem beneficial to our global growth strategy.

Selling, general and administrative expenses consist primarily of personnel and related costs of sales and marketing employees, consulting fees and expenses for travel, trade shows and promotional activities and personnel and related costs for general corporate functions, including finance, accounting, strategic and business development, human resources and legal. Selling, general and administrative expenses were further reduced in 2003 from 2002 levels continuing a trend from prior years. Net of the \$595,000 AVS bad debt write-off, our selling, general and administrative expenses decreased \$515,000 in the year ended December 31, 2003, to \$2,322,000 from \$2,837,000 for the similar period in 2002. This represents an 18% reduction in these expenses as a result of management's cost reduction programs implemented throughout 2003 including workforce cutbacks, elimination of non-essential expenses and exercising tighter constraint over overhead costs in general. We are continually reviewing operations to lower overhead costs and increase operational efficiencies

For the year ended December 31, 2003, interest and financing fees increased by \$22,000 to \$242,000, an increase of 10%. The increase was due solely to an increase in 2003 in the interest rate on the Note due the Credit Managers Association of California for \$3.2 million per the terms of the Note.

17

Our \$3,186,000 net loss for the year ended December 31, 2003 is \$411,000 less than the loss incurred in 2002 of \$3,598,000, a decrease of 11%. Excluding the bad debt charge of \$595,000 for the AVS bankruptcy and the write-down of the Hawaii tram of \$200,000, our loss for the year would be \$1,206,000 less, or \$2,392,000 for the year ended December 31, 2003, over 34%

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

lower than that incurred in 2002. This decrease is a significant milestone in Enova's goal to break-even in the near future. Management will continue to seek operational efficiencies and methods to reduce manufacturing and overhead costs as well as increase revenues to achieve this goal of profitability.

Ballard Power Systems

Our development and production program with Ballard Power Systems for low voltage 30kW electric drive system components for use in Ford's Global Th!nk City was terminated by Ford and Th!nk Nordic in early 2003, as previously reported. Under the terms of the contract, Ballard is liable for all costs incurred by Enova which are normally associated with the production including inventory and other development or production costs. We invoiced Ballard for approximately \$952,000 for work-in-process inventory and other additional material, tooling and engineering costs for the initial production of the drive system component. Of this amount, Ballard remitted \$580,400 during the second quarter of 2003. In October 2003, Enova and Ballard reached a settlement on all remaining balances due wherein Enova will receive \$198,125 in cash and title to all inventory, raw materials, tooling and equipment in its possession that is associated with the program. The Company intends to sell such in the resale markets. The Company believes that the resale market value of the inventory and equipment will amount to at least the value of the remainder balance of the receivable of approximately \$173,000.

Hyundai-Enova Innovative Technology Center

In September 2003, Enova and Hyundai Heavy Industries, Co. Ltd. (HHI) funded the Hyundai-Enova Innovative Technology Center (HEITC) to be located at Enova's Torrance headquarters. In connection with the Joint Venture Agreement entered into between the two parties in March 2003, HHI purchased \$1,500,000 of common stock of Enova Systems, Inc. HHI purchased 23,076,923 shares representing a 6.2% ownership in Enova, Inc. Of this amount, Enova invested \$1,000,000 in the HEITC for a forty percent (40%) ownership interest. HHI invested an additional \$1,500,000 for a sixty percent (60%) ownership interest in the HEITC. Furthermore, in June of 2004, HHI will invest an additional \$3,000,000 in Enova and HEITC under the same terms as the initial investment, subject to stock price adjustments, in accordance with the Joint Venture Agreement. The joint venture company officially opened in November 2003 to pursue advanced research and development in hybrid automotive and stationary applications for fuel cell technologies.

Years Ended December 31, 2002 and 2001

Net sales of \$4,455,000 for the twelve months ended December 31, 2002 increased \$675,000 or 18% from \$3,780,000 during the same period in 2001. Our revenue base is shifting to higher concentration in product sales as we expand our market penetration in these areas. Accordingly, we have added this delineation in our financial statement representation for sales and costs of sales. Product sales as a percentage of total revenues increased to 59% in 2002 as compared with 26% of total revenues in 2001. Sales of our Panther 240kW, 120kW and 90kW drive systems accounted for a majority of our product sales. We believe this trend will continue over the next several years. We continue to seek out and contract for new development programs with both our current partners such as Ford, the DOT and Hyundai, as well as creating new alliances with other vehicle manufacturers and energy companies. Furthermore, we believe that markets are developing for our stationary process and power control and conversion systems in which we intend to gain market share.

Cost of sales consists of component and material costs, direct labor costs, integration costs and overhead related to manufacturing our products. Product development costs incurred in the performance of engineering development contracts for the U.S. Government and private companies are charged to cost of

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

sales for this contract revenue. During 2002, we established several new customers, such as AVS, Tomoe and MMT, in the heavy-duty drive system market which required additional integration and support services to customize, integrate and evaluate our products. We believe these costs to be initial, one-time costs for these customers and anticipate similar costs to be incurred as we gain additional market share. During the year ended December 31, 2002, we charged off approximately \$200,000 in obsolete inventory and other engineering costs related to the cancellation of the Ballard/Ford Th!nk program. A portion of these costs may be recoverable in 2003 from Ballard, however, we can give no assurance at this time that such reimbursement will occur. Due to the increase in net sales, the aforementioned costs, the Ballard program cancellation and other inventory adjustments, cost of sales of \$3,784,000 for the year ended December 31, 2002 reflect an increase of \$1,001,000, or 36%, from \$2,783,000 for the year ended December 31, 2001. Our product line is well established. As we increase our sales volume, we believe the costs associated with manufacturing and integrating these products should continue to decrease, improving our gross margins.

Research and development expenses consist primarily of personnel, facilities, equipment and supplies for our research and development activities. Non-funded development costs are reported as research and development expense. Research and development expense increased in 2002 to \$1,152,000 from \$879,000 for the same period in 2001, an increase of \$273,000, or 31%. During 2002, we continued to expend funds for research and development for new technologies to enhance

18

existing products as well as develop new products in the areas of mobile and stationary power management and conversion. Programs included our 240kW drive system, advanced power management systems for fuel cells, a Panther 90kW Dual Motor drive system, a diesel generation engine/motor system for our heavy-duty drive systems, a 18kW on-board charger system and upgrades and improvements to our current power conversion and management components. Additionally, we are enhancing our technologies to be more universally adaptable to the requirements of our current and prospective customers. By modifying our software and firmware, we believe we should be able to provide a more comprehensive, adaptive and effective solution to a larger base of customers and applications. During 2002, we expended additional resources toward these types of programs and therefore modified our allocation of engineering costs to reflect this shift. We will continue to research and develop new technologies and products, both internally and in conjunction with our alliance partners and other manufacturers as we deem beneficial to our global growth strategy. Our joint venture advanced technology center with HHI, as previously reported, is a specific example of this strategy.

Selling, general and administrative expenses consist primarily of personnel and related costs of sales and marketing employees, consulting fees and expenses for travel, trade shows and promotional activities and personnel and related costs for general corporate functions, including finance, accounting, strategic and business development, human resources and legal. Selling, general and administrative expense decreased in the year ended December 31, 2002 to \$2,837,000 from \$2,894,000 for the similar period in 2001. We are continually reviewing operations to lower over head costs and increase operational efficiencies. During 2002, legal and accounting fees of approximately \$318,000 in conjunction with two Form S-1 Registration Statements, required quarterly, annual and other periodic SEC filings, as well as compliance with the Sarbanes-Oxley Act of 2002 and other legal matters, accounted for the majority of these expenses. We believe these professional fees should not increase significantly in 2003, however due to the increased regulatory

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

oversight of public companies and additional legal and accounting obligations mandated by Sarbanes-Oxley, we can make no assurance that increases will not occur.

For the year ended December 31, 2002, interest and financing fees increased by \$86,000 to \$199,000, an increase of 76%. The increase was due primarily to an increase in the rate on the Note due the Credit Managers Association of California for \$3.2 million per its terms and additional lease financings for equipment during 2002.

Our net loss for the year ended December 31, 2002 of \$3,598,000 is comparable to the loss incurred in 2001 of \$3,428,000, however we believe the components of the 2002 net loss should provide much greater near and long-term benefits to Enova. Certain factors, such as the Ballard program cancellation, could not be anticipated and did contribute substantially to the net loss from operations. Other elements however, such as the increased funding levels for development of new systems and enhancement of current systems, we believe, will provide opportunities for increased sales and market share capture in 2003 and beyond. Depending on the level of externally funded engineering programs, additional internal funds may be expended to maintain or improve our technologies to remain competitive in the market.

Our basic strategy continues toward increased research and development and increased marketing and administrative operations relating to further establishing ourselves as one of the key players in the mobile power conversion and management markets and to develop new systems for the stationary markets. During 2002, we experienced increased demand and recognition of our products and expertise in these markets, thus increasing our revenue base, and we shall continue to increase engineering, production, and support personnel as we deem necessary to meet our current and prospective customer needs.

Recent accounting pronouncements - The Financial Accounting Standards Board (FASB) has not issued any new accounting pronouncements that will have an impact on our financial statements.

RISK FACTORS THAT MAY AFFECT FUTURE RESULTS

This Form 10-K contains forward looking statements concerning our existing and future products, markets, expenses, revenues, liquidity, performance and cash needs as well as our plans and strategies. These forward-looking statements involve risks and uncertainties and are based on current management's expectations and we are not obligated to update this information. Many factors could cause actual results and events to differ significantly from the results anticipated by us and described in these forward looking statements including, but not limited to, the following risk factors.

Net Operating Losses. We have experienced recurring losses from operations and had an accumulated deficit of \$97,078,000 at December 31, 2003. There is no assurance, however, that any net operating losses will be available to us in the future as an offset against future profits for income tax purposes.

Continued Losses. For the year ended December 31, 2003, 2002 and 2001, we had net losses of \$3,186,000, \$3,598,000, and \$3,428,000, respectively, on sales of \$4,310,000, \$4,455,000, and \$3,780,000, respectively.

Nature of Industry. The mobile and stationary power markets, including electric vehicle and hybrid electric vehicles, continue to be subject to rapid technological change. Most of the major domestic and foreign automobile manufacturers: (1) have already produced electric and hybrid vehicles, and/or (2) have developed improved electric storage, propulsion and control systems, and/or (3) are now entering or have entered into production, while continuing to improve technology or incorporate newer

technology. Various companies are also developing improved electric storage, propulsion and control systems. In addition, the stationary power market is still in its infancy. A number of established energy companies are developing new technologies. Cost-effective methods to reduce price per kilowatt have yet to be established and the stationary power market is not yet viable.

Our current products are designed for use with, and are dependent upon, existing technology. As technologies change, and subject to our limited available resources, we plan to upgrade or adapt our products in order to continue to provide products with the latest technology. We cannot assure you, however, that we will be able to avoid technological obsolescence, that the market for our products will not ultimately be dominated by technologies other than ours, or that we will be able to adapt to changes in or create "leading-edge" technology. In addition, further proprietary technological development by others could prohibit us from using our own technology.

Our industry is affected by political and legislative changes. In recent years there has been significant public pressure to enact legislation in the United States and abroad to reduce or eliminate automobile pollution. Although states such as California have enacted such legislation, we cannot assure you that there will not be further legislation enacted changing current requirements or that current legislation or state mandates will not be repealed or amended, or that a different form of zero emission or low emission vehicle will not be invented, developed and produced, and achieve greater market acceptance than electric or hybrid electric vehicles. Extensions, modifications or reductions of current federal and state legislation, mandates and potential tax incentives could also adversely affect our business prospects if implemented.

Changed legislative climate. Because vehicles powered by internal combustion engines cause pollution, there has been significant public pressure in Europe and Asia, and enacted or pending legislation in the United States at the federal level and in certain states, to promote or mandate the use of vehicles with no tailpipe emissions ("zero emission vehicles") or reduced tailpipe emissions ("low emission vehicles"). Legislation requiring or promoting zero or low emission vehicles is necessary to create a significant market for electric vehicles. The California Air Resources Board (CARB) is continuing to modify its regulations regarding its mandatory limits for zero emission and low emission vehicles. Furthermore, several car manufacturers have challenged these mandates in court and have obtained injunctions to delay these mandates.

There are substantial risks involved in the development of unproven products. In order to remain competitive, we must adapt existing products as well as develop new products and technologies. In fiscal years 2002 and 2003 we spent in excess of \$1.9 million on research and development of new products and technology. Despite our best efforts a new product or technology may prove to be unworkable, not cost effective, or otherwise unmarketable. We can give you no assurance that any new product or technology we may develop will be successful or that an adequate market for such product or technology will ever develop.

We may be unable to effectively compete with other companies who have significantly greater resources than we have. Many of our competitors, in the automotive, electronic and other industries, are larger, more established companies that have substantially greater financial, personnel, and other resources than we do. These companies may be actively engaged in the research and development of power management and conversion systems. Because of their greater resources, some of our competitors may be able to adapt more quickly to new or emerging technologies and changes in customer requirements, or to devote

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

greater resources to the promotion and sales of their products than we can. We believe that developing and maintaining a competitive advantage will require continued investment in product development, manufacturing capability and sales and marketing. We cannot assure you however that we will have sufficient resources to make the necessary investments to do so. In addition, current and potential competitors may establish collaborative relationships among themselves or with third parties, including third parties with whom we have relationships. Accordingly, new competitors or alliances may emerge and rapidly acquire significant market share.

Future equity financings may dilute your holdings in our company. We need to obtain additional funding through public or private equity or debt financing, collaborative agreements or from other sources. If we raise additional funds by issuing equity securities, current shareholders may experience significant dilution of their holdings. We may be unable to obtain adequate financing on acceptable terms, if at all. If we are unable to obtain adequate funds, we may be required to reduce significantly our spending and delay, scale back or eliminate research, development or marketing programs, or cease operations altogether.

Potential intellectual property, shareholder or other litigation could adversely impact our business. Because of the nature of our business, we may face litigation relating to intellectual property matters, labor matters, product liability or shareholder disputes. Any litigation could be costly, divert management attention or result in increased costs of doing business. Although we intend to vigorously defend any future lawsuits, we cannot assure you that we would ultimately prevail in these efforts. An adverse judgment could negatively impact the price of our common stock and our ability to obtain future financing on favorable terms or at all.

We may be exposed to product liability or tort claims if our products fail, which could adversely impact our results of operations. A malfunction or the inadequate design of our products could result in product liability or other tort claims. Accidents involving our products could lead to personal injury or physical damage. Any liability for damages resulting from malfunctions could be substantial and could materially adversely affect our business and results of operations. In addition, a

20

well-publicized actual or perceived problem could adversely affect the market's perception of our products. This could result in a decline in demand for our products, which would materially adversely affect our financial condition and results of operations.

We are highly subject to general economic conditions. The financial success of our company is sensitive to adverse changes in general economic conditions, such as inflation, unemployment, and consumer demand for our products. These changes could cause the cost of supplies, labor, and other expenses to rise faster than we can raise prices. Such changing conditions also could significantly reduce demand in the marketplace for our products. We have no control over any of these changes.

We are an early growth stage company. Although our Company was originally founded in 1976, many aspects of our business are still in the early growth stage development, and our proposed operations are subject to all of the risks inherent in a start-up or growing business enterprise, including the likelihood of continued operating losses. Enova is relatively new in focusing its efforts on electric systems, hybrid systems and fuel cell management systems. The likelihood of our success must be considered in light of the problems, expenses,

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

difficulties, complications, and delays frequently encountered in connection with the growth of an existing business, the development of new products and channels of distribution, and current and future development in several key technical fields, as well as the competitive and regulatory environment in which we operate.

We operate in a highly regulated business environment and changes in regulation could impose costs on us or make our products less economical. Our products are subject to federal, state, local and foreign laws and regulations, governing, among other things, emissions as well as laws relating to occupational health and safety. Regulatory agencies may impose special requirements for implementation and operation of our products or may significantly impact or even eliminate some of our target markets. We may incur material costs or liabilities in complying with government regulations. In addition, potentially significant expenditures could be required in order to comply with evolving environmental and health and safety laws, regulations and requirements that may be adopted or imposed in the future.

We are highly dependent on a few key personnel and will need to retain and attract such personnel in a labor competitive market. Our success is largely dependent on the performance of our key management and technical personnel, including Carl Perry, our Chief Executive Officer, Larry Lombard, our Acting Chief Financial Officer, Edward Moore, our Chief Operating Officer and Don Kang, our Vice President of Engineering the loss of one or more of whom could adversely affect our business. Additionally, in order to successfully implement our anticipated growth, we will be dependent on our ability to hire additional qualified personnel. There can be no assurance that we will be able to retain or hire other necessary personnel. We do not maintain key man life insurance on any of our key personnel. We believe that our future success will depend in part upon our continued ability to attract, retain, and motivate additional highly skilled personnel in an increasingly competitive market.

There are minimal barriers to entry in our market. We presently license or own only certain proprietary technology and, therefore, have created little or no barrier to entry for competitors other than the time and significant expense required to assemble and develop similar production and design capabilities. Our competitors may enter into exclusive arrangements with our current or potential suppliers, thereby giving them a competitive edge which we may not be able to overcome, and which may exclude us from similar relationships.

Item 7A. Quantitative and Qualitative Disclosures about Market Risk

None.

Item 8. Financial Statements and Supplementary Data

The response to this Item is submitted as a separate section of this Form 10-K. See Item 15.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

On November 21, 2003, Enova Systems, Inc. ("Company") dismissed Moss Adams LLP ("Moss Adams") as its independent auditors and engaged Singer, Lewak, Greenbaum & Goldstein ("SLGG") as its independent auditors to audit its financial statements for its year ending December 31, 2003. This decision was approved by the Board of Directors of the Company. Prior to such engagement, the Company did not consult with SLGG regarding the application of accounting principles to a specific, completed or contemplated transaction, or the type of audit opinion that might be rendered on the Company's financial statements.

During the fiscal years ended December 31, 2001 and 2002, and the

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

subsequent interim period through the date of Moss Adams dismissal, November 21, 2003, there have been no disagreements on any matter of accounting principles or practices, financial statement disclosure or auditing scope or procedure, which disagreements, if not resolved to the satisfaction of Moss Adams, would have caused it to make reference to the subject matter of the disagreements in connection with its reports, except the following:

21

In connection with the audit of the Company's financial statements for the year ended December 31, 2002, Moss Adams had a disagreement with the Company over the valuation of inventory.

In connection with the review of the Company's financial statements for the quarter ended September 30, 2003, Moss Adams had a disagreement with the Company over the allowance for uncollectible receivables.

The audit committee of the Board of Directors and the management of the Company discussed each of these disagreements with Moss Adams and resolved the matters to each party's satisfaction prior to the filing of the Company's Form 10-K for the year ended December 31, 2002 and Form 10-Q for the quarter ended September 30, 2003, respectively. The Company has authorized Moss Adams to respond fully to inquiries from SLGG concerning the matters described in this section.

Item 9A. Controls and Procedures

An evaluation was carried out by Carl D. Perry, the Company's Chief Executive Officer and then Acting Chief Financial Officer, of the effectiveness of the Company's disclosure controls and procedures (as defined in Rule 13a-15(e) or 15d-15(e) under the Securities Exchange Act of 1934) as of December 31, 2003. Based upon that evaluation, the Chief Executive Officer and then Acting Chief Financial Officer concluded that these disclosure controls and procedures were effective. During the period covered by this report, there have been no changes in the Company's internal control over financial reporting that have materially affected or are reasonably likely to materially affect the Company's internal control over financial reporting.

(REMAINDER OF PAGE INTENTIONALLY LEFT BLANK)

22

PART III

Item 10. Directors and Executive Officers of the Registrant

The following table sets forth certain information with respect to the current Directors and executive officers of Enova:

Name	Age	Position
-----	---	-----
Anthony N. Rawlinson	48	Chairman of the Board
Carl D. Perry	71	Chief Executive Officer, President and Director

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Edwin O. Riddell (1)	61	Director
Dr. Malcolm Currie (1)	77	Director
John J. Micek, III (2)	51	Director
Donald H. Dreyer (2)	66	Director
John Wallace	55	Director
Larry B. Lombard	43	Acting Chief Financial Officer
Edward M. Moore	42	Chief Operating Officer

(1) Member of the Compensation Committee.

(2) Member of the Audit Committee.

Anthony N. Rawlinson, Chairman of the Board. Mr. Rawlinson was appointed non-executive Chairman of the Board in July 1999. Since 1996, Mr. Rawlinson has been Managing Director of the Global Value Investment Portfolio Management Pte. Ltd., a Singapore based International Fund Management Company managing discretionary equity portfolios for institutions, pension funds and clients globally. Mr. Rawlinson has more than twenty years experience in international fund management. Mr. Rawlinson is a specialist in analysis and investment in high technology companies. From 1996 to 1999, Mr. Rawlinson was Chairman of IXLA Ltd., an Australian public company in the field of PC photography software and its wholly-owned subsidiary, photohighway.com. Mr. Rawlinson is also a Chairman of Cardsoft, Inc., a high technology software company with secure java based solutions for mobile phones and handheld devices.

Carl D. Perry, Chief Executive Officer, President and Director. Mr. Perry served as a Director and as an Executive Vice President of the Company from July 1993 until November 1997. In November 1997, Mr. Perry was elected as Chairman of the Board and Chief Executive Officer of the Company, and was elected President in June 1999. In July 1999, Mr. Perry resigned his position as Chairman of the Board to allow Mr. Anthony N. Rawlinson to become Chairman. Mr. Perry continues as Chief Executive Officer and President and as a Director. He served as Acting Chief Financial Officer of the Company from November 1997 to March 2004. Prior to joining the Company, he was an international aerospace and financial consultant from 1989 to 1993. Mr. Perry served as Executive Vice President of Canadair Ltd. (now known as Bombardier), Canada's largest aerospace corporation, from 1984 to 1989, where he conducted strategic planning, worldwide marketing, and international joint ventures. From 1979 to 1983, Mr. Perry served as Executive Vice President of the Howard Hughes Helicopter Company, now known as Boeing Helicopter Company, where he was responsible for general management, worldwide business development, and international operations.

Malcolm R. Currie, Ph.D, Director. Dr. Currie was re-elected to the Board of Directors in 1999. Dr. Currie had served as a Director of the Company from 1995 through 1997. From 1986 until 1992, Dr. Currie served as Chairman and Chief Executive Officer of Hughes Aircraft Co., and from 1985 until 1988, he was the Chief Executive Officer of Delco Electronics. His career in electronics and management has included research with many patents and papers in microwave and millimeter wave electronics, laser, space systems, and related fields. He has led major programs in radar, commercial satellites, communication systems, and defense electronics. He served as Undersecretary of Defense for Research and Engineering, the Defense Science Board, and currently serves on the Boards of Directors of LSI Logic, Inamed Corp., Innovative Micro Technology, Regal One, and Currie Technologies. He is past president of the American Institute of Aeronautics and Astronautics, and is a Member of the Board of Trustees of the University of Southern California.

Edwin O. Riddell, Director. Mr. Riddell has served as a Director of the Company since June 1995. From March 1999 to the present, Mr. Riddell has been President of CR Transportation Services, a consultant to the electric vehicle industry. From January 1991 to March 1999, Mr. Riddell has served as Manager of the Transportation Business Unit in the Customer Systems Group at the Electric Power Research Institute in Palo Alto, California, and from 1985 until November 1990, he served with the Transportation Group, Inc. as Vice President, Engineering, working on electric public transportation systems. From 1979 to 1985, he was Vice President and General Manager of Lift U, Inc., the leading manufacturer of handicapped wheelchair lifts for the transit industry. Mr. Riddell has also worked with Ford, Chrysler, and General Motors in the area of auto design (styling), and has worked as a member of senior management for a number of public transit vehicle manufacturers. Mr. Riddell has been a member of the American Public Transportation Association's (APTA) Member Board of Governors for over 15 years, and has served on APTA's Board of Directors. Mr. Riddell was also Managing Partner of the U.S. Advanced Battery Consortium.

John R. Wallace, Director. Mr. Wallace was elected as a Director of the Company in 2002. Mr. Wallace retired from the Ford Motor Company in 2002, and is currently serving as a consultant to the Company for fuel cell and hybrid electric vehicle strategy. Prior to his retirement, he was executive director of TH!NK Group. He has been active in Ford Motor Company's alternative fuel vehicle programs since 1990, serving first as: Director, Technology Development Programs; then as Director, Electric Vehicle Programs; Director, Alternative Fuel Vehicles and finally Director, Environmental Vehicles. He is past Chairman of the Board of Directors of TH!NK Nordic; he is past chairman of the United States Advanced Battery Consortium; Co-Chairman of the Electric Vehicle Association of the Americas, and past Chairman of the California Fuel Cell Partnership. He served as Director of Ford's Electronic Systems Research Laboratory, Research Staff, from 1988 through 1990. Prior to joining Ford Research Staff, he was president of Ford Microelectronics, Inc., in Colorado Springs. His other experience includes work as program manager with Intel Corporation. He also served as Director, Western Development Center, for Perkin-Elmer Corporation and as President of Precision Microdesign, Inc.

Donald H. Dreyer, Director. Mr. Dreyer was elected a Director of the Company in January 1997. Mr. Dreyer is President and CEO of Dreyer & Company, Inc., a consultancy in credit, accounts receivable and insolvency services, which he founded in 1990. Mr. Dreyer has served as Chairman of the Board of Credit Managers Association of California during the 1994 to 1995 term and remains a current member. Mr. Dreyer is also a member of the American Bankruptcy Institute and the National Advisory Committee of Dun & Bradstreet, Inc.

John J. Micek III, Director. Mr. Micek was elected a Director of the Company in April 1999. Mr. Micek served as the Company's Vice President, General Counsel and Secretary from March 1994 to March 1997. From June 1997 to August 1998, Mr. Micek was COO of Pelion Systems, Inc. Mr. Micek is currently Managing Director of Silicon Prairie Partners, LP. He also is a practicing attorney specializing in corporate finance and business development in Palo Alto, CA. He is a Board Member of Universal Warranty and also sits on the boards of UTEK Corp., Pelion Systems, Inc., Universal Assurors Agency, Inc., and Armanino Foods.

Larry B. Lombard, Acting Chief Financial Officer. Mr. Lombard was appointed Acting Chief Financial Officer in March 2004. He has served as Director of Finance and Administration at Enova Systems, Inc. since 1998. Mr. Lombard has over twenty years experience in management and finance for a wide range of companies including software development, insurance, petroleum and

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

banking. He received his BA in Business Economics, University of California at Los Angeles and his MBA in Global Management from the University of Phoenix.

Edward M. Moore, Chief Operating Officer. Mr. Moore was appointed Chief Operating Officer in March 2004. He has served as Vice President, Marketing and Sales at Enova Systems, Inc. since 2000. Mr. Moore was vice president, sales for E-Bus from 1999 to 2000. Mr. Moore has experience in creating and implementing strategic marketing plans for both domestic and international markets. He has an extensive background in the alternative fuels and drive system industry, having worked with GM Hughes, AeroEnvironment and E-Bus in both the technology and marketing fields. He received his BS, Occupational Education from Southern Illinois University and his MBA from the University of Phoenix.

Relationships Among Directors or Executive Officers

There are no family relationships among any of the Directors or executive officers of Enova.

Section 16(a) Beneficial Ownership Reporting Compliance

Section 16(a) of the Securities Exchange Act requires our Directors, executive officers and persons who own more than 10% of our Common Stock (collectively, "Reporting Persons") to file reports of ownership and changes in ownership of our Common Stock to the Securities and Exchange Commission ("SEC"). Copies of these reports are also required to be delivered to Enova.

24

We believe, based solely on our review of the copies of such reports received or written representations from certain Reporting Persons, that each of Messrs. Rawlinson, Riddell, Currie, Micek, Wallace and Dreyer, each of whom is a Director of Enova, and James M. Strock (who resigned as a Director of Enova in March 2004), failed to file on a timely basis three separate Form 4s, each of which Form 4 reported one transaction, namely the issuance of shares of Common Stock in partial payment of directors' fees for August and November 2003 and February 2004.

Code of Ethics

Enova has adopted a code of ethics that applies to its principal executive officer, principal financial officer, principal accounting officer or controller and all persons performing similar functions, if any. We will provide to any person without charge, upon request, a copy of such code of ethics. Requests should be made in writing to:

Enova Systems, Inc.
Larry Lombard, Acting Chief Financial Officer
19850 S. Magellan Drive
Torrance, CA 90502

Item 11. Executive Compensation

Summary Compensation Table

The following table sets forth all compensation earned by our Chief Executive Officer and each of the other most highly compensated executive officers of Enova whose annual salary and bonus exceeded \$100,000 for the years ended December 31, 2003, 2002 and 2001 (collectively, the "Named Executive Officers"). Mr. Carl D. Perry was the sole executive officer of Enova whose salary currently exceeded \$100,000 as of December 31, 2003.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Name and Principal Position

	SUMMARY COMPENSATION TABLE		
	ANNUAL COMPENSATION		
	Year	Salary	Bonus
	-----	-----	-----
Carl D. Perry (1)	2003	139,615	--
Chief Executive Officer, Acting Chief	2002	150,000	\$30,000 (earned in 2000)
Financial Officer and President	2001	160,989	--

(1) Mr. Perry was elected as Chief Executive Officer in November 1997. Mr. Perry's current salary is \$120,000 per year, a 20% voluntary reduction from prior year's salary. Mr. Perry served as Acting Chief Financial Officer during the periods reflected in the above chart and through March 6, 2004.

Option/SAR Grants

No grants of stock options or stock appreciation rights ("SARs") were made during 2003 to the Named Executive Officer.

Option Exercises and Option Values

The Named Executive Officer did not exercise any options during the year ended December 31, 2003. All options of the Named Executive Officer expired prior to December 31, 2003 without exercise.

Compensation of Directors

In September 1999, our Board of Directors unanimously approved a compensation package for outside directors consisting of the following: for each meeting attended in person, each outside director is to receive \$1,000 in cash and \$2,000 of stock valued on the date of the meeting at the average of the closing ask and bid prices; for each telephonic Board meeting, each outside director is to receive \$250 in cash and \$250 of stock valued on the date of the meeting at the average of the closing ask and bid prices; for each meeting of a Board committee attended in person, the committee chairperson is to receive \$500 in cash and \$500 of stock valued on the date of the meeting at the average of the closing ask and bid prices. As of January 2002, this package was amended to include like compensation of \$500 in cash and \$500 in stock to all committee members in attendance at each committee meeting. All Directors are also reimbursed for out-of-pocket expenses incurred in connection with attending Board and committee meetings. For and with respect to fiscal 2003, 754,167 shares of Common Stock were issued under the above compensation plan for Directors. As of March 22, 2004, an aggregate of 2,938,529 shares have been issued under the above compensation plan for Directors since its inception in September 1999.

25

James M. Strock

The Company has entered into a consulting agreement with James Strock & Company, a corporation wholly owned by James M. Strock. Mr. Strock served as a Director of the Company from July 2000 until his resignation in March 2004. Under the terms of that consulting agreement, the Company retained Mr. Strock's

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

services for a minimum monthly retainer of \$3,000 plus reasonable expenses. This consulting agreement was terminated in April 2003. During 2003, the Company paid Mr. Strock \$17,000 in cash for consulting services and expenses and \$12,000 for directors fees (which latter amount includes the cash paid and the value of the stock issued to him pursuant to the outside directors' compensation package described above).

John R. Wallace

The Company has entered into a consulting agreement with John R. Wallace wherein the Company compensates Mr. Wallace at the rate of \$1,500 per day plus reasonable expenses for consulting services rendered. Mr. Wallace is not compensated per this agreement when acting in the capacity of a director of the Company. During 2003, the Company paid Mr. Wallace \$6,000 in cash for consulting services and expenses and \$12,000 for directors fees (which latter amount includes the cash paid and the value of the stock issued to him pursuant to the outside directors' compensation package described above).

Donald Dreyer

The Company utilizes the consulting service of Donald Dreyer wherein the Company compensates Mr. Dreyer at the rate of \$150 per hour plus reasonable expenses for consulting services rendered. Mr. Dreyer is not compensated when acting in the capacity of a director of the Company other than the fees noted above. During 2003, the Company paid Mr. Dreyer \$10,000 in cash for consulting services and expenses and \$12,000 for directors fees (which latter amount includes the cash paid and the value of the stock issued to him pursuant to the outside directors' compensation package described above).

Compensation Committee Interlocks and Insider Participation

The Compensation Committee held two meetings in the year ended December 31, 2003. The Compensation Committee currently consists of Mr. Edwin Riddell and Dr. Malcolm Currie, neither of who have been officers of the Company. The Compensation Committee's functions are to establish and apply the Company's compensation policies with respect to the Company's Executive Officers, and to administer the Company's stock option plans.

(REMAINDER OF PAGE INTENTIONALLY LEFT BLANK)

26

Stock Performance Graph

The graph below compares the cumulative total shareholder return on our Common Stock with the cumulative total return on the Standard & Poor's Small Capitalization 600 Index and an index of peer companies selected by us. A group of five other electric vehicle companies comprise the peer group index.(1)

The period shown commences on December 31, 1998, and ends on December 31, 2003, the end of our last fiscal year. The graph assumes an investment of \$100 on December 31, 1998 and the reinvestment of any dividends. The comparisons in the graph below are based upon historical data and are not indicative of, nor intended to forecast, future performance of our Common Stock.

[The following table was depicted as a line graph in the printed material.]

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

ENOVA SYSTEMS INC

	Cumulative Total Return					
	12/98	12/99	12/00	12/01	12/02	12/03
ENOVA SYSTEMS, INC.	100.00	1048.39	548.39	483.87	258.06	435.48
S & P SMALLCAP 600	100.00	112.40	125.67	133.89	114.30	158.63
PEER GROUP	100.00	179.53	157.93	100.05	48.78	75.62

* \$100 invested on 12/31/98 in stock or index-including reinvestment of dividends. Fiscal year ending December 31. 1 - Companies included in the peer group index are Amerigon, Inc. (ARGN), Electric Fuel Corp. (EFCX) - Electric Fuel Corp changed it's name to Arotech Corp. (ARTX), Energy Conversion Devices, Inc. (ENER), Unique Mobility (UQM), and Valence Technology, Inc. (VLNC).

Copyright(c) 2002 Standard & Poor's, a division of The McGraw-Hill Companies, Inc. All rights reserved. www.researchdatagroup.com/S&P.htm

27

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The following table sets forth certain information known to the Company with respect to beneficial ownership of the Company's Common Stock as of March 22, 2004, by (i) each shareholder known to the Company to own beneficially more than 5% of the Company's Common Stock; (ii) each of the Company's Directors; (iii) the Named Executive Officer; and (iv) all Executive Officers and Directors as a group. Except as indicated in the footnotes to this table and subject to applicable community property laws, the persons named in the table, based on information provided by such persons, have sole voting and investment power with respect to all shares of Common Stock shown as beneficially owned by them.

Name	Shares Beneficially Owned (1)	Percentage of Shares Beneficially Owned (2)	Voting Percentage
Jagen, Pty., Ltd. 9 Oxford Street, South Ybarra 3141 Melbourne, Victoria Australia	145,000,000	34.54%	37.81%
Hyundai Heavy Industries, Co. 1 Cheona-Dong, Dong-Ku Ulsan, Korea	23,076,923	5.50%	6.02%
Citibank N.A. 111 Wall Street, 8th Floor New York, NY 10043	31,405,754	7.48%	8.19%
Carl D. Perry c/o Enova Systems, Inc. 19850 South Magellan Drive Torrance, CA 90502	10,000,500	2.38%	2.61%
Anthony N. Rawlinson c/o Enova Systems, Inc. 19850 South Magellan Drive Torrance, CA 90502	25,389,806	6.05%	6.62%

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

John J. Micek III	1,473,596 (4)	*	*
Edwin O. Riddell	634,803	*	*
Dr. Malcolm Currie	524,174	*	*
Donald H. Dreyer	433,858	*	*
John R. Wallace	145,238	*	*
Delphi Delco Electronics	1,278,720 (5)	*	*
Jean Schulz	1,329,111 (6)	*	*
Larry B. Lombard	1,800,000 (7)	*	*
Edward M. Moore	2,063,923 (8)	*	*
All directors and executive officers as a group (9 persons)	42,465,442 (9)	10.12%	10.42%

* Indicates less than 1%

(1) Number of Common Stock shares includes Series A Preferred Stock, Series B Preferred Stock and Common Stock shares issuable pursuant to stock options, warrants and other securities convertible into Common Stock beneficially held by the person or class in question which may be exercised or converted within 60 days after March 22, 2004.

(2) The percentages are based on the number of shares of Common Stock, Series A Preferred Stock and Series B Preferred Stock owned by the shareholder divided by the sum of: (i) the total Common Stock outstanding, (ii) the Series A Preferred Stock owned by such shareholder; (iii) the Series B Preferred Stock owned by such shareholder; and (iv) Common Stock issuable pursuant to warrants, options and other convertible securities exercisable or convertible by such shareholder within sixty (60) days after March 22, 2004.

28

(3) The percentages are based on the number of shares of Common Stock, Series A Preferred Stock and/or Series B Preferred Stock owned by the shareholder divided by the sum of: (i) the total Common Stock outstanding, (ii) the total Series A Preferred Stock outstanding and (iii) the total Series B Preferred Stock outstanding. This percentage calculation has been included to show more accurately the actual voting power of each of the shareholders, since the calculation takes into account the fact that the outstanding Series A Preferred Stock and Series B Preferred Stock are entitled to vote together with the Common Stock as a single class on certain matters to be voted upon by the shareholders.

(4) Includes 1,000,000 shares of Common Stock issued to Silicon Prairie Partners, LP, a limited partnership in which John J. Micek III is the general partner.

(5) The number of shares shown represents the ownership of 639,360 shares of Series B Preferred Stock, each of which is convertible into two shares of Common Stock. These 639,360 shares represent more than 5% of

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

the outstanding shares of Series B Preferred Stock.

- (6) The number of shares shown represents the ownership of 1,329,111 shares of Series A Preferred Stock, each of which is convertible into one share of Common Stock. These 1,329,111 shares represent more than 5% of the outstanding shares of Series A Preferred Stock.
- (7) Includes 1,000,000 shares of Common Stock issuable pursuant to stock options exercisable at a price of \$.16.
- (8) Includes 2,033,467 shares of Common Stock issuable pursuant to stock options exercisable at prices from \$.051 to \$.20.
- (9) Includes 3,033,467 shares of Common Stock issuable pursuant to stock options exercisable at prices from \$.051 to \$.20 per share and 1,000,000 shares of Common Stock issued to Silicon Prairie Partners, LP, a limited partnership in which John J. Micek III is the general partner.

Equity Compensation Plan Information

The following table provides information regarding our equity compensation plans as of December 31, 2003:

Plan category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of remaining shares of common stock available for future issuance under equity compensation plans (including securities reserved for issuance under equity compensation plans) (c)
Equity compensation plans approved by security holders	21,156,000	\$0.14	23,800,000
Equity compensation plans not approved by security holders	--	--	--
Total	21,156,000	\$0.14	23,800,000

Our board of directors adopted the 1996 Employee and Consultant Stock Option Plan in October 1996 which was subsequently approved by our shareholders in May 1997. A total of 15,000,000 shares were reserved for issuance under the 1996 Plan. Options granted under the 1996 Plan may be either incentive stock options, as defined in Section 422 of the Internal Revenue Code of 1986, or nonstatutory stock options. The 1996 Plan provides that options may be granted to employees (including officers and directors who are also employees), directors and consultants. Incentive stock options may only be granted to employees. In 1999, our board of directors and shareholders approved an amendment to the 1996 Plan to increase the number of shares of common stock reserved for issuance thereunder by 30,000,000 shares, bringing the total number of shares issuable under the 1996 Plan to 45,000,000. The share increase to the 1996 Plan assured that a sufficient reserve of common stock are available to provide us with the continuing opportunity to utilize equity incentives to attract and retain the services of employees

essential to our long-term growth and financial success. A copy of the actual 1996 Plan document was previously filed with the Securities and Exchange Commission.

Options granted under the amended 1996 Plan will vest over such periods as may be determined by the board of directors and will generally have an exercise price equal to the closing price for our stock on the NASDAQ OTC Bulletin Board on the last trading day immediately prior to the date of grant. As of December 31, 2003, the Company had reserved 23,844,000 common shares for issuance under the 1996 Plan, as amended. Options to purchase 9,998,000 shares of Enova common stock were granted to employees in 2003.

In September 1999, our Board of Directors unanimously approved a compensation package for outside directors consisting of the following: for each meeting attended in person, each outside director is to receive \$1,000 in cash and \$2,000 of stock valued on the date of the meeting at the average of the closing ask and bid prices; for each telephonic Board meeting, each outside director is to receive \$250 in cash and \$250 of stock valued on the date of the meeting at the average of the closing ask and bid prices; for each meeting of a Board committee attended in person, the committee chairperson is to receive \$500 in cash and \$500 of stock valued on the date of the meeting at the average of the closing ask and bid prices. As of January 2002, this package was amended to include like compensation of \$500 in cash and \$500 in stock to all committee members in attendance at each committee meeting. For and with respect to fiscal 2003, 754,167 shares of Common Stock were issued under the above compensation plan for Directors. As of March 22, 2004, an aggregate of 2,938,529 shares have been issued under the above compensation plan for Directors since its inception in September 1999. Shares of common stock are not specifically allocated for this program other than those issued after each meeting.

Item 13. Certain Relationships and Related Transactions

The following are certain transactions entered into between Enova and its officers, directors and principal shareholders and their affiliates since January 1, 2003.

During 2003, Hyundai Heavy Industries, Co. (HHI) purchased 23,076,923 shares representing a 6.2% ownership in Enova, Inc. Additionally, during 2003, we purchased from HHI approximately \$599,000 in components, materials and services for manufacture of our drive systems and power management systems. These purchases were made on terms and conditions equal to or better than our standard commercial terms with other vendors. At the year ended December 31, 2003, our outstanding payables balance due HHI was approximately \$395,000.

Item 14. Principal Accountant Fees and Services

Singer, Lewak, Greenbaum & Goldstein were engaged on November 21, 2003 to audit our financial statements for the fiscal year ended December 31, 2003. Moss Adams, LLP served as our auditors prior to November 21, 2003 and audited our financial statements for the fiscal year ended December 31, 2002.

Audit Fees

The aggregate fees billed for the fiscal year ended December 31, 2003 for professional services rendered by Singer, Lewak, Greenbaum & Goldstein for the audit of Enova's financial statements for that fiscal year were \$7,500.

The aggregate fees billed during the last two fiscal years for

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

professional services rendered by Moss Adams, LLP for the audit of Enova's financial statements for the fiscal year ended December 31, 2002 and for its review of financial statements included in Enova's Form 10-Q-s during the last two fiscal years and other services that are normally provided by an accountant in connection with statutory and regulatory filings or engagements during such fiscal years were \$87,210 for fiscal 2003 and \$82,916 for fiscal 2002.

Audit-Related Fees

Singer, Lewak, Greenbaum & Goldstein did not perform for Enova any assurance and related services that were reasonably related to the performance of the audit of our financial statements for the fiscal year ended December 31, 2003.

Moss Adams, did not perform for Enova any assurance and related services that were reasonably related to the performance of the audit of our financial statements for the fiscal year ended December 31, 2003.

Tax Fees

Since November 21, 2003, Singer, Lewak, Greenbaum & Goldstein did not perform for Enova any tax compliance, tax advice and tax planning services.

30

Moss Adams, LLP did not perform for Enova any tax compliance, tax advice and tax planning services in fiscal 2002 or fiscal 2003.

All Other Fees

Neither Singer, Lewak, Greenbaum & Goldstein nor Moss Adams, LLP performed any other services for fees other than audit fees in fiscal 2002 or 2003.

(REMAINDER OF PAGE INTENTIONALLY LEFT BLANK)

31

PART IV

Item 15. Exhibits, Financial Statement Schedules, and Reports on Form 8-K

(a)1. Financial Statements

The financial statements filed as a part of this report are identified in the Index to Financial Statements on page F-1.

(a)2. Financial Statement Schedule

No financial statement schedules are filed as a part of this report.

(a)3. Exhibits

See Item 15 (c) for Index of Exhibits.

(b) Reports on Form 8-K

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

On December 1, 2003, Registrant filed a Form 8-K, with date of earliest event reported of November 21, 2003, reporting under items 4 and 7.

(c) Exhibits

Exhibit Number	Description
3.1	Amended and Restated Articles of Incorporation of the Registrant (filed as Exhibit 3.1 to the Registrant's Annual Report on Form 10K for the year ended December 31, 2000 filed on March 30, 2001 and incorporated herein by reference).
3.2	Bylaws of Registrant (filed as Exhibit 3.12 to the Registration Statement on Form 10 filed on November 29, 1994, and incorporated herein by reference).
4.1	Cashless Exercise Warrants dated October 25, 1996 issued to Fontal International, Ltd. (filed as Exhibit 4.1 to the Registrant's Annual Report on Form 10-K for the year ended July 31, 1996, as filed on November 12, 1996, and incorporated herein by reference).
10.1	Form of Stock Option Agreement under 1993 Employee and Consultant Stock Plan (filed as Exhibit 10.15 to the Registration Statement on Form 10 filed on November 29, 1994, and incorporated herein by reference).
10.2	Form of Solar Electric Engineering, Inc. 1993 Employee and Consultant Stock Plan (filed as Exhibit 10.16 to the Registration Statement on Form 10 filed on November 29, 1994, and incorporated herein by reference).
10.3	Form of Confidential Private Placement Memorandum and Debt Restructuring Disclosure Statement of U.S. Electricar, Inc., dated January 2, 1996, delivered by Enova to certain of its unsecured trade creditors, including exhibits (filed as Exhibit 10.91 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended January 31, 1996, as filed on March 18, 1996, and incorporated herein by reference).
10.4	Form of Stock Purchase, Note and Debt Exchange Agreement dated January 2, 1996 between Enova and certain unsecured trade creditors (filed as Exhibit 10.92 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended January 31, 1996, as filed on March 18, 1996, and incorporated herein by reference).
10.5	Form of Indemnification Agreement (filed as Exhibit 10.63 to the Registration Statement on Form 10 filed on November 29, 1994, and incorporated herein by reference).
10.6	Form of Security Agreement made as of May 31, 1995, between Enova and Credit Managers Association of California, Trustee (filed as Exhibit 10.85 to the Registrant's Quarterly Report on Form 10-Q for the quarter ended April 30, 1996, as filed on June 14, 1996, and incorporated herein by reference).
10.7	Amended 1996 Employee and Consultant Stock Option Plan (filed as Exhibit 10.7 to the Registrant's Annual Report on Form 10-K for fiscal year ended July 31, 1999, as filed on October 29, 1999, and incorporated herein by reference).

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

32

- 10.8 Stock Purchase Agreement and Technology License Agreement dated February 27, 1997, by and between Enova and Hyundai Motor Company and Hyundai Electronics Industries Co., Ltd. (filed as Exhibit 10.98 to the Registrant's Quarterly Report on Form 10-Q for fiscal quarter ended January 31, 1997, as filed on March 14, 1997, and incorporated herein by reference).
- 10.9 Letter of Intent between Registrant and a domestic supplier, dated December 9, 1999, to design, develop and manufacture low voltage electric drive system components (filed as Exhibit 10.16 to the Registrant's Annual Report on Form 10-K for fiscal year ended December 31, 2000 and incorporated herein by reference).
- 10.10 Put/Call Option to sell Itochu shares between Registrant and Carl D. Perry dated September 1, 1999 (filed as Exhibit 10.16 to the Registrant's Annual Report on Form 10-K for fiscal year ended December 31, 2000 and incorporated herein by reference).
- 10.11 Agreement (redacted) between the Registrant and a customer dated June 14, 2001, to develop and produce power management systems. (filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q for Six Months ended June 30, 2001 and incorporated herein by reference).
- 10.12 Agreement (redacted) between the Registrant and Eco Power Technology, dated June 12, 2001, to produce and sell power drive systems (filed as Exhibit 10.19 to Amendment No. 6 to the Registrant's Registration Statement on Form S-1, No. 333-85308, and incorporated herein by reference).
- 10.13 Agreement (redacted) between the Registrant and Tomoe Electro-Mechanical Engineering and Manufacturing, Inc., dated November 19, 2001, to produce and sell power drive systems (filed as Exhibit 10.20 to Amendment No. 6 to the Registrants Registration Statement on Form S-1, No. 333-85308, and incorporated herein by reference).
- 10.14 Agreement (redacted) between the Registrant and Moriah Corporation, dated January 22, 2002, to produce and sell power drive systems (filed as Exhibit 10.21 to Amendment No. 6 to the Registrant's Registration Statement on Form S-1, No. 333-85308, and incorporated herein by reference).
- 10.15 Form of Stock Purchase Agreement dated June 7, 2002 between Registrant and each of the selling shareholders listed in a Prospectus dated July 26, 2002 (filed as Exhibit 10.22 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1, No. 333-96829, and incorporated herein by reference).
- 10.16 Form of Registration Rights Agreement dated June 7, 2002 between Registrant and each of the selling shareholders listed in a Prospectus dated July 26, 2002 (filed as Exhibit 10.23 to Amendment No. 1 to the Registrant's Registration Statement on Form S-1, No. 333-96829, and incorporated herein by reference).
- 10.17 Joint Venture Agreement (redacted**) to form advanced research and development corporation, dated as of March 18, 2003, by and between the Registrant and Hyundai Heavy Industries Co. Ltd. (filed as Exhibit 10.24 to the Registrant's Quarterly Report on Form 10-Q for Three Months ended March 31, 2003 and incorporated herein by reference).

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

- 10.18 Securities Purchase Agreement dated as of March 18, 2003, by and between the Registrant and Hyundai Heavy Industries Co. Ltd. (filed as Exhibit 10.25 to the Registrant's Quarterly Report on Form 10-Q for Three Months ended March 31, 2003 and incorporated herein by reference).
- 24* Power of Attorney (included on signature page)
- 31.1* Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act Of 2002
- 31.2* Certification of Acting Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
- 32* Certification Pursuant to 18 U.S.C. Section 1350

* Filed herewith.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

ENOVA SYSTEMS, INC.

By: /s/ Carl D. Perry

Carl D. Perry, Chief Executive Officer

Dated: March 30, 2004

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Carl D. Perry, with full power to act alone, his true and lawful attorney-in-fact and agent, with full power of substitution for him and in his name, place and stead, in any and all capacities, to sign any and all amendments to the annual report on Form 10-K, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent may lawfully do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, each of the undersigned has executed this Power of Attorney as of the date indicated. Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the registrant and in the capacities and on the date indicated.

Signature	Title	Date
-----	-----	----

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

/s/ Carl D. Perry ----- Carl D. Perry	Chief Executive Officer and Director (Principal Executive Officer)	March 30, 2004
/s/ Larry B. Lombard ----- Larry B. Lombard	Acting Chief Financial Officer (Principal Financial Officer)	March 30, 2004
/s/ Anthony N. Rawlinson ----- Anthony N. Rawlinson	Chairman	March 30, 2004
/s/ Malcolm Currie ----- Malcolm Currie	Director	March 30, 2004
/s/ Edwin O. Riddell ----- Edwin O. Riddell	Director	March 30, 2004
/s/ John J. Micek, III ----- John J. Micek, III	Director	March 30, 2004
/s/ Donald H. Dreyer ----- Donald H. Dreyer	Director	March 30, 2004
/s/ John R. Wallace ----- John R. Wallace	Director	March 30, 2004

ENOVA SYSTEMS, INC.
 FINANCIAL STATEMENTS
 FOR THE YEARS ENDED
 DECEMBER 31, 2003, 2002, AND 2001

ENOVA SYSTEMS, INC.
 CONTENTS
 December 31, 2003

	Page
INDEPENDENT AUDITOR'S REPORTS	1 - 2
FINANCIAL STATEMENTS	
Balance Sheets	3 - 4

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Statements of Operations	5
Statements of Stockholders' Equity	6
Statements of Cash Flows	7 - 8
Notes to Financial Statements	9 - 23
SUPPLEMENTAL INFORMATION	
Independent Auditor's Report on Financial Statement Schedule	24
Valuation and Qualifying Accounts - Schedule II	25

[Letterhead of SINGER LEWAK GREENBAUM & GOLDSTEIN LLP]

INDEPENDENT AUDITOR'S REPORT

Board of Directors and Stockholders Enova Systems, Inc.

We have audited the accompanying balance sheet of Enova Systems, Inc. as of December 31, 2003, and the related statements of operations, stockholders' equity, and cash flows for the year then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit. .

We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, the 2003 financial statements referred to above present fairly, in all material respects, the financial position of Enova Systems, Inc. as of December 31, 2003, and the results of its operations and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

/s/ SINGER LEWAK GREENBAUM & GOLDSTEIN LLP

SINGER LEWAK GREENBAUM & GOLDSTEIN LLP

Los Angeles, California
March 25, 2004

1

INDEPENDENT AUDITOR'S REPORT

To the Stockholders and Board of Directors
Enova Systems, Inc.

We have audited the accompanying balance sheet of Enova Systems Inc., as of

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

December 31, 2002, and the statements of operations, stockholders' equity, and cash flows for the two years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Enova Systems, Inc., as of December 31, 2002, and the results of its operations and cash flows for the two years then ended, in conformity with accounting principles generally accepted in the United States of America.

/s/ MOSS ADAMS LLP

Santa Rosa, California
February 24, 2003

2

ENOVA SYSTEMS, INC.
BALANCE SHEETS
December 31,

ASSETS

	2003	2002
	-----	-----
Current assets		
Cash and cash equivalents	\$ 530,000	\$1,868,000
Accounts receivable	803,000	1,256,000
Inventories and supplies	1,606,000	1,652,000
Note receivable - related party	8,000	32,000
Prepaid expenses and other current assets	78,000	107,000
	-----	-----
Total current assets	3,025,000	4,915,000
Property and equipment, net	481,000	811,000
Investment	960,000	--
Other assets	404,000	498,000
	-----	-----
Total assets	\$4,870,000	\$6,224,000
	=====	=====

LIABILITIES AND STOCKHOLDERS' EQUITY

	2003	2002
	-----	-----
Current liabilities		

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Accounts payable	\$ 768,000	\$1,192,000
Line of credit	120,000	14,000
Accrued payroll and related expenses	120,000	240,000
Other accrued expenses	98,000	95,000
Current portion of notes payable	131,000	120,000
Current portion of capital lease obligations	23,000	28,000
	-----	-----
Total current liabilities	1,260,000	1,689,000
Accrued interest payable	1,122,000	889,000
Capital lease obligations, net of current portion	5,000	27,000
Notes payable, net of current portion	3,347,000	3,332,000
	-----	-----
Total liabilities	5,734,000	5,937,000
	-----	-----
Commitments and contingencies		

The accompanying notes are an integral part of these financial statements.

3

ENOVA SYSTEMS, INC.
BALANCE SHEETS
December 31,

LIABILITIES AND STOCKHOLDERS' EQUITY (Continued)

	2003	
	-----	-----
Stockholders' equity		
Series A convertible preferred stock, no par value		
30,000,000 shares authorized		
2,820,000 and 2,824,000 shares issued and outstanding		
Liquidating preference at \$0.60 per share, aggregating \$1,692,000 and \$1,706,000	\$ 1,837,000	
Series B convertible preferred stock, no par value		
5,000,000 shares authorized		
1,217,000 shares issued and outstanding		
Liquidating preference at \$2 per share, aggregating \$2,434,000	2,434,000	
Common stock, no par value		
500,000,000 shares authorized		
378,341,000 and 345,194,000 shares issued and outstanding	86,054,000	8
Common stock subscribed	60,000	
Stock notes receivable	(1,203,000)	(
Additional paid-in capital	7,031,000	
Accumulated deficit	(97,077,000)	(9
	-----	-----
Total stockholders' equity	(864,000)	
	-----	-----
Total liabilities and stockholders' equity	\$ 4,870,000	\$
	=====	=====

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

The accompanying notes are an integral part of these financial statements.

4

ENOVA SYSTEMS, INC.
STATEMENT OF OPERATIONS
For the Years Ended December 31,

	2003	
<hr style="border-top: 1px dashed black;"/>		
Net revenues		
Research and development contracts	\$ 1,889,000	\$
Production	2,421,000	
	<hr style="border-top: 1px dashed black;"/>	
Total net revenues	4,310,000	
	<hr style="border-top: 1px dashed black;"/>	
Cost of revenues		
Research and development contracts	1,326,000	
Production	1,978,000	
	<hr style="border-top: 1px dashed black;"/>	
Total cost of revenues	3,304,000	
	<hr style="border-top: 1px dashed black;"/>	
Gross profit	1,006,000	
	<hr style="border-top: 1px dashed black;"/>	
Other costs and expenses		
Research and development	799,000	
Selling, general, and administrative	2,919,000	
Interest and financing fees, net	234,000	
Loss on disposal of property and equipment	--	
Equity in losses	40,000	
Asset impairment	200,000	
Legal settlements	--	
	<hr style="border-top: 1px dashed black;"/>	
Total other costs and expenses	4,192,000	
	<hr style="border-top: 1px dashed black;"/>	
Loss from continuing operations	(3,186,000)	(
Extraordinary item		
Gain on debt restructuring	--	
	<hr style="border-top: 1px dashed black;"/>	
Net loss	\$ (3,186,000)	\$ (
	<hr style="border-top: 1px dashed black;"/>	
Basic loss and diluted per share		
Loss from continuing operations	\$ (0.01)	\$
Gain on debt restructuring	--	
	<hr style="border-top: 1px dashed black;"/>	
Total basic and diluted loss per share	\$ (0.01)	\$

Weighted-average number of shares outstanding	334,839,700
---	-------------

The accompanying notes are an integral part of these financial statements.

5

ENOVA SYSTEMS, INC.
STATEMENT OF STOCKHOLDERS' EQUITY
For the Years Ended December 31,

	Convertible Preferred Stock			
	Series A		Series B	
	Shares	Amount	Shares	Amount
Balance, December 31, 2000	2,844,000	\$ 1,867,000	1,217,000	\$ 2,434,000
Issuance of common stock for				
Exercise of warrants				
Exercise of options				
Services				
Legal settlement				
Warrants issued for value participation agreement				
Net loss	--		--	
Balance, December 31, 2001	2,844,000	1,867,000	1,217,000	2,434,000
Conversion of Series A preferred stock	(20,000)	(25,000)		
Issuance of common stock for				
Cash, net of offering costs of \$206,000				
Exercise of options				
Services				
Legal settlement				
Stock notes receivable				
Net loss				
Balance, December 31, 2002	2,824,000	\$ 1,842,000	1,217,000	\$ 2,434,000
Conversion of Series A preferred stock	(4,000)	(5,000)		
Issuance of common stock for				
Cash				
Issuance of subscribed common stock				
Exercise of options				
Stock option				
Services				

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Net loss				
Balance, December 31, 2003	2,820,000	\$ 1,837,000	1,217,000	\$ 2,434,000
		Common Stock Subscribed	Stock Notes Receivable	Additional Paid-In Capital
	Shares	Amount		
Balance, December 31, 2000	45,000	\$ 13,000	\$ (1,149,000)	\$ 6,372,000
Issuance of common stock for				
Exercise of warrants				
Exercise of options			(59,000)	
Services	955,000	147,000		
Legal settlement				
Warrants issued for value participation agreement				577,000
Net loss	--			
Balance, December 31, 2001	1,000,000	160,000	(1,208,000)	6,949,000
Conversion of Series A preferred stock				
Issuance of common stock for				
Cash, net of offering costs of \$206,000	1,000,000	100,000		
Exercise of options				
Services	(628,000)	(130,000)		
Legal settlement				
Stock notes receivable			5,000	
Net loss				
Balance, December 31, 2002	1,372,000	\$ 130,000	\$ (1,203,000)	\$ 6,949,000
Conversion of Series A preferred stock				
Issuance of common stock for				
Cash				
Issuance of subscribed common stock	1,000,000	(100,000)		
Exercise of options				
Stock option				82,000
Services	754,000	30,000		
Net loss				
Balance, December 31, 2003	1,126,000	\$ 60,000	\$ (1,203,000)	\$ 7,031,000

The accompanying notes are an integral part of these financial statements.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

ENOVA SYSTEMS, INC.
STATEMENT OF CASH FLOWS
For the Years Ended December 31,

	2003	2002	2001
Cash flows from operating activities			
Net loss	\$(3,186,000)	\$(3,598,000)	\$(3,428,000)
Adjustments to reconcile net loss to net cash used in operating activities			
Depreciation and amortization	351,000	134,000	205,000
Bad debt expense	595,000	--	--
Provision for asset impairment	200,000	--	--
Equity in losses	40,000	--	--
Gain on debt restructuring	--	--	(210,000)
Issuance of common stock for services	34,000	60,000	245,000
Issuance of common stock for legal settlement	--	45,000	900,000
(Increase) decrease in			
Accounts receivable	(138,000)	(19,000)	(233,000)
Inventories and supplies	48,000	(727,000)	(520,000)
Related party receivable	24,000	25,000	25,000
Prepaid expenses and other current assets	29,000	(20,000)	(19,000)
Other assets	(14,000)	76,000	(39,000)
Increase (decrease) in			
Accounts payable and accrued expenses	(536,000)	1,112,000	(112,000)
Accrued interest payable	234,000	212,000	163,000
Net cash used in operating activities	(2,319,000)	(2,700,000)	(3,023,000)
Cash flows from investing activities			
Purchase of property and equipment	(113,000)	(613,000)	(219,000)
Net cash used in investing activities	(113,000)	(613,000)	(219,000)

The accompanying notes are an integral part of these financial statements.

ENOVA SYSTEMS, INC.
STATEMENT OF CASH FLOWS
For the Years Ended December 31,

2003	2002	2001
------	------	------

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Cash flows from financing activities			
Net increase from line of credit	\$ 106,000	\$ 14,000	\$ --
Payments on notes payable and capital lease obligations	(1,000)	(24,000)	(11,000)
Proceeds from sale of common stock	600,000	4,210,000	--
Offering costs	--	(206,000)	--
Proceeds from exercise of warrants and options	389,000	3,000	3,122,000
Payments on stock notes receivable	--	5,000	--
	-----	-----	-----
Net cash provided by financing activities	1,094,000	4,002,000	3,111,000
	-----	-----	-----
Net increase (decrease) in cash and cash equivalents			
	(1,338,000)	689,000	(131,000)
Cash and cash equivalents, beginning of year			
	1,868,000	1,179,000	1,310,000
	-----	-----	-----
Cash and cash equivalents, end of year			
	\$ 530,000	\$ 1,868,000	\$ 1,179,000
	=====	=====	=====
Supplemental disclosures of cash flow information			
Interest paid	\$ 9,000	\$ 8,000	\$ 5,000
	=====	=====	=====
Income taxes paid	\$ --	\$ --	\$ --
	=====	=====	=====
Supplemental schedule of non-cash investing and financing activities			
Equipment acquired under capital lease agreements	\$ --	\$ 52,000	\$ --
	=====	=====	=====
Conversion of preferred stock to common stock	\$ (5,000)	\$ 25,000	\$ --
	=====	=====	=====
Acquired investment under common stock purchase	\$ 1,000,000	\$ --	\$ --
	=====	=====	=====

The accompanying notes are an integral part of these financial statements.

8

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2003

NOTE 1 - ORGANIZATION AND LINE OF BUSINESS

General

Enova Systems, Inc. (the "Company") is a California corporation that develops drive trains and related components for electric, hybrid electric, and fuel cell systems for mobile and stationary applications.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

The Company retains development and manufacturing rights to many of the technologies created, whether such research and development is internally or externally funded. The Company develops and sells components in the United States and Asia, and sells components in Europe.

Liquidity

At December 31, 2003, the Company had a net working capital of approximately \$1,765,000 as compared to \$3,226,000 at December 31, 2002, representing a decrease of \$1,461,000. This decrease is due mostly to losses from operations. Operating and investing activities used approximately \$2,306,000 and \$113,000, respectively, while financing activities provided \$1,094,000.

During the year ended December 31, 2003, the Company reduced its headcount and other administrative expenses. The Company anticipates realizing the full impact of expense reductions in 2004. The Company's business plan for 2004 provides for raising additional capital in order to continue with the Company's operations until it becomes profitable. The Company will also continue to search for areas in which to further reduce expenses and increase sales.

In addition, additional payment of \$500,000 is expected in June 2004 from HHI under the stock purchase agreement (Note 1), which will help the Company to fund its operations.

See Note 15 for additional information.

Stock Purchase Agreement

The Company has entered into a joint venture agreement (the Agreement) with Hyundai Heavy Industries of Korea ("HHI") to create a joint venture corporation, Hyundai-Enova Innovative Technology Center (the "ITC") to be domiciled in Torrance, California. In conjunction with this Agreement, HHI and the Company entered into a stock purchase agreement in which HHI agreed to make a \$3 million investment in the Company through the purchase of shares of the Company's authorized and unissued common stock pursuant to Regulation D of the Securities Act of 1933. This investment was to be made in two installments of \$1.5 million each. The first installment was made upon incorporation of the ITC and in consideration for the issuance to HHI by the Company of 23,076,923 shares of common stock at \$0.065 per share in June 2003.

9

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2003

NOTE 1 - ORGANIZATION AND LINE OF BUSINESS (Continued)

Stock Purchase Agreement (Continued)

The second installment of \$1.5 million will be made one year after the first installment in consideration for the issuance to HHI of additional shares of the Company's common stock at a price per share equal to the average daily volume weighted closing price of the Company's common stock, as quoted on the NASDAQ OTC market (or successor trading market) for the three month period preceding the

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

closing date of the second installment.

The Company agreed to invest \$1 million of each installment into the ITC in consideration for the issuance to the Company of a 40% equity interest in the ITC (the balance of the installments, in the amount of \$500,000 each, is to be retained by Enova). HHI will acquire a 60% equity interest in ITC by investing \$3 million in the ITC in two installments of \$1.5 million each, to be made concurrently with the two installment payments to be paid by HHI for the Company's common stock. At the conclusion of these transactions, HHI and the Company will have invested an aggregate of \$5 million in the ITC.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Revenue Recognition

Revenue on engineering and research and development contracts is recognized at the completion of specified engineering or billing milestones, as set forth in each agreement. Revenues from sales of components are recognized when shipped and title passes to the customer.

Comprehensive Income

The Company utilizes Statement of Financial Accounting Standards ("SFAS") No. 130, "Reporting Comprehensive Income." This statement establishes standards for reporting comprehensive income and its components in a financial statement. Comprehensive income as defined includes all changes in equity (net assets) during a period from non-owner sources. Examples of items to be included in comprehensive income, which are excluded from net income, include foreign currency translation adjustments, minimum pension liability adjustments, and unrealized gains and losses on available-for-sale securities. Comprehensive income is not presented in the Company's financial statements since the Company did not have any changes in equity from non-owner sources.

Cash and Cash Equivalents

Highly liquid investments with an original maturity of three months or less are considered cash equivalents.

10

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2003

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Accounts Receivable

Receivables are reported at net realizable value and are considered past due when payments have not been received for 90 days. In general, receivables are charged off as uncollectible upon exhausting all avenues of collection. Receivables older than 90 days totaled \$678,000 (of which \$595,000 have been reserved for) and \$365,000 at December 31, 2003 and 2002, respectively.

Inventories and Supplies

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Inventories and supplies are comprised of materials used in the design and development of electric, hybrid electric, and fuel cell drive systems, and other power and ongoing management and control components for production and ongoing development contracts, and is stated at the lower of cost (first-in, first-out) or market.

Property and Equipment

Property and equipment are stated at cost and depreciated using the straight-line method over the estimated useful lives of the related assets, which range from three to seven years. Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate the sum of expected cash flows from use of the asset is less than its carrying value. Long-lived assets that management commits to sell or abandon are reported at the lower of carrying amount or fair value less cost to sell.

Investment

Investment in joint venture (see Note 1) is accounted for by the equity method.

Fair Value of Financial Instruments

The Company's financial instruments include cash and cash equivalents, accounts receivable and accounts payable. The book value of all other financial instruments are representative of their fair values. The Company's short and long term debt may be substantially less than the carrying value since there is no readily ascertainable market for the debt given the financial position of the Company.

Stock-Based Compensation

SFAS No. 123, "Accounting for Stock-Based Compensation," establishes and encourages the use of the fair value based method of accounting for stock-based compensation arrangements under which compensation cost is determined using the fair value of stock-based compensation determined as of the date of grant and is recognized over the periods in which the related services are rendered. The statement also permits companies to elect to continue using the current implicit value accounting method specified in Accounting Principles Board ("APB") Opinion No. 25, "Accounting for Stock Issued to Employees," to account for stock-based compensation. The Company has elected to use the intrinsic value based method and has disclosed the pro forma effect of using the fair value based method to account for its stock-based compensation.

11

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2003

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Advertising Expense

The Company expenses all advertising costs, including direct response advertising, as they are incurred. Advertising expense for the years ended December 31, 2003, 2002, and 2001 was \$21,000, \$20,000, and

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

\$32,000, respectively.

Income Taxes

The Company utilizes SFAS No. 109, "Accounting for Income Taxes," which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements or tax returns. Under this method, deferred income taxes are recognized for the tax consequences in future years of differences between the tax bases of assets and liabilities and their financial reporting amounts at each year-end based on enacted tax laws and statutory tax rates applicable to the periods in which the differences are expected to affect taxable income. Valuation allowances are established, when necessary, to reduce deferred tax assets to the amount expected to be realized.

Loss Per Share

The Company utilizes SFAS No. 128, "Earnings per Share." Basic loss per share is computed by dividing loss available to common stockholders by the weighted-average number of common shares outstanding. Diluted loss per share is computed similar to basic loss per share except that the denominator is increased to include the number of additional common shares that would have been outstanding if the potential common shares had been issued and if the additional common shares were dilutive. Common equivalent shares are excluded from the computation if their effect is anti-dilutive. The Company's common share equivalents consist of stock options.

Estimates

The preparation of financial statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

Concentrations of Credit Risk

Financial instruments which potentially subject the Company to concentrations of credit risk consist of cash and cash equivalents and accounts receivable. The Company places its cash and cash equivalents with high credit, quality financial institutions. At times, such cash and cash equivalents may be in excess of the Federal Deposit Insurance Corporation insurance limit of \$100,000. The Company has not experienced any losses in such accounts and believes it is not exposed to any significant credit risk on cash and cash equivalents. With respect to accounts receivable, the Company routinely assesses the financial strength of its customers and, as a consequence, believes that the receivable credit risk exposure is limited.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Major Customers

During the year ended December 31, 2003, the Company conducted business with four customers whose sales comprised 18%, 17%, 13%, and 11% of total revenues. As of December 31, 2003, these customers accounted for 5%, 0%, 23%, and 3%, respectively, of total accounts receivable.

During the year ended December 31, 2002, the Company conducted business with two customers whose sales comprised 46% of total revenues. As of December 31, 2002, these customers accounted for 24%, of total accounts receivable.

In addition, one of the Company's stockholders accounted for 1%, 16%, and 13% of total revenues during the years ended December 31, 2003, 2002, and 2001, respectively. This stockholder holds less than 5% of the total issued and outstanding common stock. Demand deposits are placed with known, creditable financial institutions.

NOTE 3 - PROPERTY AND EQUIPMENT

Property and equipment at December 31, 2003 and 2002 consisted of the following:

	2003	2002
	-----	-----
Computers	\$ 213,000	\$ 177,000
Machinery and equipment	715,000	643,000
Furniture and office equipment	192,000	189,000
Demonstration vehicles and buses	297,000	497,000
Equipment under capital lease obligations	94,000	94,000
Leasehold improvements	68,000	68,000
	-----	-----
	1,579,000	1,668,000
Less accumulated depreciation and amortization	1,098,000	857,000
	-----	-----
Total	\$ 481,000	\$ 811,000
	=====	=====

Depreciation and amortization expense was \$241,000, \$134,000, and \$205,000 for the years ended December 31, 2003, 2002, and 2001, respectively.

NOTE 4 - INVESTMENT

During the year ended December 31, 2003, the Company formed a joint venture with HHI (see Note 1), whereby the Company invested \$1,000,000 of the proceeds received from sale of common stock to HHI into ITC. The Company's share of income and losses is 40% as stated in the agreement. During the year ended December 31, 2003, the Company recorded \$40,000 as its proportionate share of losses in the joint venture.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

NOTE 4 - INVESTMENT (Continued)

The following is the condensed financial position and results of operations of ITC, as of and for the year ended December 31, 2003:

Financial position	
Current assets	\$ 2,413,000
Property and equipment, net	12,000
Liabilities	(27,000)

Equity	\$ 2,398,000
	=====
Operations	
Net revenues	\$ 6,000
Expenses	(107,000)

Net loss	\$ (101,000)
	=====
Company's proportionate share of net loss	\$ (40,000)
	=====

NOTE 5 - OTHER ASSETS

During the year ended December 31, 2002, the Company incurred legal costs of \$78,000 associated with two patents. These patents have been capitalized and are being amortized over their estimated useful lives..

In June 2001, a strategic relationship with Ford Motor Company was entered into to develop and manufacture a high power, high voltage conversion module for Ford's fuel cell vehicle. Warrants were issued to Ford Motor Company in exchange for Ford's commitment to enter into a five-year agreement. The issuance of the warrants was recorded as a non-current asset (Value Participation Agreement) at its fair market value of \$577,000, which was determined using the Black-Scholes option pricing model, and is being amortized on a straight-line basis over the life of the contract.

	2003	2002
	-----	-----
Patents	\$ 92,000	\$ 78,000
Valuation Participation Agreement	577,000	577,000
	-----	-----
	669,000	655,000
Less accumulated amortization	265,000	157,000
	-----	-----
Total	\$404,000	\$498,000
	=====	=====

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

NOTE 6 - LINE OF CREDIT

The Company has available \$250,000 revolving line of credit from a bank with interest payable monthly at 3.25%. The line of credit is secured by \$250,000 Certificate of Deposit and it's maturity has been extended until April 2004.

NOTE 7 - NOTES PAYABLE

Notes payable at December 31, 2003 consisted of the following:

	2003	2002
	-----	-----
Secured note payable to Credit Managers Association of California, bearing interest at 6% per annum during 2003 and 2002 and at prime plus 3% per annum through maturity. Principal and unpaid interest at due in April 2016. A sinking fund escrow is required to be funded with 10% of future equity financing, as defined in the agreement.	\$ 3,332,000	\$ 3,332,000
Unsecured note payable, bearing interest at 10% per annum. This note payable is in default.	120,000	120,000
Secured note payable to a financial institution in the original amount of \$33,000, bearing interest at 8% per annum, payable in 36 equal monthly installments.	26,000	-
	-----	-----
	3,478,000	3,452,000
Less current portion	131,000	120,000
	-----	-----
Long-term portion	\$ 3,347,000	\$ 3,332,000
	=====	=====

15

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2003

NOTE 7 - NOTES PAYABLE (Continued)

Future minimum principal payments of notes payable at December 31, 2003 consisted of the following:

Year Ending December 31,	

2004	\$ 131,000
2005	12,000
2006	3,000
2007	-

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

2008	-
Thereafter	3,332,000

Total	\$ 3,478,000
	=====

NOTE 8 - COMMITMENTS AND CONTINGENCIES

Leases

The Company leases its facilities under an operating lease agreement, which requires monthly payments of \$11,000 and expires in February 2008. In addition, the Company rents manufacturing and office equipment under various capital lease agreements.

Future minimum lease payments under these non-cancelable operating and capital lease obligations at December 31, 2003 were as follows:

Year Ending December 31,	Operating Leases	Capital Leases
	-----	-----
2004	\$ 97,000	\$ 23,000
2005	155,000	8,000
2006	166,000	--
2007	168,000	--
2008	28,000	--
	-----	-----
	\$614,000	31,000
	=====	-----
Less amount representing interest		3,000

		28,000
Less current portion		23,000

Long-term portion		\$ 5,000
		=====

Rent expense was \$150,000, \$206,000, and \$210,000 for the years ended December 31, 2003, 2002, and 2001, respectively.

16

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2003

NOTE 8 - COMMITMENTS AND CONTINGENCIES (Continued)

Contingency

Ballard Power Systems cancelled its development and production program for low voltage 30kw electric drive system components that were for use in Ford's Th!nk City vehicle. At December 31, 2002, included in inventories and supplies was approximately \$450,000 of materials related to this program. Approximately \$300,000 of materials and engineering costs have been incurred by a subcontractor for which the Company may be liable for payment.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

In October 2003, Enova and Ballard reached a settlement on all remaining balances due whereas Enova will receive \$198,125 cash and title to all inventory, raw materials, tooling and equipment in its possession that is associated with the program. The Company intends to sell this equipment and recover at least the remaining balance of the receivable of approximately \$173,000.

NOTE 9 - STOCKHOLDERS' EQUITY

Series A Preferred Stock

Series A preferred stock is currently unregistered and convertible into common stock on a one-to-one basis at the election of the holder or automatically upon the occurrence of certain events including: sale of stock in an underwritten public offering; registration of the underlying conversion stock; or the merger, consolidation, or sale of more than 50% of the Company. Holders of Series A preferred stock have the same voting rights as common stockholders. The stock has a liquidation preference of \$0.60 per share plus any accrued and unpaid dividends in the event of voluntary or involuntary liquidation of the Company. Dividends are non-cumulative and payable at the annual rate of \$0.036 per share if, when, and as declared by, the Board of Directors. No dividends have been declared on the Series A preferred stock.

Substantially all of the stock notes receivable stem from a Board of Directors plan for the sale of shares of Series A preferred stock in 1993 to certain officers and directors (Participants). In general, the Participants could purchase the preferred stock for a combination of cash, promissory notes payable to the Company, and conversion of debt and deferred compensation due to the Participants. All shares issued under this plan were pledged to the Company as security for the notes. The notes provided for interest at 8% per annum payable annually, with the full principal amount and any unpaid interest due on January 31, 1997. The notes remain outstanding. The likelihood of collecting the interest on these notes is remote; therefore, accrued interest has not been recorded since the fiscal year ended July 31, 1997.

17

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2003

NOTE 9 - STOCKHOLDERS' EQUITY (Continued)

Series B Preferred Stock

Series B preferred stock is currently unregistered and each share is convertible into shares of common stock on a two-for-one basis at the election of the holder or automatically upon the occurrence of certain events including: sale of stock in an underwritten public offering, if the offering results in net proceeds of \$10,000,000, and the per share price of common stock is at least \$2.00; and the merger, consolidation, or sale of common stock or sale of substantially all of the Company's assets in which gross proceeds received are at least \$10,000,000.

The Series B preferred stock has certain liquidation and dividend rights prior and in preference to the rights of the common stock and

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Series A preferred stock. The stock has a liquidation preference of \$2.00 per share together with an amount equal to, generally, \$0.14 per share compounded annually at 7% per year from the filing date, less any dividends paid. Dividends on the Series B preferred stock are non-cumulative and payable at the annual rate of \$0.14 per share if, when, and as declared by, the Board of Directors. No dividends have been declared on the Series B preferred stock.

Common Stock

The Company settled an outstanding lawsuit in 2001 by agreeing to issue 6,000,000 shares of common stock, with a fair market value on the date of issuance of \$900,000. Delays in issuing the stock resulted in the Company issuing an additional 300,000 shares of stock in 2002. The fair market value of these additional shares was \$45,000.

Stock Options and Warrants

The 1993 Employee and Consultant Stock Plan expired in 2003 and all outstanding stock options were forfeited.

The Company grants other non-statutory stock options. Under the Director Stock Option Plan, the Company reserved 1,500,000 shares of common stock for non-statutory stock options for non-employee directors. Options under this Plan are fully vested upon the granting of the options and expire ten years from the date of grant unless terminated sooner or upon termination of the optionee's status as a director. Options that expire or are canceled may become available for future grants under the Director Option Plan. No options are outstanding under this Plan.

The 1996 Stock Option Plan reserves 45,000,000 shares for incentive and non-statutory stock options during the period of the Plan, which expires in 2006. Options under the 1996 Plan expire over a period not to exceed ten years.

18

ENOVA SYSTEMS, INC.
 NOTES TO FINANCIAL STATEMENTS
 December 31, 2003

NOTE 9 - STOCKHOLDERS' EQUITY (Continued)

Stock Options and Warrants (Continued)

The following summarizes common stock option activity:

	1996 Plan		1993 Plan		
	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price	Shares
Outstanding, December					

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

31, 2000	20,465,000	\$ 0.10 - 0.30	9,654,000	\$ 0.10 - 0.60	1,495,0
Granted	7,472,000	\$ 0.11 - 0.18	-	\$ -	
Exercised	(1,805,000)	\$ 0.06 - 0.11	-	\$ -	
Forfeited	(5,266,000)	\$ 0.11 - 0.30	-	\$ -	
	-----		-----		-----
Outstanding, December					
31, 2001	20,866,000	\$ 0.10 - 0.30	9,654,000	\$ 0.10 - 0.60	1,495,0
Granted	900,000	\$ 0.10	-	\$ -	
Exercised	-	\$ -	(35,000)	\$ 0.10	
Forfeited	(439,000)	\$ 0.11 - 0.18	(2,565,000)	\$ 0.10	
	-----		-----		-----
Outstanding, December					
31, 2002	21,327,000	\$ 0.10 - 0.30	7,054,000	\$ 0.10 - 0.60	1,495,0
Granted	9,998,000	\$ 0.05	-	\$ -	
Exercised	(8,638,000)	\$ 0.05 - 0.11	-	\$ -	
Forfeited	(1,556,000)	\$ 0.11 - 0.18	(7,054,000)	\$ 0.10 - 0.60	(1,495,0
	-----		-----		-----
Outstanding, December					
31, 2003	21,131,000	\$ 0.14	-	\$ -	
	=====		=====		=====
Exercisable, December					
31, 2003	20,898,000	\$ 0.14	-	\$ -	
	=====		=====		=====

The weighted-average remaining contractual life of the options outstanding at December 31 2003 was 1.8 years. The exercise prices of the options outstanding at December 31, 2003 ranged from \$0.05 to \$0.30. Options exercisable were 20,898,000, 28,304,228, and 26,293,358 at December 31, 2003, 2002 and 2001.

The Company has adopted only the disclosure provisions of SFAS No. 123. It applies APB Opinion No. 25 and related interpretations in accounting for its plans and does not recognize compensation expense for its stock-based compensation plans other than for restricted stock and options issued to outside third parties.

19

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2003

NOTE 9 - STOCKHOLDERS' EQUITY (Continued)

Stock Options and Warrants (Continued)

If the Company had elected to recognize compensation expense based upon the fair value at the grant date for awards under this plan consistent with the methodology prescribed by SFAS No. 123, the Company's net loss and loss per share would be reduced to the pro forma amounts indicated below for the years ended December 31, 2003, 2002, and 2001:

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

	2003	2002	2001
	-----	-----	-----
Net loss			
As reported	\$ (3,186,000)	\$ (3,598,000)	\$ (3,428,000)
Pro forma	\$ (3,501,000)	\$ (3,795,000)	\$ (4,204,500)
Basic and diluted loss per common share			
As reported	\$ (0.01)	\$ (0.01)	\$ (0.01)
Pro forma	\$ (0.01)	\$ (0.01)	\$ (0.01)

For purposes of computing the pro forma disclosures required by SFAS No. 123, the fair value of each option granted to employees and directors is estimated using the Black-Scholes option-pricing model with the following weighted-average assumptions for the years ended December 31, 2003, 2002, and 2001: dividend yields of 0%, 0%, and 0%, respectively; expected volatility of 88%, 83%, and 125%, respectively; risk-free interest rates of 4%, 4%, and 5%, respectively; and expected lives of three, five, and five years, respectively. The weighted-average fair value of options granted during the year ended December 31, 2003 for which the exercise price equals the market price on the grant date was \$0, and the weighted-average exercise price was \$0.051.

The Black-Scholes option valuation model was developed for use in estimating the fair value of traded options, which do not have vesting restrictions and are fully transferable. In addition, option valuation models require the input of highly subjective assumptions, including the expected stock price volatility. Because the Company's employee stock options have characteristics significantly different from those of traded options, and because changes in the subjective input assumptions can materially affect the fair value estimate, in management's opinion, the existing models do not necessarily provide a reliable single measure of the fair value of its employee stock options.

The agreement with Ford Motor Company (see Note 4) included issuing warrants to Ford to purchase 4.6% of the fully diluted common stock of Enova Systems over a 66 month period. The number of shares to be acquired will be adjusted from time to time for increases in the Company's fully diluted common stock. The vesting of these warrants is dependent upon Ford meeting specific purchase requirements. Initially, the exercise price of the warrants is equal to the price of the stock on the date of issuance, with the exercise price adjusted when the aggregate number of shares is adjusted.

20

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2003

NOTE 9 - STOCKHOLDERS' EQUITY (Continued)

Stock Options and Warrants (Continued)

The fair value of warrants granted were estimated on the date of grant using the Black-Scholes option-pricing model with the following assumptions: dividend yield of 0%, expected volatility of 102%, risk-free interest rate of 4.76% and an expected life of the warrants

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

of 66 months. Warrants issued and vested under this agreement totaled 2,500,000 at an exercise price of \$0.29 per share during the year ended December 31, 2001. No warrants were vested under this program during 2002 and 2003.

NOTE 10 - INCOME TAXES

Significant components of the Company's deferred tax assets and liabilities for federal and state income taxes as of December 31, 2003 and 2002 consisted of the following:

	2003	2002
	-----	-----
Deferred tax assets		
Federal tax loss carry-forward	\$31,286,000	\$30,513,000
State tax loss carry-forward	712,000	404,000
Basis difference	1,610,000	1,610,000
Other, net	555,000	433,000
	-----	-----
	34,163,000	32,960,000
Less valuation allowance	34,163,000	32,960,000
	-----	-----
Net deferred tax assets	\$ --	\$ --
	=====	=====

As of December 31, 2003, the Company had net operating loss carry forwards for federal and state income tax purposes of approximately \$92,867,000 and \$8,589,000, respectively. The net operating loss carry forwards began expiring in 2003.

NOTE 11 - RELATED PARTY TRANSACTIONS

During 2003, the Company purchased approximately \$599,000 in components, materials and services from HHI. The outstanding balance owed to HHI at December 31, 2003 was approximately \$395,000.

During 2003, the Company paid a total of \$33,000 to three of its directors in consulting fees.

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2003

NOTE 12 - EMPLOYEE BENEFIT PLAN

The Company has a 401(k) profit sharing plan covering substantially all employees. Eligible employees may elect to contribute a percentage of their annual compensation, as defined, to the plan. The Company may also elect to make discretionary contributions. For the years ended December 31, 2003, 2002, and 2001 the Company did not make any contributions to the plan.

NOTE 13 - GEOGRAPHIC AREA DATA

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

The Company operates as a single reportable segment and attributes revenues to countries based upon the location of the entity originating the sale. Revenues by geographic area are as follows:

	2003 -----	2002 -----	2001 -----
United States	\$2,672,000	\$2,478,000	\$2,854,000
Italy	213,000	1,040,000	359,000
Korea	297,000	726,000	483,000
Japan	146,000	87,000	--
Malaysia	184,000	65,000	--
Ireland	--	59,000	--
Canada	738,000	--	--
England	60,000	--	84,000
	-----	-----	-----
Total	\$4,310,000 =====	\$4,455,000 =====	\$3,780,000 =====

NOTE 14 - EXTRAORDINARY ITEM

During the year ended December 31, 2000, the Company negotiated repayment of long-term trade payables for less than the amounts originally recorded. The gain from these negotiated payments is reflected as an extraordinary item.

In consultation with legal counsel, certain payables were extinguished under a provision of the California Code of Civil Procedure in which the statute of limitations precluded the ability of a creditor to commence an action to recover stale account balances. The Company determined that conditions surrounding the application of the statute of limitations had been met; accordingly, the 2001 and 2000 extraordinary item includes the gain from these extinguishments.

NOTE 15 - Subsequent Events

As of March 30, 2004, the Company has obtained several commitments from investors to purchase approximately 15,000,000 shares of common stock at \$0.12 per share for a total cash purchase of approximately \$1,800,000.

SUPPLEMENTAL INFORMATION

Independent Auditor's Report on Financial Statement Schedule

[Letterhead of SINGER LEWAK GREENBAUM & GOLDSTEIN LLP]

INDEPENDENT AUDITOR'S REPORT

Board of Directors and Stockholders Enova Systems, Inc.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Our audits were made for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental schedule II for the year ended December 31, 2003 is presented for purposes of complying with the Securities and Exchange Commission's rules and is not a part of the basic financial statements. This schedule has been subjected to the auditing procedures applied in the audits of the basic financial statements and, in our opinion, is fairly stated in all material respects in relation to the basic financial statements taken as a whole.

/s/ SINGER LEWAK GREENBAUM & GOLDSTEIN LLP

SINGER LEWAK GREENBAUM & GOLDSTEIN LLP

Los Angeles, California
March 25, 2004

24

ENOVA SYSTEMS, INC.
VALUATION AND QUALIFYING ACCOUNTS - SCHEDULE II
For the Years Ended December 31,

	Balance Beginnin of Year -----	Additions Charged to Operations -----	Deductions from Reserve -----	Balance, End of Year -----

Allowance for doubtful accounts				
December 31, 2003	\$ -- =====	\$595,000 =====	\$-- =====	\$595,000 =====
December 31, 2002	\$ -- =====	\$ -- =====	\$-- =====	\$ -- =====
December 31, 2001	\$ -- =====	\$ -- =====	\$-- =====	\$ -- =====
Reserve for obsolete inventories				
December 31, 2003	\$ 80,000 =====	\$ -- =====	\$-- =====	\$ 80,000 =====
December 31, 2002	\$ 80,000 =====	\$ -- =====	\$-- =====	\$ 80,000 =====
December 31, 2001	\$ 80,000 =====	\$ -- =====	\$-- =====	\$ 80,000 =====

The accompanying notes are an integral part of these financial statements.

25