

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

ENOVA SYSTEMS INC
Form 10-K
March 31, 2005

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, 2004

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
incorporation or organization)

(I.R.S. Employer Identification Number)

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, 2004 (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

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

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 June 30, 2004, 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 30, 2005 was 415,601,000.

ENOVA SYSTEMS, INC.

2004 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

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Item 15. Exhibits and Financial Statement Schedules.....

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

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

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 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.

Enova's primary market focus centers on both series and parallel heavy-duty drive systems for multiple vehicle and marine applications. We believe series-hybrid and parallel hybrid heavy-duty drive system sales offer Enova the greatest return on investment in both the short and long term. Additionally, Enova management believes that this area will see significant growth over the next several years. As we penetrate more market areas, we are continually refining and optimizing both our market strategy and our product line to maintain our leading edge in power management and conversion systems for mobile applications.

Our website, www.enovasystems.com, contains up-to-date information on us, our products, programs and current events. We are implementing an aggressive strategy to utilize our website and the internet as a prime focal point for current and prospective customers, investors and other affiliated parties seeking data on us.

During 2004, we experienced a slowdown in sales due to a number of internal and external developments. Internally, we reorganized our senior management by moving our vice president of marketing and sales, Edward Moore, to the position of Chief Operating Officer, which resulted in an interim period without a dedicated sales executive. During the fourth quarter of 2004, we selected Michael Staran to head our marketing department. Additionally, we appointed Edwin Riddell, a director of Enova since 1994, to the position of president and Chief Executive Officer to replace Carl Perry during the third quarter of 2004. Mr. Perry was appointed as our Vice-Chairman. We believe our market focus is more defined with sales and market potential improving during 2005. In 2004, we also continued to see our current and prospective customers seek more development programs, or evaluation systems, than actual demand for production systems. We believe this trend is the reason our current customers ordered additional drive systems and components in the first quarter of 2005 with forecasts to order more during the next three fiscal quarters of 2005. We anticipate potential customers will use references from our current customer base in their decision process which may lessen order cycle timing and increase sales volume.

3

Our decreases in production and development revenues are primarily a result of an ongoing slowdown in heavy-duty alternative fuel drive system sales as manufacturers assess the various new types of systems on the market. There has been a greater shift to parallel hybrid type systems. As yet, however, no particular type of systems has gained a major foothold in the marketplaces in which we compete. Management's strategy in this regard is to provide a dual path approach in offering both a series and parallel hybrid drive systems solution which we commenced in 2004. We have developed or are developing a variety of heavy-duty drive system solutions including our series hybrid drive system featuring our diesel generator set; a post-transmission parallel hybrid system and two variations of a pre-transmission parallel hybrid drive system. Many of these systems are currently being utilized in our customer's trucks and buses such as the Mack R-11 refueler vehicle which utilizes our post-transmission parallel hybrid and WrightBus of the United Kingdom's 10m bus which utilizes our series hybrid drive system.

Additionally, to offset this temporary decline in production sales, we

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

continue to pursue privately and governmental funded development programs. This allows us to increase our revenue base, form new alliances with major OEMs and participate in the latest trends in alternative fuel technologies. The decrease in R&D revenues for the year ended December 31, 2004 is primarily due to customer requirement slippage during the year, all of which, we believe, will be realized in 2005. Research and development revenues are a result of engineering services for the Mack/Volvo hybrid drive system, the EDO minesweeper project, the First Auto Work (FAW) parallel hybrid program and various Hawaii Center for Advanced Transpiration Technologies (HCATT) programs.

We continue to receive greater recognition from both governmental and private industry with regards to both commercial and military application of its hybrid drive systems and fuel cell power management technologies. Although we believe that current negotiations with several parties may result in development and production contracts during 2005 and beyond, there are no assurances that such additional agreements will be realized.

During 2004, we continued to advance its technologies and products for greater market penetration for 2005 and beyond. We continue to develop independently and in conjunction with the Hyundai-Enova Innovative Technology Center's (ITC) progress on several fronts to produce commercially available heavy-duty, series and parallel hybrid drive systems. Enova continued its expansion into the Chinese hybrid vehicle markets by securing contracts for hybrid buses and trains in China and Singapore, respectively. In July of 2004, we entered into an agreement with Tomoe and Hyundai Heavy Industries of Korea for the development and production of eight, 36-ton battery electric locomotives for the Singapore Land Transport Authority for anticipated delivery in late 2005 to early 2006.

During the year ended December 31, 2004, we continued to develop and produce electric and hybrid electric drive systems and components for Mack/Volvo, First Auto Works of China, Ford Motor Company (Ford), Wright Bus and Eneco of the United Kingdom, and Tomoe of Japan and several other domestic and international vehicle and bus manufacturers.

Our various electric and hybrid-electric drive systems, power management and power conversion systems are being used in applications including Class 8 trucks, train locomotives, transit buses and industrial vehicles as well as in non-transportation applications such as fuel-cell management and power management systems, including the EDO minesweeper. We have furthered its development and production of systems for both mobile and stationary fuel cell powered systems with major companies such as Ford and Hydrogenics, a fuel cell developer in Canada.

Our potential in China is growing with the addition of two (2) more bus manufacturers, First Auto Group (FAW) and Top-Electric. Our contract with FAW is for the development and evaluation of a parallel hybrid drive system for buses, in conjunction with the proposed/possible production of up to 1,000 hybrid vehicles for the 2008 Summer Olympics in Beijing. The development contract is scheduled to run through early/mid 2005 to deliver three pre-transmission parallel hybrid motors and controllers. FAW has discussed ordering three additional systems in mid 2005 upon completion of the evaluation of the initial systems. Successful completion of this project could lead to additional development and production contracts with FAW, however, we cannot assure that such additional orders will be forthcoming.

For the year ended December 31, 2004, the following customers accounted for more than ten percent (10%) of our total revenues:

Customer	Percent
Ford Motor Company	16.0%

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

EDO New York	13.0%
Hyundai Motor Company	10.0%

Heavy-Duty Drive Systems - Buses, Trucks, Vans and Other Industrial Vehicle Applications

Enova's primary market focus centers on both series and parallel heavy-duty drive systems for multiple vehicle and marine applications. We believe series-hybrid and parallel hybrid heavy-duty drive system sales offer

4

Enova the greatest return on investment in both the short and long term. Although this market sector has developed more slowly than anticipated, management believes that this area will see significant growth over the next several years. As the Company penetrates more market areas, we are continually refining and optimizing both our market strategy and our product line to maintain our leading edge in power management and conversion systems for mobile applications.

During 2004, we introduced our latest hybrid, the HybridPower Series Hybrid, at the Electric Drive Transportation Association's annual symposium in Orlando Florida. Enova's new diesel generator set, the power component within the hybrid drive system, delivers 60 kilowatts volts of continuous power, enabling it to integrate seamlessly with Enova's 240kW or 120kW drive motors and other digital power management components. The series hybrid genset consists of a 60kW electric motor, a motor controller and a diesel engine meeting stringent Euro 3 or Euro 4 emission specifications. The genset is distinctively designed to allow end users to choose the engine best suited for their commercial needs, permitting a wide variety of engine choices.

In early 2004, we sold three HybridPower 120kW drive systems to Tsinghua University in China for fuel cell hybrid bus development. China intends to use hybrid-electric buses to shuttle athletes and guests at the 2008 Beijing Summer Olympics and the 2010 World's Expo in Shanghai. China is seeking up to 1,000 full-size hybrid-electric buses to support these global events. We believe Tsinghua is the premier research university in China. Its automotive engineering department selected Enova's drive systems for its government funded hybrid fuel cell bus development. In July 2004, Enova completed negotiations for two development and production contracts for Asian markets. Enova continued its expansion into the Chinese hybrid vehicle markets by securing contracts for hybrid buses and trains in China and Singapore respectively. Enova's potential in China is growing with the addition of two more bus manufacturers, First Auto Works (FAW) and Top-Electric. FAW entered into an agreement with us to purchase three medium-duty, parallel hybrid drive systems, the first of which was delivered in late 2004. Enova now sells its hybrid drive systems to three bus developers in China, including Tsinghua University of China. Management believes that these development and initial production programs will result in additional production contracts during 2005 and beyond; however at this time; there are no assurances that such additional contracts will be consummated.

In Japan, Tomoe Electro-Mechanical Engineering and Manufacturing, Inc. has entered into a development and production contract with Enova for eight battery-electric locomotives for the Singapore Land Transport Authority for service vehicles for the Singapore Mass Rapid Transit Circle Line system for maintenance, repair, shunting and recovery of passenger trains. Over the last several years, Enova successfully integrated its HybridPower™ drive systems into Tomoe's heavy-duty Isuzu dump truck application, three passenger trams and

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

a mine tunnel crawler. It is anticipated that the hybrid drive train components will begin being delivered in late 2005 at Tomoe's Japan-based facilities. Enova anticipates the total contract to exceed US\$3 million over the life of the contract. This latest market penetration in Asia enhances not only Enova's alliances with both Tomoe and HHI, but also advances Enova's hybrid-electric technologies in high voltage power management components. As part of this contract, Enova will develop a high voltage charging system to enable the locomotive to receive a direct battery charge from the high voltage rail. Tomoe and Enova continue to develop other commercial and industrial applications for our drive systems, including potential light rail applications. During the first quarter of 2005, Tomoe issued a purchase order for three post transmission parallel hybrid drive systems for another train project in South Korea. For the year ended December 31, 2004 we billed approximately \$175,000 for these various systems. Although we anticipate additional orders for these systems in 2005 and beyond, there are no assurances that such additional orders will be forthcoming.

WrightBus, one of the largest low-floor bus manufacturers in the United Kingdom, continues to purchase our diesel genset-,powered, series hybrid drive systems for their medium and large bus applications. WrightBus ordered 4 120kW drive systems and one 240kW drive system in 2004 for a total of \$166,000. In late 2004, we entered into an exclusive agreement with WrightBus for the sale of certain Enova products for specific vehicles in the United Kingdom. WrightBus has issued additional purchase orders for product in 2005 and notified us of their potential requirements for 2005 through 2007. At this time, however, there are no assurances that such additional orders will be forthcoming.

Eneco of the United Kingdom, a vehicle integrator which utilizes Enova's HybridPower 120kW drive systems in its hybrid bus applications, purchased six 120kW systems in 2004 for a total of \$170,000. Eneco has notified us of its plans to order additional 120kw systems in 2005 for its bus programs. At this time, however, there are no assurances that such additional orders will be forthcoming.

EcoPower Technology of Italy continues to purchase components for its hybrid electric drive systems during 2004 for service and maintenance parts for its fleet of buses powered by HybridPower™ 120kw drive systems. Since our teaming with EcoPower, we have sold 42 drive systems forming one of the largest fleets of hybrid buses in the world. EcoPower 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. EcoPower notified Enova of its requirements for additional drive systems in 2005, however, there are no assurances that such additional orders will be forthcoming.

MTrans of Malaysia has integrated two of our standard HybridPower 120kW drive system into a hybrid 10-meter bus with a Capstone microturbine as its power source. MTrans has discussed the potential of utilizing Enova drive systems for all of its hybrid and monorail requirements in 2005 and beyond. At this time, however, there are no assurances that such additional orders will be forthcoming.

5

Additionally, we are in discussions with other bus manufacturers and industrial, commercial and military vehicle manufacturers regarding the purchase of our heavy-duty, high performance, 120kW and 240kW drive systems in 2005. There are no assurances, however, that these discussions will result in any sales of the HybridPower 240kW or 120kW drive systems.

Light-Duty Drive Systems - Automobiles and Delivery vehicles

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Our 90kW controller, motor and gear unit is utilized in light duty vehicles such as midsize automobiles and delivery vehicles. The topology of this system is being adapted to also be utilized as a parallel hybrid motor and controller system. We are beginning to receive more interest in our light-duty systems from both European and Asian customers.

Eneco of the United Kingdom, a vehicle integrator which utilizes Enova's HybridPower™ 120kW drive systems in its hybrid bus applications, purchased two HybridPower™ 90kW drive systems for integration into delivery vans.

Our 90kW motor controller is also utilized in the parallel hybrid drive system designed for FAW. In conjunction with the 90kW motor, FAW and Enova are evaluating this latest employ of our hybrid technologies. As noted earlier, we anticipate additional demand for these systems. At this time, however, 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 (FCV) 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 delivered 8 additional HVEC production systems to Ford in 2004 valued at approximately \$100,000. These systems will be integrated into the Ford Focus FCV which will be part of an evaluation program being implemented by Ford in 2005. There is a potential for additional production orders for HVEC units from Ford in 2005 and beyond; 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 and other fuel cell powered systems such as the Hyundai fuel cell vehicle. Both of these projects are further detailed in the research and development programs section.

Enova's fuel cell enabling components are part of the proposed fleets of fuel cell vehicles being utilized by both Ford Motor Company - the Ford Focus FCV- and Hyundai Motor Company - the Hyundai Tucson fuel cell hybrid electric vehicle - in response to the U.S. Department of Energy's solicitation, entitled "Controlled Hydrogen Fleet and Infrastructure Demonstration and Validation Project." This government-funded project, which commenced in late 2004, will last over five years evaluating the economic and performance feasibility of fuel cell vehicles and infrastructure across the U.S.

The Company will continue to explore new applications for this versatile technology in both mobile and stationary systems.

Research and Development Programs

We continue to aggressively pursue government and commercially sponsored development programs for both ground and marine heavy-duty drive system applications.

Our program with Mack Truck, Inc., Powertrain division - a unit of The

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

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 continues on schedule. 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 vehicles 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 is anticipated to be completed in mid 2005 followed by an evaluation period of approximately three to nine months. The program generated \$150,000 in revenues for us in 2004. This program has opened several avenues within Mack and Volvo for Enova to develop and manufacture advanced drive system components. However, at this time, there are no assurances that such additional orders will be forthcoming.

Our 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 also continues to progress during the first quarter of 2004.

6

The electronics package will include Enova's advanced power components including a new, enhanced 50V, 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. During the second quarter of 2004, Enova completed and presented the hardware to EDO, which is now undergoing functional testing. We believe that the aggregate value of the program will be approximately \$420,000, of which \$342,000 was received in 2004. 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.

The all-electric Hyundai Santa Fe SUV demonstration project in Honolulu Hawaii is nearing its completion in June 2005 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 continues its development for Hyundai Motor Company (HMC) of the 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. During the second quarter of 2004, Enova completed the development of this next generation hybrid-electric 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. During 2004, we delivered 8 systems to HMC for test, evaluation and integration into vehicles. 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. During 2004, this program generated \$250,000 in revenues from development and hardware sales. Although we believe there is potential for further production of these drive system components and other development programs in 2005, there can be no assurances at this time that such orders will be realized.

In the fourth quarter of 2004, Enova completed the design and integration of its 120kw drive system with a Capstone microturbine into a MB4

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

tow tractor for the U.S. Air Force through a contract with the Volpe National Transportation Systems Center. The objectives of this program include the integration of microturbine technology into the hybrid electric tow tractor, field testing and evaluation of the benefits of microturbine technology in a hybrid electric vehicle, integration of grid-charging technology, DC-DC converter, and a data acquisition system into an electric tow tractor, and validation of the technology effect on the original system and performance. During 2004, the program generated \$165,000 in revenues for Enova. There is a potential for other upgrades of this type and we anticipate entering into more of these contracts in 2005 with the U.S. Air Force. There can be no assurances at this time, however, that such contracts will be realized.

We also commenced a program with Hydrogenics to integrate a HybridPower 120kW hybrid drive system into a step-van for Purolator as a hydrogen fuel cell hybrid vehicle. In integrating this new system, we utilized several new power management systems including our dual 8kW inverter and our Mobile Fuel Cell Generator that utilizes our High Voltage Converters. This 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 is in its final stage of evaluation. As a result of this program, we have also commenced a similar fuel cell step van conversion program for HCATT and the U.S. Air Force.

Also in the fourth quarter of 2004, we commenced integration of a fuel cell powered step-van similar to the aforementioned Hydrogenics program for HCATT and the U.S. Air Force. The program is scheduled to continue through the third quarter of 2005 ending with an evaluation phase. We are experiencing a notable increase in interest from both government and military organizations for our products and integration services. For the year ended December 31, 2004, we billed approximately \$96,000 for all of our HCATT programs.

We intend to establish new development programs with the Hawaii Center for Advanced Transportation Technologies 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 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 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

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

limits for low emission vehicles. Recently, CARB proposed additional amendments to the regulations. Furthermore, several car manufacturers have challenged 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 our 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.

Enova's alliances with other major OEMs in the automotive, transit, commercial and energy sectors continue to expand. In 2004, Enova entered the Chinese hybrid vehicle market with alliances with First Auto Works and Tsinghua University for heavy-duty hybrid drive systems and technologies. Additionally, we expanded on our alliances with Mack/Volvo, Tomoe, Hyundai Motor Company (HMC), MTrans of Malaysia, Eneco, Hydrogenics of Canada, the Southwest Research Institute, the U.S. Air Force 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 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

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

power management and power conversion for industrial, commercial, residential and vehicle applications. The ITC has been instrumental in bringing our diesel genset system into commercialization. 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 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.

Products

Our 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 produced under the HybridPower™ brand name. 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. Our 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.

8

We are moving to expand its product base into new markets outside of the traditional electric and hybrid-electric automotive fields. Key areas which we have 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. We have entered into agreements, or commenced negotiations, with various alternative power generation manufacturers such as Hydrogenics, Capstone Turbine and Ballard Power 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.

We have embraced fuel cell technology and have 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.

HybridPower™ Electric and Hybrid-Electric Drive Systems

Enova's HybridPower drive system family, along with its drive system accessories are designed to provide our customers with a complete solution to their drive system needs for both light-duty through heavy-duty vehicle markets. Enova's HybridPower hybrid electric drive system provides all the functionality one would find under the hood of an internal combustion engine powered vehicle. The HybridPower 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 which ensures the desired propulsion and performance. The system is designed to be installed

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

as a "drop in," fully integrated turnkey fashion, or on a modular, "as-needed" basis. Regardless of power source (battery, fuel cell, diesel generator or turbine) the HybridPower electric motor is designed to meet the customer's drive cycle requirements.

The HybridPower drive system family is targeted to meet the demands of light-duty through heavy-duty vehicle markets. Enova's family of light-duty drive systems includes:

- o 30kilowatt (kW), 60kW, 90kW all-electric drives
- o 90kW series-hybrid drive
- o combinations of these systems based on customer requirements.

Our family of heavy-duty electric drive systems includes:

- o 120kW all-electric drive
- o 120/60kW peak series hybrid system
- o 240/60kW peak series hybrid system
- o 90kW peak mild, pre-transmission parallel hybrid system
- o 100kW peak post-transmission parallel hybrid systems
- o 100kW peak pre-transmission parallel hybrid system.

Enova's drive systems, in conjunction with, internal combustion engines, microturbines, fuel cells, flywheels, and generators sets provide state of the art hybrid-electric propulsion systems.

Hybrid vehicles are those that utilize an electric motor and batteries in conjunction with an internal combustion engine (ICE), whether piston or turbine. With a hybrid system, a small piston or turbine engine - fueled by gasoline or diesel, compressed natural gas (CNG), methane, etc., in a tank - supplements the electric motor and battery. These systems are self-charging, in that the operating ICE recharges the battery.

There are two types of hybrid systems: series and parallel. A series hybrid system is one where only the electric motor connects to the drive shaft; a parallel hybrid system is one where both the internal combustion engine and the electric motor are connected to the drive shaft. In a series hybrid system, the ICE turns the generator, which charges the battery, which -- through a control unit - powers the electric motor, which turns the wheels. In a parallel hybrid system, both the electric motor and the ICE can operate simultaneously to drive the wheels. In both hybrid systems and in pure electric systems, regenerative braking occurs, which assists in the charging of the batteries.

The parallel hybrid system is ideally suited for conditions where most of the driving is done at constant speed cruising, with a smaller amount of the driving involving random acceleration, such as "up hill" or with "stop and go" conditions. For acceleration, the controller causes the electric motor to kick in to assist the ICE, both running simultaneously. When speed is steady or the ground is flat, only the ICE runs. Additionally, when the batteries are low, the controller causes the ICE and motor to charge the batteries. As a result, the series hybrid system is best suited for starts and stops, and is ideal for applications such as urban transit buses and urban garbage trucks. The design of the series hybrid system is based on a driving cycle with a high percentage of random acceleration conditions.

Series Hybrid	Driving with high percentage stop and go and/or hilly terrain	Optimally-sized IC engine Advanced engine/turbine may be used Simplified transmission Independent control
Parallel Hybrid	Driving with high percentage constant speed cruising	No generator and converter needed The drive system may be smaller

Hybrid Drive Configurations

Enova has identified three primary configurations based upon how well they meet market needs economic requirements. We have developed all of the relevant technology required to produce these drive systems and is currently introducing the Hybrid Power product line worldwide. All of our innovative hybrid drive systems are compatible with wide range of fuel sources and engine configurations.

Hybrid 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 HybridPower drive systems exclusively utilize induction AC motors for their high performance, power density, 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.

Hybrid 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, 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.

Using our proprietary Windows™ 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

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

The Enova hybrid drive family currently includes a 120/60kW peak series hybrid system, a 240/60kW peak series hybrid system, a 90kW peak mild, pre-transmission parallel hybrid system, a 100kW peak post-transmission parallel hybrid systems and our 100kW peak pre-transmission parallel hybrid system to be introduced later this year.

The Enova HybridPower 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 120/60 kW series hybrid system uses the 120kW electric drive components to propel the vehicle, and uses a 60kW diesel generator (genset) to generate power while the vehicle is in operation. This synergy of design reduces the development cost of our hybrid systems by taking advantage of existing designs. The diesel genset has been designed to take advantage of many different models of internal combustion

10

engines for greater penetration into the burgeoning heavy-duty hybrid vehicle markets. Enova's genset will accept any engine with an industry standard bell housing and flywheel. Enova's control protocols are designed to easily interface with any standard engine controller with analog throttle inputs. Accessories for these drives include battery management systems, chargers and 12 or 24 volt power supplies.

Our 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 Hydrogenics or Ballard system, or many others. In all of these examples, Enova's battery management system provides the power management to allow for proper power control.

Drive System Accessories

Enova's drive system accessories range from battery management systems to hybrid controllers, to rapid charging systems. These critical components are designed to complement the HybridPower drive system family by providing the elements necessary to create a complete technical solution for alternative energy drive systems.

Enova's drive system accessories are not only integral, but are also the perfect complement to our drive systems and are designed to provide our customers with a complete solution to their drive system needs.

Battery Care Unit

Enova's Battery Care Unit (BCU) monitors, manages, protects, and reports on the condition of the vehicles battery pack. 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. The BCU reports state-of-charge, amp hours and kilowatt-hours.

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 device is approximately 7.1 inches by 4.3 inches by 1.6 inches.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

The BCU directly interfaces with the HybridPower and other drive systems, and controls the Safety Disconnect Unit (SDU). 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 the errors commonly associated with other types of sensors.

The non-volatile RAM 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-based diagnostic software, the BCU control parameters can be programmed "live" in-vehicle. Additionally, battery performance can be monitored in real-time. Reports can be output to a laptop computer for precise results and "customer friendly" usage.

Hybrid Control Unit

Enova's 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. This innovative control loop ensures that the entire system is optimized to provide quick response to driver commands while providing the best possible system efficiency.

11

Safety Disconnect Unit

The Safety Disconnect Unit (SDU) is under the control of the BCU, and allows vehicle systems to easily 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 thus ensuring a safe environment for the vehicle and operator. The SDU is available in two configurations to match the requirements of the drive systems.

High Voltage Disconnect Unit

The High Voltage Disconnect Unit (HVDU) is a reduced feature version of the Safety Disconnect Unit. The pre-charge board has been eliminated in order to provide a lower cost method of safely switching high voltage systems on the vehicle that do not require the soft start feature.

12

Wiring Harness Connector Kits

Enova provides complete mating connector kits to help the vehicle OEM with their production process. By using the Enova supplied kit the vehicle manufacturer is ensuring that they will have all of the necessary connectors to complete the vehicle build.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

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.

20kW bi-directional Fuel Cell Power Conditioning System

Enova's 20kW bi-directional Fuel Cell Power Conditioning System, originally designed to meet the demands of an automotive Fuel Cell propulsion system, is now being applied to the stationary market for distributed generation applications.

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 Stationary Generation System over a CAN bus. Other communications protocols supported are SAE J-1850, RS-232, and RS-485. Our proprietary package diagnostic software allows all key parameters of the Power Conditioner to be monitored and control boundaries to be adjusted.

Fuel Cell Management Unit

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. The FCU monitors the fuel cell 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 FCU has eight (8) user-programmable outputs and four (4) user-programmable inputs to allow full integration into the distributed generation system. These can be used to customize input and output parameters, and to provide for other custom monitoring and battery pack control.

Research and Development Strategy

Enova maintains a strategy of continual enhancement of its current product line and development of more efficient and reliable products for the ever-changing alternative energy sectors. Management believes R&D must be continued in order to remain competitive, minimize production cost and meet our customers' specifications. Because microprocessors and other components continue to advance in speed, miniaturization and reduction of cost, Enova must re-examine its designs to take advantage of such developments. Enova endeavors to fund its R&D through customer contracts where applicable, however it will provide internal funding where technology developed is critical to its future.

Enova's commitment to advancing technological superiority is evidenced by its internal efforts as well as its joint venture with HHI for future technologies.

Manufacturing Strategy

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Our products are "production-engineered," meaning they are designed so they can be commercially produced without additional development. All formats and files are designed with manufacturability in mind from the start. For the automotive market, Enova designs its products to ISO 900X 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.

We have developed a multi-tiered manufacturing strategy that allows the company to meet the market's demand for high quality production goods while optimizing cost of goods sold across the spectrum of low to high volumes. At the core of this strategy is a strong reliance on pre-selected highly qualified outside manufacturing houses that specialize in various aspects of the manufacturing process. It is through this closely managed outsourcing strategy that Enova is able to achieve improved gross margins while minimizing fixed costs within the organization.

13

All tiers of manufacturing of electronic components begin with a complete engineering design package that includes a drawing tree, bill of material, electrical and mechanical drawings, and control software where appropriate. The control software and the design package are internally reviewed, validated, and released through our configuration management process.

For low volume manufacturing, where volumes are less than 10 to 20 units, the process is similar to that for prototyping. Low volume manufacturing and testing is performed in-house.

For higher volume manufacturing, Enova has established strategic alliances with ISO-900X certified manufacturers that can take on all aspects of the process from component sourcing, to circuit card assembly, to component assembly, to final unit assembly and test. These completed components and units are shipped to our facility where complete drive systems that meet the customer's unique requirements are packaged and shipped.

As our market continues to grow and individual customers begin to order higher quantities of fixed drive system configurations, we will transition to a system where the final assembly is drop shipped directly to the end customer. This critical concept has already been discussed with our strategic manufacturing partners.

Competitive Conditions

Competition within the mobile and stationary hybrid power sector is still somewhat fragmented, although there are indications of some consolidation at this time. The market is still divided into very large players such as Allison, Siemens, BAE and Eaton; or smaller competitors such as ISE Research, Azure Dynamics/Solectria; PEI, Unique Mobility and others. The larger companies tend to still focus on single solutions but maintain the capital and wherewithal to aggressively market such. The smaller competitors offer a more diversified product line, but do not have the market presence to generate significant penetration at this juncture.

Our research and experience has indicated that our target market segments certainly focus on price, but would buy based on reliability, performance and quality support when presented the life-cycle business model for hybrid technologies for their application. Enova has good indications that many

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

would pay a 10-20% premium for hybrids from a secure vendor providing warranted performance, quality service and support.

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.

14

For the years ended December 31, 2004, 2003 and 2002, we spent \$935,000, \$799,000, and \$1,152,000, 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.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

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 continue to place emphasis on the development and acquisition of patentable technology, however, a majority of our intellectual property is contained within our software which is best protected under trade secret provision of U.S. patent law. Under such provisions, Enova does not have to publish its proprietary code in order to maintain protection.

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.

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 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

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

As of December 31, 2004, 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 4 in administration, 1 in sales, 11 in engineering and research and development, and 12 in production.

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.

15

Item 3. Legal Proceedings

We may from time to time become a party to various legal proceedings arising in the ordinary course of business. At December 31, 2004, the Company had no known current, pending or threatened litigation.

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 2004.

(REMAINDER OF PAGE INTENTIONALLY LEFT BLANK)

16

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 2003

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

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
Calendar 2004			
First Quarter	\$ 0.21	\$ 0.09	1,000,685
Second Quarter	\$ 0.19	\$ 0.09	479,857
Third Quarter	\$ 0.15	\$ 0.12	293,817
Fourth Quarter	\$ 0.15	\$ 0.09	308,098

On March 30, 2005, the last reported high bid price of the Common Stock was \$0.10 and the last reported low asking price was \$0.095. As of March 30, 2005, there were approximately 9,750 holders of record of our Common Stock. As of March 30, 2005, approximately 106 shareholders, many of who are also Common Stock shareholders, held our Series A Preferred Stock. Approximately 34 shareholders as of March 30, 2005 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.

Stock Issuances

In the first quarter of 2004, Enova entered into several stock purchase agreements to issue 16,250,000 shares of our common stock through a private placement offering at \$0.12 per share for a total cash purchase of \$1,950,000. The funds were received and the shares were issued in April 2004. 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. Enova continues to seek additional investment capital to fund its operations, development and expansion plans. Additionally, we received approximately \$783,000 in equity capital during the year as a result of our employees exercising incentive stock options, a majority of which expired in July 2004.

In September 2004, the Company issued 11,335,315 restricted 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 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 and Section 4(2) of the Securities Act of 1933, as amended, as the exemption from registration for the issuance of these shares.

During 2004, we issued, or accrued for issuance, an aggregate of 701,255 shares of common stock to the non-executive board directors in accordance with the September 1999 Board of Directors compensation package for outside directors, as amended to date. For each meeting attended in person, each outside director is entitled to receive \$2,000 in cash and \$4,000 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 entitled 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; and for each meeting of a Board committee attended in person, a committee member is entitled to receive \$1,000 in cash and \$1,000 of stock valued on the date of the meeting at the average of the closing ask and bid prices. All Directors are also reimbursed for out-of-pocket expenses incurred in connection with attending Board and committee meetings.

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

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

sale of such shares. As of December 31, 2004, an aggregate of 3,539,784 shares had been issued, or accrued for issuance, under the above compensation plan for Directors.

17

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, 2004, Enova had an accumulated deficit of approximately \$100,459,000 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, 2004, 2003, 2002, 2001 and 2000. The statement of income data and balance sheet data for and as of the end of the years ended December 31, 2004, 2003, 2002, 2001 and 2000 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.

As of and for the year ended December 31
(in thousands, except per share data),

	2004	2003	2002
NET SALES	\$ 2,554	\$ 4,310	\$ 4,4
COST OF SALES	2,239	3,304	3,7
GROSS MARGIN	315	1,006	6
OTHER COSTS AND EXPENSES			
Research and development	925	799	1,1
Selling, general and administrative	2,325	2,919	2,8
Interest and financing fees	255	234	1
Other expenses (income)	--	200	--
Equity in losses of equity method investee	192	40	--
Legal settlements	--	--	
Total other costs and expenses	3,697	4,192	4,2
LOSS FROM CONTINUING OPERATIONS	(3,382)	(3,186)	(3,5
GAIN ON DEBT RESTRUCTURING	--	--	--
NET LOSS	\$ (3,382)	\$ (3,186)	\$ (3,5

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

PER COMMON SHARE:

Loss from continuing operations	\$ (0.01)	\$ (0.01)	\$ (0.01)
Gain on debt restructuring	--	--	--
Net loss per common share	\$ (0.01)	\$ (0.01)	\$ (0.01)

WEIGHTED AVERAGE NUMBER
COMMON SHARES OUTSTANDING

	397,685	334,840	326,300
Total Assets	\$ 5,887	\$ 4,870	\$ 6,200
Long-term debt	\$ 3,335	\$ 3,347	\$ 3,300
Shareholder's equity (deficit)	\$ 103	\$ (864)	\$ 200

18

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 2004 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 events may vary significantly from those 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 believes it is a leading supplier of efficient, environmentally-friendly digital power components and systems products in conjunction with our associated engineering services. Our core competencies are focused on the development and commercialization of power management and conversion systems for mobile and stationary applications. Enova applies unique 'enabling technologies' in the areas of alternative energy propulsion systems

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

for light and heavy-duty vehicles as well as power conditioning and management systems for distributed generation systems. Our products can be found in a variety of OEM vehicles including those from Hyundai Motor Company and Ford Motor Company, trucks and buses for First Auto Works of China, Mack Truck, WrightBus of the U.K. and the U.S. Military, as well as digital power systems for EDO, Hydrogenics and UTC Fuel Cells, a division United Technologies.

Enova's product focus is digital power management and power conversion systems. Its software, firmware, and hardware manage and control the power that drives either a vehicle or stationary device(s). They convert the power into the appropriate forms required by the vehicle or device and manage the flow of this energy to optimize efficiency and provide protection for both the system and its users. Our products and systems are the enabling technologies for power systems.

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 Systems supplies these essential components. Enova drive systems are 'fuel-neutral,' meaning that they have the ability to utilize any type of fuel including diesel, liquid natural gas (LNG) or bio-diesel fuels. 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.

Our products are "production-engineered." This means they are designed so they can be commercially produced (i.e., all formats and files are designed with manufacturability in mind, from the start). For the automotive market, Enova designs its products to ISO 9000X manufacturing and quality standards. Enova's redundancy of systems and rigorous quality standards result in high 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 and confirms the value of the systems to OEM customers. Our engineering services focus on system integration support for product sales and custom product design.

The financial statements present the financial position of Enova Systems, Inc. as of December 31, 2004 and 2003 and the results of operations and cash flows for the year ended December 31, 2004, 2003 and 2002.

19

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

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

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:

- o Inventories are priced at the lower of cost or market using standard costs, which approximate actual costs on a first-in, first-out (FIFO) basis. We maintain a perpetual inventory system and continuously record the quantity on-hand and standard cost for each product, including purchased components, subassemblies and finished goods. We maintain the integrity of perpetual inventory records through periodic physical counts of quantities on hand. Finished goods are reported as inventories until the point of transfer to the customer. Generally, title transfer is documented in the terms of sale.

Standard costs are generally re-assessed at least annually and reflect achievable acquisition costs, generally the most recent vendor contract prices for purchased parts, currently obtainable assembly and test labor, and overhead for internally manufactured products. Manufacturing labor and overhead costs are attributed to individual product standard costs at a level planned to absorb spending at average utilization volumes.

We maintain an allowance against inventory for the potential future obsolescence or excess inventory that is based on our estimate of future sales. A substantial decrease in expected demand for our products, or decreases in our selling prices could lead to excess or overvalued inventories and could require us to substantially increase its allowance for excess inventory. If future customer demand or market conditions are less favorable than our projections, additional inventory write-downs may be required, and would be reflected in cost of sales in the period the revision is made.

- o Stock based compensation - we periodically issue common stock or stock options to employees and non-employees for services rendered. For common stock issuances, the cost of these services is recorded based upon the fair value of our common stock on the date of issuance. 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. We have 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. For issuances of stock options to employees and directors we measure compensation costs using the intrinsic value method, or APB Opinion No. 25. Stock options granted to non-employees are accounted for under the fair value method. The fair value of stock options granted is calculated using the Black Scholes option pricing model based on the weighted average assumptions as detailed in the notes to our financial statements.
- o Allowance for Doubtful Accounts - we maintain allowances for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. A considerable amount of judgment is required in assessing the ultimate realization of accounts receivable including the current credit-worthiness of each customer. If

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

the financial condition of the Company's customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required.

- o Contract Services Revenue and Cost Recognition - The Company is required to make judgments based on historical experience and future expectations, as to the reliability of shipments made to its customers. These judgments are required to assess the propriety of the recognition of revenue based on Staff Accounting Bulletin ("SAB") No. 101 and 104, "Revenue Recognition," and related guidance. The Company makes these assessments based on the following factors: i) customer-specific information, ii) return policies, and iii) historical experience for issues not yet identified. Under FAS Concepts No. 5, revenues are not recognized until earned.

20

The Company manufactures proprietary products and other products based on design specifications provided by its customers. Revenue from sales of products are generally recognized at the time title to the goods and the benefits and risks of ownership passes to the customer which is typically when products are shipped based on the terms of the customer purchase agreement. Revenue relating to long-term fixed price contracts is recognized using the percentage of completion method. Under the percentage of completion method, contract revenues and related costs are recognized based on the percentage that costs incurred to date bear to total estimated costs. Changes in job performance, estimated profitability and final contract settlements may result in revisions to cost and revenue, and are recognized in the period in which the revisions are determined. Contract costs include all direct materials, subcontract and labor costs and other indirect costs. General and administrative costs are charged to expense as incurred. At the time a loss on a contract becomes known, the entire amount of the estimated loss is accrued. The aggregate of costs incurred and estimated earnings recognized on uncompleted contracts in excess of related billings is shown as a current asset, and billings on uncompleted contracts in excess of costs incurred and estimated earnings is shown as a current liability.

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

The accompanying financial statements have been prepared on a going concern basis which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. Over the next few years, we expect to incur losses from operations as we continue to develop future products and market our current products. We will need to raise additional capital through debt or equity financings or collaborative arrangements with industry partners to continue its business operations.

Our ability to continue as a going concern is dependent on its success at obtaining additional capital sufficient to meet its obligations on a timely basis, and to ultimately attain profitability. Management is actively engaged in seeking to raise capital through product licensing, co-development programs, or public or private equity financing. We believe we have demonstrated the ability to raise the necessary funds for our growth and development activities. However, there is no assurance that we will raise capital sufficient to enable us to

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

continue its operations through the end of the fiscal year.

In the event we are unable to successfully obtain additional capital, it is unlikely that we will have sufficient cash flows and liquidity to finance our business operations as currently contemplated. Accordingly, in the event additional capital is not obtained, we will likely further downsize the organization, defer marketing programs, reduce general and administrative expenses and delay or reduce the scope of research and development projects until we are able to obtain sufficient financing to do so.

These factors could significantly limit our ability to continue as a going concern. The balance sheets do not include any adjustments relating to recoverability and classification of recorded asset amounts or the amounts of classification of liabilities that might be necessary should the Company be unable to continue in existence.

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.

We are 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. However, our current sources of funds are not sufficient to provide the working capital for material growth, and we will need to obtain additional debt or equity financing to support such growth. As of March 30, 2005, we continue to seek private accredited investors to purchase Enova common stock. We have been in discussions with several private institutions and investment banks to acquire such financings. As of March 30, 2005, there were no other firm commitments for such funds. Currently, we are seeking up to \$10 million in new investment funding.

Our operations during the year ended December 31, 2004 were financed by development contracts and product sales, as well as from working capital reserves.

During the year ended December 31, 2004, our operations required \$2,156,000 more in cash than was generated. Enova continues to increase marketing and development spending as well as administrative expenses necessary for expansion to meet customer demand. Accounts receivable decreased by \$281,000 from \$803,000, or approximately 35% from the balance at December 31, 2003 (net of write-offs). The decrease is due to a continued delay in acquiring new business in the third and fourth quarters of 2004. We are beginning to observe an increase in sales activity for our drive systems, components and development services which commenced in the fourth quarter of 2004, which we anticipate will

increase receivables in future quarters. Inventory decreased slightly by \$570,000 from \$1,606,000 or 36% from December 31, 2003 balances. The decrease was due to utilization of inventory stock for sales as well as write-offs for obsolete and slow-moving inventory. We charged off approximately \$113,000 of this reduction of our inventory relating to raw materials for the Ballard/Ford Th!nk city program which was terminated in 2003. This was inventory specific to

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

that program which we believed may be useable in other components, or would be purchased by third parties, but was not due to our increased focus on the heavy-duty hybrid markets. We also charged off an additional \$162,000 in obsolete or slow moving inventory during 2004.

Prepaid expenses increased by net \$226,000 during 2004 from the December 31, 2003 balance of \$78,000 or almost 300% due to two customer deposits from Tomoe Engineering totaling \$220,000 as an element of the Singapore Land Transit Authority program. These deposits are against component sales which are anticipated to be completed in late 2005 and early 2006.

Fixed assets increased by \$175,000 or 11%, before depreciation, for the year ended December 31, 2004 from the prior year balance of \$1,579,000 primarily due to the purchase of our heavy-duty diesel series-hybrid demonstration truck and a company vehicle which accounted for \$160,000 of the total. Additional purchases of computer equipment and software accounted for the balance.

Investments increased by \$808,000 during 2004, 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, 2004, the ITC generated a net loss of approximately \$481,000, resulting in a charge to Enova of \$192,000 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., we made an additional investment of \$1,000,000 in 2004 which was funded by HHI through a stock purchase in September 2004 as noted in Part II, Item 5 of this Form 10-K.

Other assets decreased by \$108,000 during 2004 from \$404,000 in 2003 as we continued to amortize the asset relating to the Ford Value Participation Agreement. Intellectual property assets, including patents and trademarks remained unchanged at \$92,000 at December 31, 2004.

Accounts payable decreased in 2004 by over 88% from \$768,000 at December 31, 2003 to \$66,000 at December 31, 2004. We paid down the remaining HHI payables as well as other payables during the year from both cash flows from operations, invested capital and our bank line of credit. Our line of credit balance increased to \$229,000 at December 31, 2004 from \$120,000 at December 31, 2003 as we utilized such to reduce other liabilities with higher interest rates. Deferred revenue increased to \$392,000 during 2004 in conjunction with the Tomoe Singapore project. These revenues will be recognized throughout 2005 and early 2006 as we progress on the development and production phases of that contract. Accrued salaries and wages increased by a net of \$74,000 including monies payable to Carl Perry, our former CEO, in conjunction with his agreement with us.

Accrued interest increased by \$256,000 for the year ended December 31, 2004, an increase of 23%. The increase was due to interest on the Note due the Credit Managers Association of California for \$3.2 million per the terms of the Note as well as the Schulz note payable. Other accrued expenses and payables decreased by \$85,000 during 2004 from \$98,000 at December 31, 2003 as we paid off the liabilities comprising these amounts during the year.

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, 2004 and 2003

Net sales of \$2,554,000 for the twelve months ended December 31, 2004

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

decreased \$1,756,000 or 41% from \$4,310,000 during the same period in 2003. The decrease in sales was attributable primarily to those factors listed elsewhere in this Form 10-K. During 2004, we experienced a slowdown in sales due to a number of internal and external developments including personnel changes, and customer delays in ordering caused by continued evaluation of our systems or awaiting orders for their products.

Our sources of revenue for 2004 came relatively equally from product sales and development contracts. Product sales as a percentage of total revenues of 57% in 2004 were consistent with the 2003 product sales to total revenues percentage of 56%. Sales of our HybridPower 120kW drive systems accounted for a majority of our product sales in 2004. We believe this trend will continue over the next several years. However we continue to seek out and contract for new development programs with both our current partners such as Ford, Mack/Volvo, FAW, Tomoe, 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

22

contracts for the U.S. Government and private companies are charged to cost of sales for this contract revenue. During 2004, our trend of establishing new customers and strengthening current alliances with customers, such as Tomoe and MTrans in the heavy-duty drive system market continued. Our new customers continue to 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 similar costs to be incurred with respect to new customers as we gain additional market share. Customers who have been using our products over one year do not incur these same types of initial costs. Cost of sales for the year ended December 31, 2004 decreased \$1,065,000, or 32%, from \$3,304,000 for the year ended December 31, 2003. This decrease is primarily attributable to the decrease in sales for the year, although we are experiencing a reduction in integration support costs. We anticipate there may be an increase in cost of sales for products in 2005 due to foreign exchange rate fluctuations of the U.S. dollar versus those currencies of our primary manufacturers. We anticipate this to be offset by a reduction in costs associated with manufacturing these products due to increasing purchases, improving our gross margins. Cost of sales, as a percentage of gross sales were higher than in prior years due to the aforementioned write downs of inventory for the Ford Th!nk program and due to obsolescence. Additionally, during 2004, we modified the method to account for cost of sales to a more accurate approach which includes more detailed analysis of costs associated with the various projects and components we sell.

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 2004 to \$925,000 from \$799,000 for the same period in 2003, an increase of \$126,000, or 16%. During 2004, externally funded research and development from partners such as FAW, Mack/Volvo, Hyundai, and the U.S. Government offset certain costs of development for new products in the areas of mobile and stationary power management and conversion, thereby reducing the need for internal funding. Programs included our new parallel hybrid drive systems, our diesel generation engine/motor system for our heavy-duty drive systems, and upgrades and improvements to our current power conversion and management components. Additionally, we continued to

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

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 decreased in 2004 from 2003 levels due to lower consulting, legal, and accounting costs and expenses as well as continued efforts to maintain a reduction in overall non-revenue generating expenditures. For the year ended December 31, 2004, these expenses totaled \$2,325,000 from \$2,919,000 for the similar period in 2003. This represents a \$594,000 decrease, or 20%, in these expenses. We are continually reviewing operations to lower overhead costs and increase operational efficiencies

For the year ended December 31, 2004, interest and financing fees increased by \$21,000 to \$255,000, an increase of 8%. The increase was due solely to an increase in 2004 in the interest rate on the Note due the Credit Managers Association of California for \$3.2 million per the terms of the Note.

In 2004, we charged off approximately \$275,000 in obsolete and slow moving inventory from our books. Approximately 40% of this consisted of raw materials associated with the Ford Th!nk city program which was terminated in 2002. We do not anticipate further material write downs of our inventory.

Our \$3,382,000 net loss for the year ended December 31, 2004 is \$196,000 more than the loss incurred in 2003 of \$3,186,000, an increase of 6%. The increase is due primarily to write-offs of obsolete and slow-moving inventory during the year increased internal development for new products and costs associated with the annual meeting and other regulatory compliance. Management will continue to seek operational efficiencies and methods to reduce manufacturing and overhead costs as well as increase revenues to enhance our goal of profitability.

During the fourth quarter of fiscal 2004, we:

- o wrote-down inventory by a net of \$275,000 for obsolete and slow-moving inventory. We charged off approximately \$113,000 of this reduction of our inventory relating to raw materials for the Ballard/Ford Th!nk city program which was terminated in 2002. This was inventory specific to that program which we believed may be useable in other components, or would be purchased by third parties, but was not due to our increased focus on the heavy-duty hybrid markets. We also charged off an additional \$162,000 in obsolete or slow moving inventory during 2004. This resulted in an increase of cost of sales by \$275,000 for the year.
- o allocated certain expenses to cost of sales, which had been charged to general and administrative expense, based on our improved method of apportioning such costs. This resulted in an increase in cost of sales of approximately \$147,000 in the fourth quarter, a portion of which may have been attributable to prior quarters in 2004 but none that we believe would have a material impact on the presentation of those quarters.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

The above two adjustments (i) increased cost of sales by \$422,000 in the fourth quarter, (ii) reduced gross profit by \$422,000, (iii) increased loss from operations by \$275,000 and (iv) reduced net loss by \$275,000.

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 HybridPower 120kW drive systems accounted for a majority of our product sales in 2003.

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. Cost of sales for the year ended December 31, 2003 decreased \$480,000, or 12%, from \$3,784,000 for the year ended December 31, 2002. This decrease was 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.

Research and development expense decreased in 2003 to \$799,000 from \$1,152,000 for the same period in 2002, a decrease of \$353,000, 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 continued to enhance our technologies to be more universally adaptable to the requirements of our current and prospective customers.

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 \$513,000 in the year ended December 31, 2003, to \$2,324,000 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.

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.

Our \$3,186,000 net loss for the year ended December 31, 2003 is \$412,000 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 have been \$1,207,000 less, or \$2,391,000 for the year ended December 31, 2003, over 34% lower than that incurred in 2002.

Hyundai-Enova Innovative Technology Center

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

In September 2003, Hyundai Heavy Industries, Co. Ltd. (HHI) and we 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. Of this amount, we 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. In September 2004, HHI invested an additional \$1,500,000 in Enova and \$1,500,000 in the HEITC under the same terms as the initial investment. In this second tranche, HHI purchased 11,335,315 restricted shares of common stock in accordance with the Joint Venture Agreement increasing HHI's ownership to 8.0% in Enova. 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.

Recent accounting pronouncements

In November 2004, the FASB issued SFAS No. 151, "Inventory Costs". SFAS No. 151 amends the accounting for abnormal amounts of idle facility expense, freight, handling costs, and wasted material (spoilage) under the guidance in ARB No. 43, Chapter 4, "Inventory Pricing". Paragraph 5 of ARB No. 43, Chapter 4, previously stated that ". . . under some circumstances, items such as idle facility expense, excessive spoilage, double freight, and rehandling costs may be so abnormal as to require treatment as current period charges. . . ." This

24

statement requires that those items be recognized as current-period charges regardless of whether they meet the criterion of "so abnormal." In addition, this statement requires that allocation of fixed production overheads to the costs of conversion be based on the normal capacity of the production facilities. This statement is effective for inventory costs incurred during fiscal years beginning after June 15, 2005. Management does not expect adoption of SFAS No. 151 to have a material impact, if any, on our financial position or results of operations.

In December 2004, the FASB issued SFAS No. 152, "Accounting for Real Estate Time-Sharing Transactions". The FASB issued this statement as a result of the guidance provided in AICPA Statement of Position (SOP) 04-2, "Accounting for Real Estate Time-Sharing Transactions". SOP 04-2 applies to all real estate time-sharing transactions. Among other items, the SOP provides guidance on the recording of credit losses and the treatment of selling costs, but does not change the revenue recognition guidance in SFAS No. 66, "Accounting for Sales of Real Estate", for real estate time-sharing transactions. SFAS No. 152 amends Statement No. 66 to reference the guidance provided in SOP 04-2. SFAS No. 152 also amends SFAS No. 67, "Accounting for Costs and Initial Rental Operations of Real Estate Projects", to state that SOP 04-2 provides the relevant guidance on accounting for incidental operations and costs related to the sale of real estate time-sharing transactions. SFAS No. 152 is effective for years beginning after June 15, 2005, with restatements of previously issued financial statements prohibited. Management does not expect adoption of SFAS No. 152 to have a material impact, if any, on our financial position or results of operations.

In December 2004, the FASB issued SFAS No. 153, "Exchanges of Nonmonetary Assets," an amendment to Opinion No. 29, "Accounting for Nonmonetary Transactions". SFAS No. 153 eliminates certain differences in the guidance in Opinion No. 29 as compared to the guidance contained in standards issued by the International Accounting Standards Board. The amendment to Opinion No. 29 eliminates the fair value exception for nonmonetary exchanges of similar

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

productive assets and replaces it with a general exception for exchanges of nonmonetary assets that do not have commercial substance. Such an exchange has commercial substance if the future cash flows of the entity are expected to change significantly as a result of the exchange. SFAS No. 153 is effective for nonmonetary asset exchanges occurring in periods beginning after June 15, 2005. Earlier application is permitted for nonmonetary asset exchanges occurring in periods beginning after December 16, 2004. Management does not expect adoption of SFAS No. 153 to have a material impact, if any, on our financial position or results of operations.

In December 2004, the FASB issued SFAS No. 123(R), "Share-Based Payment". SFAS 123(R) amends SFAS No. 123, "Accounting for Stock-Based Compensation", and APB Opinion No. 25, "Accounting for Stock Issued to Employees". SFAS No.123(R) requires that the cost of share-based payment transactions (including those with employees and non-employees) be recognized in the financial statements. SFAS No. 123(R) applies to all share-based payment transactions in which an entity acquires goods or services by issuing (or offering to issue) its shares, share options, or other equity instruments (except for those held by an ESOP) or by incurring liabilities (1) in amounts based (even in part) on the price of our shares or other equity instruments, or (2) that require (or may require) settlement by the issuance of a company's shares or other equity instruments. This statement is effective (1) for public companies qualifying as SEC small business issuers, as of the first interim period or fiscal year beginning after December 15, 2005, or (2) for all other public companies, as of the first interim period or fiscal year beginning after June 15, 2005, or (3) for all nonpublic entities, as of the first fiscal year beginning after December 15, 2005. Management is currently assessing the impact of this statement on its financial position and results of operations.

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 \$100,459,000 at December 31, 2004. 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, 2004, 2003 and 2002, we had net losses of \$3,382,000, \$3,186,000 and \$3,598,000, respectively, on sales of \$2,554,000, \$4,310,000, and \$4,455,000, respectively.

Our independent auditors' opinion on our audited financial statements includes a going concern qualification.

Our independent auditors have included an explanatory paragraph in their audit report issued in connection with our financial statements which states that our recurring operating losses raise substantial doubt about our ability to continue as a going concern. Our financial statements do not include any adjustments to the amounts and classification of assets and liabilities that may be necessary should we be unable to continue as a going concern. Our ability to continue as a going concern is dependent upon our ability to generate profitable operations in the future and/or to obtain the necessary financing to meet our obligations and repay our liabilities arising from normal business operations when they come due. The outcome of these matters cannot be predicated with any certainty at

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

this time.

The Company's ability to continue as a going concern is dependent on its success at obtaining additional capital sufficient to meet its obligations on a timely basis, and to ultimately attain profitability. Management is actively engaged in seeking to raise capital through product licensing, co-promotional arrangements, or public or private equity financing. The Company believes it has demonstrated the ability to raise the necessary funds for the Company's growth and development activities. However, there is no assurance that the Company will raise capital sufficient to enable the Company to continue its operations through the end of the fiscal year.

In the event the Company is unable to successfully obtain additional capital, it is unlikely that the Company will have sufficient cash flows and liquidity to finance its business operations as currently contemplated. Accordingly, in the event additional capital is not obtained, the Company will likely further downsize the organization, defer marketing programs, reduce general and administrative expenses and delay or reduce the scope of research and development projects until it is able to obtain sufficient financing to do so.

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.

25

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

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

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 2004, 2003 and 2002, we spent collectively in excess of \$2,850,000 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 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

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

operations. In addition, a 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.

26

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, 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 Edwin Riddell, our Chief Executive Officer, Larry Lombard, our 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.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

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.

None.

Item 9A. Controls and Procedures

We conducted an evaluation of the effectiveness of the design and operation of our "disclosure controls and procedures" (Disclosure Controls) as of the end of the period covered by this Annual Report. The controls evaluation was done under the supervision and with the participation of management, including our Chief Executive Officer (CEO) and Chief Financial Officer (CFO).

Attached as exhibits to this Annual Report are certifications of the CEO and the CFO, which are required in accord with Rule 13a-15(e) of the Exchange Act. This Controls and Procedures section includes the information concerning the controls evaluation referred to in the certifications and it should be read in conjunction with the certifications for a more complete understanding of the topics presented.

27

Definition of Disclosure Controls

Disclosure Controls are controls and procedures designed to reasonably assure that information required to be disclosed in our reports filed under the Exchange Act, such as this Annual Report, is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure Controls are also designed to reasonably assure that such information is accumulated and communicated to our management, including the CEO and CFO, as appropriate to allow timely decisions regarding required disclosure. Our Disclosure Controls include components of our internal control over financial reporting, which consists of control processes designed to provide reasonable assurance regarding the reliability of our financial reporting and the preparation of financial statements in accordance with US generally accepted accounting principles. To the extent that components of our internal control over financial reporting are included within our Disclosure Controls, they are included in the scope of our periodic controls evaluation.

Limitations on the Effectiveness of Controls

Our management, including the CEO and CFO, does not expect that our Disclosure Controls or our internal control over financial reporting will prevent all error and all fraud. A control system, no matter how well designed and operated, can provide only reasonable, not absolute, assurance that the control system's objectives will be met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of the inherent limitations in all control systems, no evaluation of controls can provide

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

absolute assurance that all control issues and instances of fraud, if any, within the Company have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of a simple error or mistake. Controls can also be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the controls. The design of any system of controls is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may become inadequate because of changes in conditions or deterioration in the degree of compliance with policies or procedures. Because of the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

Scope of the Controls Evaluation

The evaluation of our Disclosure Controls included a review of the controls' objectives and design, our implementation of the controls and the effect of the controls on the information generated for use in this Annual Report. In the course of the controls evaluation, we sought to identify data errors, controls problems or acts of fraud and confirm that appropriate corrective action, including process improvements, were being undertaken. This type of evaluation is performed on a quarterly basis so that the conclusions of management, including the CEO and CFO, concerning controls effectiveness can be reported in our Quarterly Reports on Form 10-Q and in our Annual Report on Form 10-K. Many of the components of our Disclosure Controls are also evaluated on an ongoing basis by personnel in our Finance organization, as well as our independent auditors who evaluate them in connection with determining their auditing procedures related to their report on our annual financial statements and not to provide assurance on our controls. The overall goals of these various evaluation activities are to monitor our Disclosure Controls, and to modify them as necessary.

Among other matters, we also considered whether our evaluation identified any "significant deficiencies" or "material weaknesses" in our internal control over financial reporting, and whether the Company had identified any acts of fraud involving personnel with a significant role in our internal control over financial reporting. This information was important both for the controls evaluation generally, and because item 5 in the certifications of the CEO and CFO require that the CEO and CFO disclose that information to our Board's Audit Committee and to our independent auditors. In the professional auditing literature, "significant deficiencies" are referred to as "reportable conditions," which are deficiencies in the design or operation of controls that could adversely affect our ability to record, process, summarize and report financial data in the financial statements. Auditing literature defines "material weakness" as a particularly serious reportable condition where the internal control does not reduce to a relatively low level the risk that misstatements caused by error or fraud may occur in amounts that would be material in relation to the financial statements and the risk that such misstatements would not be detected within a timely period by employees in the normal course of performing their assigned functions.

Conclusions

Based upon the controls evaluation, our CEO and CFO have concluded that, subject to the limitations noted above, as of the end of the period covered by this Annual Report, our Disclosure Controls were effective to provide reasonable assurance that material information relating to the Company is made known to management, including the CEO and CFO.

PART III

Item 10. Directors and Executive Officers of the Registrant

Our directors and executive officers hold office until the first meeting of the Board of Directors following the annual meeting of stockholders and until their successors are duly chosen and qualified, or until they resign or are removed from office in accordance with our By-laws. The following table sets forth certain information with respect to the current Directors and executive officers of Enova:

Name ----	Age ---	Position -----
Anthony N. Rawlinson	49	Chairman of the Board
Edwin O. Riddell	62	Chief Executive Officer, President and Director
Carl D. Perry	72	Vice chairman
Bjorn Ahlstrom (1)	70	Director
Dr. Malcolm Currie (1)	77	Director
John J. Micek, III (2) (3)	52	Director
Donald H. Dreyer (2)	67	Director
John Wallace	56	Director
Larry B. Lombard	44	Chief Financial Officer
Edward M. Moore	43	Chief Operating Officer

(1) Member of the Compensation Committee.

(2) Member of the Audit Committee.

Anthony Rawlinson, Chairman of the Board. Mr. Rawlinson was appointed Chairman of the Board in July 1999. He is 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 from 1996 to the present. Mr. Rawlinson is also a director of Calvalley Petroleum, a Canadian listed public company with Yemen oil interests and chairman of Cardsoft Inc., a privately-held company which supplies software for a secure Java environment that meets financial standards.

Edwin O. Riddell, President, CEO and Director. Mr. Riddell was appointed President and Chief Executive Officer on August 20, 2004. Mr. Riddell has been a Director of the Company since 1995. Since 1999, Mr. Riddell has been President of CR Transportation Services, a consultant to the electric vehicle industry. From 1992 to 1999, Mr. Riddell was Product Line Manager of the Transportation Business Unit at the Electric Power Research Institute, and from 1985 until 1992, 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, General Manager and COO of Lift-U, Inc., the leading manufacturer of handicapped wheelchair lifts for the transit

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

industry. Mr. Riddell has also worked with Ford, Chrysler, and General Motors in the area of auto design, 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.

Carl D. Perry, Director, Vice Chairman of the Board. Mr. Perry served as Chief Executive Officer, President and a Director of the Company until August 2004 when he stepped down from his positions to accept the position of vice chairman of the Board. Mr. Perry served as a Director and as an Executive Vice President of the Company from 1993 until 1997. In 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 Rawlinson to become Chairman.

Bjorn Ahlstrom, Director. Mr. Ahlstrom was elected to the Board of Directors in June 2004. Mr. Ahlstrom currently is a consultant in the heavy-duty vehicle industry. Mr. Ahlstrom retired as Chairman of Volvo Group North America, Inc. on April 1, 2004. Prior to that, Mr. Ahlstrom was President and Chief Executive Officer of Volvo North America Corporation from 1971 until 1994. During this term, Volvo North America Corporation owned and operated Volvo's businesses in the United States and Canada. Under Mr. Ahlstrom's leadership,

29

VNAC grew from a \$50 million car importer in the early 1970s to a \$6 billion company with manufacturing and marketing operations for cars, trucks, marine engines, and financial services. In 1981, Mr. Ahlstrom received the Royal Order of the North Star from King Carl XVI Gustaf of Sweden. The United States Government awarded him the Medal of Peace and Commerce in 1983. He received the Ellis Island Medal of Honor in 1990. Mr. Ahlstrom has been awarded honorary Doctor of Law degree from St John's University, NY, and Ramapo College of New Jersey.

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.

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. From 2002 to the present, he has been working independently as a consultant in the alternative energy sector. 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

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

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 has been Managing Director of Silicon Prairie Partners, LP from August 1998 to the present. From June 1997 to August 1998, Mr. Micek was COO of Pelion Systems, Inc. Mr. Micek served as our Vice President, General Counsel and Secretary from March 1994 to March 1997. 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, Chief Financial Officer. Mr. Lombard was appointed Chief Financial Officer in November 2004. He was appointed as appointed Chief Financial Officer in November 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 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.

Audit Committee

We have a standing Audit Committee established in accordance with section 3(a)(58)(A) of the Securities Exchange Act of 1934, as amended, which is composed of Donald H. Dreyer and John J. Micek, III. The Audit Committee has adopted an Audit Committee Charter, which is on file at our corporate headquarters in Torrance California.

Audit Committee Financial Expert

As required by the Sarbanes-Oxley Act of 2002, our Board of Directors has determined that one member of our Audit Committee, John J. Micek

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

III, is qualified to be an "audit committee financial expert" within the meaning of SEC regulations. The Board reached its conclusion as to the qualifications of Mr. Micek based on his education and experience in analyzing financial statements of a variety of companies.

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.

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, failed to file on a timely basis one Form 4, each of which Form 4 reported one transaction, namely the issuance of shares of Common Stock in partial payment of directors' fees for August 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, Chief Financial Officer
19850 S. Magellan Drive
Torrance, CA 90502

31

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, 2004, 2003 and 2002 (collectively, the "Named Executive Officers"). Mr. Carl D. Perry was the sole executive officer of Enova whose salary currently exceeded \$100,000 prior to December 31, 2003.

Name and Principal Position

SUMMARY COMPENSATION TABLE ANNUAL COMPENSATION

Year	Salary	Bonus
------	--------	-------

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Edwin O. Riddell (1) Chief Executive Officer and President	2004	\$114,000	--
	2003	--	--
	2002	--	--
Larry B. Lombard (2) Chief Financial Officer	2004	\$127,000	--
	2003	--	--
	2002	--	--
Edward M. Moore (3) Chief Operating Officer	2004	\$147,000	\$30,000 (earned in 2004)
	2003	--	--
	2002	--	--
Carl D. Perry (4) Former Chief Executive Officer and President	2004	\$195,000	--
	2003	\$140,000	--
	2002	\$150,000	\$30,000 (earned in 2004)

32

Option/SAR Grants

The following grants of stock options or stock appreciation rights ("SARs") were made during 2004 to the Named Executive Officers.

Option Grants During Fiscal 2004

Name of Individual and Position -----	Number of Securities Underlying Options Granted -----	Percentage of Total Options Granted to Employee in Fiscal 2004 -----	Exercise Price Per Share -----	Expiration Date ----
Larry B. Lombard, Chief Financial Officer	1,000,000	50.0%	\$0.115	1-25-06
Edward M. Moore, Chief Operating Officer	1,000,000	50.0%	\$0.115	1-25-06

Option Exercises and Option Values

The following table sets forth information concerning option exercises during 2004, and the aggregate value of unexercised options as of December 31, 2004, held by each of the Named Executive Officers:

Aggregated Option/SAR Exercises in 2004
and Option Values at December 31, 2004

Number of Securities

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Name	Aggregate Option Exercises in 2004		Underlying Unexercised Options at December 31, 2004 (#)		Exercisable
	Shares Acquired on Exercise (#)	Value Realized (\$)	Exercisable	Unexercisable	
Edwin O. Riddell	--	--	--	--	
Larry B. Lombard	--	--	2,000,000	--	
Edward M. Moore	1,133,234	\$110,800	2,000,000	--	

Compensation of Directors

During 2004, we issued, or accrued for issuance, an aggregate of 701,255 shares of common stock to the non-executive board members in accordance with the September 1999 Board of Directors compensation package for outside directors, as amended to date. For each meeting attended in person, each outside director is entitled to receive \$2,000 in cash and \$4,000 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 entitled 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; and for each meeting of a Board committee attended in person, a committee member is entitled to receive \$1,000 in cash and \$1,000 of stock valued on the date of the meeting at the average of the closing ask and bid prices. All Directors are also reimbursed for out-of-pocket expenses incurred in connection with attending Board and committee meetings.

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. As of December 31, 2004, an aggregate of 3,539,784 shares had been issued, or accrued for issuance, under the above compensation plan for Directors.

33

Edwin O. Riddell

The Company entered into a consulting agreement with Edwin Riddell, doing business as CR Transportation Services, wherein the Company compensates CR Transportation at the rate of \$4,000 per week plus reasonable expenses for consulting services rendered. Upon Mr. Riddell becoming an employee of Enova in January 2005, this agreement was terminated. Mr. Riddell is not compensated per this agreement when acting in the capacity of a director of the Company. During 2004, the Company paid Mr. Riddell \$99,000 in cash for consulting services and expenses and \$15,000 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

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

above. During 2004, the Company paid Mr. Dreyer \$2,000 in cash for consulting services and expenses and \$29,000 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, 2004. The Compensation Committee currently consists of Mr. Bjorn Ahlstrom and Dr. Malcolm Currie, neither of who have been officers of the Company. Prior to August 2004, Mr. Edwin Riddell was a member of the Compensation Committee. Mr. Riddell resigned from the committee upon his appointment as Chief Executive Officer. The Compensation Committee's functions are to establish and apply our compensation policies with respect to our Executive Officers, and to administer our stock option plans.

REMAINDER OF PAGE INTENTIONALLY LEFT BLANK

34

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 our Common Stock as of March 30, 2005, by (i) each shareholder known to the Company to own beneficially more than 5% of our Common Stock; (ii) each of our 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 Beneficially Ow -----
Jagen, Pty., Ltd. 9 Oxford Street, South Ybarra 3141 Melbourne, Victoria Australia	145,000,000	33.53%
Hyundai Heavy Industries, Co. 1 Cheona-Dong, Dong-Ku Ulsan, Korea	34,412,238	7.96%
Citibank N.A 111 Wall Street, 8th Floor New York, NY 10043	29,405,754	6.80%
Anthony N. Rawlinson c/o Enova Systems, Inc. 19850 South Magellan Drive Torrance, CA 90502	25,545,001	5.91%
Edwin O. Riddell c/o Enova Systems, Inc. 19850 South Magellan Drive	1,712,119(4)	*

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Torrance, CA 90502

Carl D. Perry	10,045,045	2.32%
John J. Micek III	1,644,267 (5)	*
Bjorn Ahlstrom	114,242	*
Dr. Malcolm Currie	679,369	*
Donald H. Dreyer	620,287	*
John R. Wallace	200,433	*
Delphi Delco Electronics	1,278,720 (6)	*
Jean Schulz	1,329,111 (7)	*
Larry B. Lombard	2,800,000 (8)	*
Edward M. Moore	2,030,000 (9)	*
All directors and executive officers as a group (10 persons)	45,390,763 (10)	10.50%

Equity Compensation Plan Information

The following table provides information regarding our equity compensation plans as of December 31, 2004:

Equity Compensation Plan Information

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)
-----	---	---
Equity compensation plans approved by security holders	9,984,167	\$0.14
Equity compensation plans not approved by security holders	--	--
Total	9,984,167	\$0.14

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 and in 2004, 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 20,000,000 shares, bringing the total number of shares issuable under the 1996 Plan to 65,000,000. The share increases 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, 2004, the Company had reserved 41,844,000 common shares for issuance under the 1996 Plan, as amended. Options to purchase 2,000,000 shares of Enova common stock were granted to employees in 2004.

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, 2004.

During 2004, Hyundai Heavy Industries, Co. (HHI) purchased 11,335,315 shares increasing their ownership in Enova Systems, Inc. to 7.96%. Additionally, during 2004, we purchased from HHI approximately \$246,000 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, 2004, our outstanding payables balance due HHI was approximately \$2,000.

The Company entered into a consulting agreement with Edwin Riddell, doing business as CR Transportation Services, wherein the Company compensates CR Transportation at the rate of \$4,000 per week plus reasonable expenses for consulting services rendered. Upon Mr. Riddell becoming an employee of Enova in January 2005, this agreement was terminated. Mr. Riddell is not compensated per this agreement when acting in the capacity of a director of the Company. During 2004, the Company paid Mr. Riddell \$99,000 in cash for consulting services and expenses and \$15,000 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).

Pursuant to a written agreement approved by the Board of Directors and its Audit Committee, a finder's fee of \$92,500 was accrued to be paid, through the issuance of restricted shares of common stock in Enova, totaling 608,553 shares at a price of \$0.15 per share, in conjunction with a private placement funding in the first quarter of 2004 to The Global Value Investment Portfolio Management Pte Ltd, a Singapore Company which is substantially owned by two affiliated parties: Anthony Rawlinson, Chairman of the Board of our Company and Borl partnership, owned by Boris Liberman Family Trusts, which is also

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

affiliated with Jagen Pty Ltd., a large affiliate shareholder in Enova. Said shares were subsequently issued in the first quarter of 2005.

Item 14. Principal Accountant Fees and Services

Singer Lewak Greenbaum & Goldstein LLP were engaged on November 21, 2003 to audit our financial statements for the fiscal year ended December 31, 2004 and 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 during the last two fiscal years for professional services rendered by Singer Lewak Greenbaum & Goldstein LLP for the audit of Enova's financial statements for the fiscal year ended December 31, 2004 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 \$73,970 for fiscal 2004 and \$7,500 for fiscal 2003.

The aggregate fees billed during the last two fiscal years for professional services rendered by Moss Adams, LLP for its review of financial statements included in Enova's Form 10-Q-s and other services that are normally provided by an accountant in connection with statutory and regulatory filings or engagements during such fiscal years were \$31,050 for fiscal 2003 and \$87,210 for fiscal 2002.

37

Audit-Related Fees

Singer Lewak Greenbaum & Goldstein LLP 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, 2004.

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, 2004.

Tax Fees

Singer Lewak Greenbaum & Goldstein LLP did not perform for Enova any tax compliance, tax advice and tax planning services in fiscal 2003 or fiscal 2004.

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

All Other Fees

Neither Singer Lewak Greenbaum & Goldstein LLP nor Moss Adams, LLP performed any other services for fees other than audit fees in fiscal 2004 or 2003.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

PART IV

Item 15. Exhibits and Financial Statement Schedules

(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

On February 2, 2005, Registrant filed a Form 8-K, with date of earliest event reported of September 20, 2004, reporting under items 1 and 3.

(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

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

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).
- 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 Registrant's 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

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

(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).

39

- 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).
- 10.19 Form of Stock Purchase Agreement dated March 30, 2004 between Registrant and various investors. (filed as Exhibit 10.19 to the Registrant's Quarterly Report on Form 10-Q for Three Months ended March 31, 2004 and incorporated herein by reference).
- 10.20 Form of Registration Rights Agreement dated March 30, 2004 between Registrant and various investors. (filed as Exhibit 10.20 to the Registrant's Quarterly Report on Form 10-Q for Three Months ended March 31, 2004 and incorporated herein by reference).
- 10.21 Form of Finder's Fee agreement dated April 1, 2004 between Registrant and The Global Value Investment Portfolio Management Pte Ltd as disclosed in our Form 10-Q for the quarter ended March 31, 2004. (filed as Exhibit 10.21 to the Registrant's Quarterly Report on Form 10-Q for Six Months ended June 30, 2004 and incorporated herein by reference).
- 23.1* Consent of Singer Lewak Greenbaum & Goldstein LLP, Independent Registered Public Accounting Firm
- 23.2* Consent of Moss Adams, LLP, Independent Registered Public Accounting Firm
- 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

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

31.2* Certification of 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.

40

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/ Larry B. Lombard

Larry B. Lombard, Chief Financial Officer

Dated: March 31, 2005

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Larry B. Lombard, 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.

Table with 3 columns: Signature, Title, Date. Rows include Larry B. Lombard (Chief Financial Officer), Edwin O. Riddell (Chief Executive Officer and Director), and Anthony N. Rawlinson (Chairman).

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Anthony N. Rawlinson

/s/ Carl D. Perry	Vice Chairman	March 31, 200

Carl D. Perry		
/s/ Malcolm Currie	Director	March 31, 200

Malcolm Currie		
/s/ Bjorn Ahlstrom	Director	March 31, 200

Bjorn Ahlstrom		
/s/ John J. Micek, III	Director	March 31, 200

John J. Micek, III		
/s/ Donald H. Dreyer	Director	March 31, 200

Donald H. Dreyer		
/s/ John R. Wallace	Director	March 31, 200

John R. Wallace		

ENOVA SYSTEMS, INC.
 FINANCIAL STATEMENTS
 FOR THE YEARS ENDED
 DECEMBER 31, 2004, 2003, AND 2002

ENOVA SYSTEMS, INC.
 CONTENTS
 December 31, 2004

	Page
REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM	F1 - F2
FINANCIAL STATEMENTS	
Balance Sheets	F3 - F5
Statements of Operations	F6
Statements of Stockholders' Equity (Deficit)	F7 - F8

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Statements of Cash Flows	F9 - F10
Notes to Financial Statements	F11 - F28
SUPPLEMENTAL INFORMATION	
Report of Independent Registered Public Accounting Firm on Financial Statement Schedule	F30
Valuation and Qualifying Accounts - Schedule II	F31

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders
Enova Systems, Inc.
Torrance, California

We have audited the balance sheets of Enova Systems, Inc. as of December 31, 2004 and 2003, and the related statements of operations, stockholders' equity/(deficit), and cash flows for each of the two years in the period ended December 31, 2004. 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 the standards of the Public Company Accounting Oversight Board (United States). 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 audits provided 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, 2004 and 2003, and the results of its operations and its cash flows for each of the two years in the period ended December 31, 2004, in conformity with accounting principles generally accepted in the United States of America.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2 to the financial statements, the Company has suffered recurring losses from operations and negative cash flows from operations. These factors, among others, raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 2. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

SINGER LEWAK GREENBAUM & GOLDSTEIN LLP

Los Angeles, California
March 10, 2005

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

1

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

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

We have audited the statements of operations, stockholders' equity, and cash flows of Enova Systems, Inc., for the year ended December 31, 2002. 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 the standards of the Public Company Accounting Oversight Board (United States). 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 our audit provides a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the results of Enova Systems, Inc.'s, operations and cash flows for the year ended December 31, 2002, 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,

	2004	2003
	-----	-----
ASSETS		
Current assets		
Cash and cash equivalents	\$1,575,000	\$ 530,000
Accounts receivable	522,000	803,000
Inventories and supplies	1,036,000	1,606,000
Note receivable - related party	--	8,000
Prepaid expenses and other current assets	304,000	78,000
	-----	-----
Total Current Assets	3,437,000	3,025,000
Property and equipment, net	387,000	481,000

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Equity method investment	1,768,000	960,000
Other assets	296,000	404,000
	-----	-----
Total assets	\$5,888,000	\$4,870,000
	=====	=====

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

3

ENOVA SYSTEMS, INC.
BALANCE SHEETS
December 31,

LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)

	2004	2003
	-----	-----
Current liabilities		
Accounts payable	\$ 66,000	\$ 768,000
Deferred revenues	392,000	--
Line of credit	229,000	120,000
Accrued payroll and related expense	194,000	120,000
Other accrued expenses	13,000	98,000
Current portion of notes payable	166,000	131,000
Current portion of capital lease obligations	6,000	23,000
	-----	-----
Total current liabilities	1,066,000	1,260,000
Accrued interest payable	1,378,000	1,122,000
Capital lease obligations, net of current portion	--	5,000
Notes payable, net of current portion	3,341,000	3,347,000
	-----	-----
Total liabilities	\$5,785,000	\$5,734,000
	-----	-----

Commitments and contingencies

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

4

ENOVA SYSTEMS, INC.
BALANCE SHEETS
December 31,

LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT) (continued)

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

	2004	2003
	-----	-----
Stockholders' equity (deficit)		
Series A convertible preferred stock - no par value		
30,000,000 shares authorized		
2,748,000 and 2,820,000 shares issued and outstanding		
Liquidating preference at \$0.60 per share, aggregating \$1,648,507 and \$1,692,000	\$ 1,774,000	\$ 1,830,000
Series B convertible preferred stock - no par value		
5,000,000 shares authorized		
1,217,000 and 1,217,000 shares issued and outstanding		
Liquidating preference at \$2 per share aggregating \$2,434,000	2,434,000	2,434,000
Common Stock, no par value		
500,000,000 shares authorized		
415,265,000 and 378,341,000 shares issued and outstanding	90,465,000	86,050,000
Common stock subscribed	165,000	6,000
Stock notes receivable	(1,176,000)	(1,200,000)
Additional paid-in capital	6,900,000	7,030,000
Accumulated deficit	(100,459,000)	(97,070,000)
	-----	-----
Total stockholders' equity (deficit)	103,000	(86,000)
	-----	-----
Total liabilities and stockholders' equity (deficit)	\$ 5,888,000	\$ 4,870,000
	=====	=====

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

	2004	2003
	-----	-----
Net revenues		
Research and development contracts	\$ 1,070,000	\$ 1,070,000
Production	1,484,000	1,484,000
	-----	-----
Total net revenues	2,554,000	2,554,000
	-----	-----
Cost of revenues		
Research and development contracts	499,000	499,000
Production	1,627,000	1,627,000
Writedown Ford Think program inventory	113,000	113,000
	-----	-----
Total cost of revenues	2,239,000	2,239,000
	-----	-----

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Gross profit	315,000	
Other costs and expenses		
Research & development	925,000	
Selling, general & administrative	2,325,000	
Interest and financing fees, net	255,000	
Equity in losses of equity method investee	192,000	
Asset impairment	--	
Legal settlements	--	
Total other costs and expenses	3,697,000	
Net loss	\$ (3,382,000)	\$
Basic loss and diluted loss per share	\$ (0.01)	\$
Weighted-average number of shares outstanding	397,435,175	

6

	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

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

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				

	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				

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

	Convertible Preferred Stock			
	Series A		Series B	
	Shares	Amount	Shares	Amount
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				
Net loss				
Balance, December 31, 2003	2,820,000	\$ 1,837,000	1,217,000	\$ 2,434,000
Conversion of Series A preferred stock	(73,000)	(63,000)		
Issuance of common stock for				
Cash				
Issuance of subscribed common stock				
Exercise of options				
Stock option conversions				
Services				
Net loss				
Balance, December 31, 2004	2,747,000	\$ 1,774,000	1,217,000	\$ 2,434,000

	Common Stock			
	Subscribed		Stock Notes Receivable	Additional Paid-In Capital
	Shares	Amount		
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		

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Net loss	-----	-----	-----	-----
Balance, December 31, 2003	1,126,000	\$ 60,000	\$ (1,203,000)	\$ 7,031,000
Conversion of Series A preferred stock				
Issuance of common stock for				
Cash			27,000	
Issuance of subscribed common stock	(1,126,000)	(60,000)		
Exercise of options				
Stock option conversions				(39,000)
Services	1,196,000	165,000		(92,000)
Net loss	-----	-----	-----	-----
Balance, December 31, 2004	1,196,000	\$ 165,000	\$ (1,176,000)	\$ 6,900,000
	=====	=====	=====	=====

8

	2004

Cash flows from operating activities	
Net loss	\$ (3,382,000)
Adjustments to reconcile net loss to net cash used by operating activities	
Depreciation and amortization	377,000
Provision for asset impairment	--
Equity in losses	192,000
Issuance of common stock for services	89,000
Issuance of common stock for legal settlement	--
(Increase) decrease in	
Accounts receivable	281,000
Inventory and supplies	570,000
Note receivable - related party	8,000
Prepaid expenses and other current assets	(226,000)
Other assets	--
Increase (decrease) in	
Accounts payable	(702,000)
Accrued expenses	(11,000)
Deferred revenues	392,000
Accrued interest payable	256,000
Net cash used by operating activities	(2,156,000)

Cash flows from investing activities	
Purchases of property and equipment	\$ (175,000)
Net cash used in investing activities	(175,000)

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Cash flows from financing activities	
Net increase from line of credit	\$ 109,000
Payment on notes payable and capital lease obligations	(33,000)
Proceeds from notes payable	40,000
Proceeds from sales of common stock	2,450,000
Offering costs	--
Proceeds from exercise of stock options	783,000
Payments on stock notes receivable	27,000

Net cash provided by financing activities	3,376,000

Net increase (decrease) in cash and cash equivalents	1,045,000
Cash and cash equivalents, beginning of year	530,000

Cash and cash equivalents, end of year	\$ 1,575,000
	=====

9

	2004

Supplemental disclosure of cash flow information	
Interest paid	\$ 10,000
	=====
Income taxes paid	\$ --
	=====
Supplemental schedule of non- cash investing and financing activities	
Equipment acquired under capital lease agreements	\$ --
	=====
Conversion of preferred stock to common stock	\$ 63,000
	=====
Acquired investment under common stock purchase	\$ 1,000,000
	=====
Offering costs on common stock purchases	\$ 92,500

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Common stock issued for purchase of options

=====
\$ 39,000
=====

10

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2004

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. 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, 2004, the Company had a net working capital of approximately \$2,365,000 as compared to \$1,765,000 at December 31, 2003, representing an increase of \$600,000. This increase is due primarily to capital raised during the year offset by losses from operations. Operating and investing activities used approximately \$2,157,000 and \$175,000, respectively, while financing activities provided \$3,377,000. During the year ended December 31, 2004, the Company increased its headcount minimally to control expenses and still maintain its competitive edge in power management systems. The Company's business plan for 2005 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.

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 made in two installments of \$1.5 million each. The first installment was made in June 2003 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.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

The second installment was made in September 2004 in consideration for the issuance to HHI by the Company of 11,335,315 shares of common stock at \$0.1323 per share.

The Company invested \$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 acquired 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. HHI and the Company have invested an aggregate of \$5 million in the ITC.

11

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2004

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Management's Plans Related to Liquidity and Capital Needs

The Company has incurred significant losses from operations. During the year ended December 31, 2004, the Company incurred a net loss of \$3,382,000, and it had negative cash flows from operations of \$2,156,000. At December 31, 2004 the Company had an accumulated deficit of \$100,460,000. Such losses have resulted principally from research and development costs, sales and marketing costs and general and administrative costs associated with the development of the Company's technologies and products and expanding its level of operations.

The Company is subject to all of the many risks inherent in growing a new enterprise, and the development and commercialization of new products, including changing technologies, competition from companies offering the same or similar products, managing growth and lack of financial resources. As with any growing enterprise, there can be no assurance that the Company will achieve or sustain profitability or positive cash flow from operations.

The accompanying financial statements have been prepared on a going concern basis which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. Over the next few years the Company expects to incur losses from operations as it continues to develop future products and market its current products. The Company will need to raise additional capital through debt or equity financings or collaborative arrangements with industry partners to continue its business operations.

The Company's ability to continue as a going concern is dependent on its success at obtaining additional capital sufficient to meet its obligations on a timely basis, and to ultimately attain profitability. Management is actively engaged in seeking to raise capital through product licensing, co-promotional arrangements, or public or private equity financing. The Company believes it has demonstrated the ability to raise the necessary funds for the Company's growth and development activities. However, there is no assurance that the Company will raise capital sufficient to enable the Company to continue its operations

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

through the end of the fiscal year.

In the event the Company is unable to successfully obtain additional capital, it is unlikely that the Company will have sufficient cash flows and liquidity to finance its business operations as currently contemplated. Accordingly, in the event additional capital is not obtained, the Company will likely further downsize the organization, defer marketing programs, reduce general and administrative expenses and delay or reduce the scope of research and development projects until it is able to obtain sufficient financing to do so.

These factors could significantly limit the Company's ability to continue as a going concern. The balance sheets do not include any adjustments relating to recoverability and classification of recorded asset amounts or the amounts of classification of liabilities that might be necessary should the Company be unable to continue in existence.

12

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2004

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Contract Services Revenue and Cost Recognition

The Company manufactures proprietary products and other products based on design specifications provided by its customers. Revenue from sales of products are generally recognized at the time title to the goods and the benefits and risks of ownership passes to the customer which is typically when products are shipped based on the terms of the customer purchase agreement.

Revenue relating to long-term fixed price contracts is recognized using the percentage of completion method. Under the percentage of completion method, contract revenues and related costs are recognized based on the percentage that costs incurred to date bear to total estimated costs.

Changes in job performance, estimated profitability and final contract settlements may result in revisions to cost and revenue, and are recognized in the period in which the revisions are determined.

Contract costs include all direct materials, subcontract and labor costs and other indirect costs. General and administrative costs are charged to expense as incurred. At the time a loss on a contract becomes known, the entire amount of the estimated loss is accrued.

The aggregate of costs incurred and estimated earnings recognized on uncompleted contracts in excess of related billings is shown as a current asset, and billings on uncompleted contracts in excess of costs incurred and estimated earnings is shown as a current liability.

Comprehensive Income

The Company utilizes Statement of Financial Accounting Standards ("SFAS") No. 130, "Reporting Comprehensive Income." This statement

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

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.

13

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2004

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 \$165,000 (without reserve) and \$678,000 (of which \$595,000 had been reserved for) at December 31, 2004 and 2003, respectively. The Company believes the \$165,000 will be collected in its entirety in 2005 pending resolution of various customer requests.

Allowance for Doubtful Accounts

The Company maintains allowances for doubtful accounts for estimated losses resulting from the inability of its customers to make required payments. A considerable amount of judgment is required in assessing the ultimate realization of accounts receivable including the current credit-worthiness of each customer. If the financial condition of the Company's customers were to deteriorate, resulting in an impairment of their ability to make payments, additional allowances may be required. As of December 31, 2004, the Company did not maintain any allowances for doubtful accounts as all prior uncollectible balances have been charged to bad debt expense.

Inventories and Supplies

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. During 2004, the Company charged off \$107,000 of inventory related to a prior project with Ford Th!nk program which was terminated in 2003. Additionally, the Company charged-off approximately \$167,000 for obsolete or slow-moving inventory for a total of \$274,000 during the year ended December 31,

2004.

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.

Equity Method Investment

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

14

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2004

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Fair Value of Financial Instruments

The carrying amount of financial instruments, including cash and cash equivalents, accounts receivable, accounts payable and accrued expenses, approximate fair value due to the short maturity of these instruments. The carrying value of all other financial instruments is 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. Summary of Statement

SFAS No. 148 "Accounting for Stock-Based Compensation--Transition and Disclosure" amends SFAS No. 123 to provide alternative methods of transition for a voluntary change to the fair value based method of accounting for stock-based employee compensation. In addition, this Statement amends the disclosure requirements of Statement 123 to require prominent disclosures in both annual and interim financial statements about the method of accounting for stock-based employee compensation and the effect of the method used on reported results.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

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. 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.

For purposes of adjusted pro forma disclosures, the estimated fair value of the options is amortized to expense over the vesting period.

15

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2004

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Stock-Based Compensation (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, 2004, 2003, and 2002:

	2004	2003	2002
	-----	-----	-----
Loss applicable to common stockholders	\$(3,382,000)	\$(3,186,000)	\$(3,598,000)
Stock-based employee compensation expense determined under fair value presentation for all options	(76,000)	(315,000)	(197,000)
Pro forma net loss	\$(3,458,000)	\$(3,501,000)	\$(3,795,000)
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, 2004, 2003, and 2002: dividend yields of 0%, 0%, and 0%, respectively; expected volatility of 73%, 88%, and 83%, respectively; risk-free interest rates of 4%, 4%, and 4%, respectively; and expected lives of one, three, and five years, respectively. The weighted-average fair value of options granted during the year ended December 31, 2004 for which the exercise price equals the market price on the grant date was \$0, and the weighted-average exercise price was \$0.115.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

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.

Advertising Expense

The Company expenses all advertising costs, including direct response advertising, as they are incurred. Advertising expense for the years ended December 31, 2004, 2003, and 2002 was \$12,000, \$21,000, and \$20,000, respectively.

16

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2004

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Research and Development

Costs of researching and developing new technology or significantly altering existing technology is expensed as incurred.

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.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

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.

17

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2004

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Major Customers

During the year ended December 31, 2004, the Company conducted business with five customers whose sales comprised 16%, 13%, 10%, 9% and 8% of total revenues. As of December 31, 2004, these customers accounted for 0%, 9%, 33%, 0% and 13%, respectively, of total accounts receivable.

In addition, one of the Company's stockholders accounted for 10%, 1%, and 16% of total revenues during the years ended December 31, 2004, 2003, and 2002, respectively. This stockholder holds less than 5% of the total issued and outstanding common stock. Demand deposits are placed with known, creditable financial institutions.

Recently Issued Pronouncements

In November 2004, the FASB issued SFAS No. 151, "Inventory Costs". SFAS No. 151 amends the accounting for abnormal amounts of idle facility expense, freight, handling costs, and wasted material (spoilage) under the guidance in ARB No. 43, Chapter 4, "Inventory Pricing". Paragraph 5 of ARB No. 43, Chapter 4, previously stated that ". . . under some circumstances, items such as idle facility expense, excessive spoilage, double freight, and rehandling costs may be so abnormal as to require treatment as current period charges. . . ." This statement requires that those items be recognized as current-period charges regardless of whether they meet the criterion of "so abnormal." In addition, this statement requires that allocation of fixed production overheads to the costs of conversion be based on the normal capacity of the production

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

facilities. This statement is effective for inventory costs incurred during fiscal years beginning after June 15, 2005. Management does not expect adoption of SFAS No. 151 to have a material impact, if any, on the Company's financial position or results of operations.

In December 2004, the FASB issued SFAS No. 152, "Accounting for Real Estate Time-Sharing Transactions". The FASB issued this statement as a result of the guidance provided in AICPA Statement of Position (SOP) 04-2, "Accounting for Real Estate Time-Sharing Transactions". SOP 04-2 applies to all real estate time-sharing transactions. Among other items, the SOP provides guidance on the recording of credit losses and the treatment of selling costs, but does not change the revenue recognition guidance in SFAS No. 66, "Accounting for Sales of Real Estate", for real estate time-sharing transactions. SFAS No. 152 amends Statement No. 66 to reference the guidance provided in SOP 04-2. SFAS No. 152 also amends SFAS No. 67, "Accounting for Costs and Initial Rental Operations of Real Estate Projects", to state that SOP 04-2 provides the relevant guidance on accounting for incidental operations and costs related to the sale of real estate time-sharing transactions. SFAS No. 152 is effective for years beginning after June 15, 2005, with restatements of previously issued financial statements prohibited. Management does not expect adoption of SFAS No. 152 to have a material impact, if any, on the Company's financial position or results of operations.

18

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2004

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Recently Issued Pronouncements (continued)

In December 2004, the FASB issued SFAS No. 153, "Exchanges of Nonmonetary Assets," an amendment to Opinion No. 29, "Accounting for Nonmonetary Transactions". SFAS No. 153 eliminates certain differences in the guidance in Opinion No. 29 as compared to the guidance contained in standards issued by the International Accounting Standards Board. The amendment to Opinion No. 29 eliminates the fair value exception for nonmonetary exchanges of similar productive assets and replaces it with a general exception for exchanges of nonmonetary assets that do not have commercial substance. Such an exchange has commercial substance if the future cash flows of the entity are expected to change significantly as a result of the exchange. SFAS No. 153 is effective for nonmonetary asset exchanges occurring in periods beginning after June 15, 2005. Earlier application is permitted for nonmonetary asset exchanges occurring in periods beginning after December 16, 2004. Management does not expect adoption of SFAS No. 153 to have a material impact, if any, on the Company's financial position or results of operations.

In December 2004, the FASB issued SFAS No. 123(R), "Share-Based Payment". SFAS 123(R) amends SFAS No. 123, "Accounting for Stock-Based Compensation", and APB Opinion No. 25, "Accounting for Stock Issued to Employees". SFAS No.123(R) requires that the cost of share-based payment transactions (including those with employees and non-employees) be recognized in the financial statements. SFAS No. 123(R) applies to

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

all share-based payment transactions in which an entity acquires goods or services by issuing (or offering to issue) its shares, share options, or other equity instruments (except for those held by an ESOP) or by incurring liabilities (1) in amounts based (even in part) on the price of the company's shares or other equity instruments, or (2) that require (or may require) settlement by the issuance of a company's shares or other equity instruments. This statement is effective (1) for public companies qualifying as SEC small business issuers, as of the first interim period or fiscal year beginning after December 15, 2005, or (2) for all other public companies, as of the first interim period or fiscal year beginning after June 15, 2005, or (3) for all nonpublic entities, as of the first fiscal year beginning after December 15, 2005. Management is currently assessing the impact of this statement on its financial position and results of operations.

Fourth Quarter Adjustments

During the fourth quarter of fiscal 2004, the Company:

- o wrote-down inventory by a net of \$275,000 for obsolete and slow-moving inventory. The Company charged off approximately \$113,000 of this reduction for inventory relating to raw materials for the Ballard/Ford Think city program which was terminated in 2003. This was inventory specific to that program which the Company believed may be useable in other components, or would be purchased by third parties, but was not due to the Company's increased focus on the heavy-duty hybrid markets. The Company also charged off an additional \$162,000 in obsolete or slow moving inventory during 2004. This resulted in an increase of cost of sales by \$275,000 for the year.

19

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2004

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Continued)

Fourth Quarter Adjustments (continued)

- o allocated certain expenses to cost of sales, which had been charged to general and administrative expense, based on the Company's improved method of apportioning such costs. This resulted in an increase in cost of sales of approximately \$147,000 in the fourth quarter, a portion of which may have been attributable to prior quarters in 2004 but none that the Company believes would have a material impact on the presentation of those quarters.

The above two adjustments (i) increased cost of sales by \$422,000 in the fourth quarter, (ii) reduced gross profit by \$422,000, (iii) increased loss from operations by \$275,000 and (iv) reduced net loss by \$275,000.

NOTE 3 - PROPERTY AND EQUIPMENT

Property and equipment at December 31, 2004 and 2003 consisted of the following:

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

	2004	2003
	-----	-----
Computers	\$ 229,000	\$ 213,000
Machinery and equipment	709,000	715,000
Furniture and office equipment	192,000	192,000
Demonstration vehicles and buses	461,000	297,000
Equipment under capital lease obligations	94,000	94,000
Leasehold improvements	68,000	68,000
	-----	-----
	1,754,000	1,579,000
Less accumulated depreciation and amortization	1,367,000	1,098,000
	-----	-----
Total	\$ 387,000	\$ 481,000
	=====	=====

Depreciation and amortization expense was \$377,000, \$351,000, and \$134,000 for the years ended December 31, 2004, 2003, and 2002, respectively.

20

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2004

NOTE 4 - EQUITY METHOD INVESTMENT

During the year ended December 31, 2004, the Company invested \$1,000,000 of the proceeds received from sale of common stock to HHI into a joint venture formed with HHI in 2003 (see Note 1). The Company's share of income and losses is 40% as stated in the agreement. During the year ended December 31, 2004, the Company recorded \$192,000 as its proportionate share of losses in the joint venture.

The following is the condensed financial position and results of operations of ITC, as of and for the year ended December 31, 2004:

Financial position		
Current assets	\$	4,406,000
Property and equipment, net		15,000
Liabilities		(3,000)

Equity	\$	4,418,000
		=====
Operations		
Net revenues	\$	-
Expenses		(481,000)

Net loss	\$	(481,000)
		=====
Companies proportionate share of net loss	\$	(192,000)

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

=====

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.

	2004	2003
	-----	-----
Patents	\$ 92,000	\$ 92,000
Valuation Participation Agreement	577,000	577,000
	-----	-----
	669,000	669,000
Less accumulated amortization	373,000	265,000
	-----	-----
Total	\$296,000	\$404,000
	=====	=====

21

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2004

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 its maturity has been extended until April 2005.

NOTE 7- DEFERRED REVENUES - Tomoe LTA Long-Term Contract

The Company has entered into a development and production contract with Tomoe Electro-Mechanical Engineering and Manufacturing, Inc. for eight battery-electric locomotives for the Singapore Land Transport Authority for service vehicles for the Singapore Mass Rapid Transit Circle Line system for maintenance, repair, shunting and recovery of passenger trains. The contract commenced in August 2004 and completion of the contract will take approximately 15-18 months and is valued at approximately \$3,100,000. The Company is recording revenues for this long-term, fixed price contract on the basis of the percentage-of-completion method. The contract contains several deliverables over its life and therefore the Company will divide these deliverables into separate units of accounting based on relative fair values. Revenue recognition criteria will be assessed separately for each separate unit of accounting. As of December 31, 2004, the Company

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

recorded revenues of \$68,000 related to the development portion of this contract.

22

ENOVA SYSTEMS, INC.
 NOTES TO FINANCIAL STATEMENTS
 December 31, 2004

 NOTE 8- NOTES PAYABLE

Notes payable at December 31, consisted of the following:

	200

Secured note payable to Credit Managers Association of California, bearing interest at 6% per annum during 2003 and at prime plus 3% per annum in 2004 and through maturity. Principal and unpaid interest due in April 2016. A sinking fund escrow is required to be funded with 10% of future equity financing, as defined in the agreement.	\$ 3,3
Unsecured note payable, bearing interest at 10% per annum. This note payable is in default.	1
Secured note payable to a Coca Cola Enterprises in the original amount of \$40,000, bearing interest at 5% per annum. Principal and unpaid interest due in July 2005.	
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.	

Less current portion	3,5 1

Long-term portion	\$ 3,3
	=====

Future minimum principal payments of notes payable at December 31, 2004 consisted of the following:

Year Ending December 31,	
2005	\$ 166,000
2006	9,000
2007	-
2008	-
2009	-
Thereafter	3,332,000

Total	\$3,507,000

=====

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2004

NOTE 9- COMMITMENTS AND CONTINGENCIES

Leases

The Company leases its facilities under an operating lease agreement, which requires monthly payments of \$13,250 and expires in February 2008. At March 2005, the monthly payments will increase to \$13,700 per the terms of the lease agreement. 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, 2004 were as follows:

Year Ending December 31, -----	Operating Leases -----	Capital Leases -----
2005	\$ 164,000	\$ 6,000
2006	155,000	--
2007	166,000	--
2008	28,000	--
	-----	-----
	\$ 513,000	6,000
	=====	
Less amount representing interest		--

Less current portion		6,000

Long-term portion		\$ --
		=====

Rent expense was \$140,000, \$150,000, and \$206,000 for the years ended December 31, 2004, 2003, and 2002, respectively.

NOTE 10 - STOCKHOLDERS' EQUITY

Common Stock

During the year ended December 31, 2004, the Company issued 27,585,000 shares of common stock for cash totaling \$3,450,000. In addition, the Company issued 481,000 shares of common stock to directors as compensation totaling \$47,000.

Common Stock Subscribed

At December 31, 2004, the Company was committed to issue 1,196,000 shares of common stock totaling \$165,000 as compensation and as finder's fees to its directors.

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

In the prior year, the Company incorrectly reported the number of subscribed common stock. The actual shares subscribed as of December 31, 2003 totaling 367,000 shares differed from the previously reported number of shares by 760,000 shares, totaling \$29,000. The effect of this error was not material to the reported results. This difference has been corrected in the current year's financial statements.

24

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2004

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.

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 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

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

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.

25

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2004

NOTE 10 - STOCKHOLDERS' EQUITY (Continued)

Stock Options and Warrants

During the year ended December 31, 2004, the Company issued 8,464,000 shares of common stock from the exercise of options by certain employees in exchange for cash totaling \$783,000.

During 2004, the stockholders of the Company approved an increase of 20,000,000 shares for the 1996 Stock Option Plan for incentive and non-statutory stock options during the period of the Plan, which expires in 2006. The Plan now reserves 65,000,000 shares under the plan. Options under the 1996 Plan expire over a period not to exceed ten years. The following summarizes common stock option activity:

	1996 Plan		1993 Plan	
	Shares	Weighted-Average Exercise Price	Shares	Weighted-Average Exercise Price
Outstanding, December 31, 2001	20,866,000	\$ 0.10	9,654,000	\$ 0.52
Granted	900,000	\$ 0.10	--	\$ --
Exercised	--	\$ --	(35,000)	\$ 0.10
Forfeited	(439,000)	\$ 0.10	(2,565,000)	\$ 0.52
Outstanding, December 31, 2002	21,327,000	\$ 0.11	7,054,000	\$ 0.52
Granted	9,998,000	\$ 0.05	--	\$ --
Exercised	(8,638,000)	\$ 0.05	--	\$ --
Forfeited	(1,556,000)	\$ 0.11	(7,054,000)	\$ 0.52
Outstanding, December 31, 2003	21,131,000	\$ 0.12	--	\$ --
Granted	2,000,000	\$ 0.12	--	\$ --
Exercised	(10,981,000)	\$ 0.10	--	\$ --
Forfeited	(4,795,000)	\$ 0.12	--	\$ --

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Outstanding , December 31, 2004	7,355,000 =====	\$ 0.12	-- =====	\$ --
Exercisable, December 31, 2004	6,418,000 =====	\$ 0.12	-- =====	\$ --

The weighted-average remaining contractual life of the options outstanding at December 31, 2004 was 1.2 years. The exercise prices of the options outstanding at December 31, 2004 ranged from \$0.11 to \$0.30. Options exercisable were 6,418,000, 20,898,000, 28,304,228 at December 31, 2004, 2003 and 2002.

26

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2004

NOTE 10 - STOCKHOLDERS' EQUITY (Continued)

Stock Options and Warrants (Continued)

The agreement with Ford Motor Company (see Note 5) included issuing warrants to Ford to purchase 4.6% of the fully diluted common stock of the Company 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.

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 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 2004 and 2003. As of June 30, 2004, Ford is no longer eligible for further vesting of its warrants per the terms of the Value Participation Agreement.

NOTE 11 - INCOME TAXES

Significant components of the Company's deferred tax assets and liabilities for federal and state income taxes as of December 31, 2004 and 2003 consisted of the following:

	2004	2003
	-----	-----
Deferred tax assets		
Federal tax loss carry-forward	\$31,542,000	\$31,286,000
State tax loss carry-forward	893,000	712,000
Basis difference	1,610,000	1,610,000
Other, net	555,000	555,000
	-----	-----
	36,027,000	34,163,000

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Less valuation allowance	36,027,000 -----	34,163,000 -----
Net deferred tax assets	\$ -- =====	\$ -- =====

As of December 31, 2004, the Company had net operating loss carry forwards for federal and state income tax purposes of approximately \$95,571,000 and \$9,393,000, respectively. The net operating loss carry forwards began expiring in 2003.

NOTE 12 - RELATED PARTY TRANSACTIONS

During 2004, the Company purchased approximately \$246,000 in components, materials and services from HHI. The outstanding balance owed to HHI at December 31, 2004 was approximately \$2,000.

27

ENOVA SYSTEMS, INC.
NOTES TO FINANCIAL STATEMENTS
December 31, 2004

NOTE 12 - RELATED PARTY TRANSACTIONS (continued)

During 2004, the Company paid a total of \$101,000 to two of its directors in consulting fees.

During 2004, pursuant to a written agreement approved by the Board of Directors and its Audit Committee, a finder's fee of \$92,500 was accrued to be paid, through the issuance of restricted shares of common stock in Enova, totaling 608,553 shares at a price of \$0.15 per share, in conjunction with a private placement funding in the first quarter of 2004 to The Global Value Investment Portfolio Management Pte Ltd, a Singapore Company which is substantially owned by two affiliated parties: Anthony Rawlinson, Chairman of the Board of our Company and Borl partnership, owned by Boris Liberman Family Trusts, which is also affiliated with Jagen Pty Ltd., a large affiliate shareholder in Enova. Said shares were subsequently issued in the first quarter of 2005.

NOTE 13 - 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, 2004, 2003, and 2002 the Company did not make any contributions to the plan.

NOTE 14 - GEOGRAPHIC AREA DATA

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:

	2004 -----	2003 -----	2002 -----
United States	\$1,465,000	\$2,672,000	\$2,478,000
Italy	32,000	213,000	1,040,000

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

Korea	258,000	297,000	726,000
Japan	1760,000	146,000	87,000
China	256,000	738,000	--
Malaysia	--	184,000	65,000
Ireland	166,000	--	59,000
Canada	--	738,000	--
England	203,000	60,000	--
	-----	-----	-----
Total	\$2,554,000	\$4,310,000	\$4,455,000
	=====	=====	=====

28

SUPPLEMENTAL INFORMATION

29

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Board of Directors and Stockholders
 Enova Systems, Inc.
 Torrance, California

Our audits were conducted in accordance with the standards of the Public Company Accounting Oversight Board (United States) and were made for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental schedule II 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 our 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.

SINGER LEWAK GREENBAUM & GOLDSTEIN LLP

Los Angeles, California
 March 10, 2005

30

ENOVA SYSTEMS, INC.
 VALUATION AND QUALIFYING ACCOUNTS - SCHEDULE II

Edgar Filing: ENOVA SYSTEMS INC - Form 10-K

	Balance, Beginning of Year -----	Additions Charged to Operations -----	Deductions from Reserve -----	Balance, End of Year -----
Allowance for doubtful accounts				
December 31, 2004	\$595,000 =====	\$ -- =====	\$595,000 =====	\$ -- =====
December 31, 2003	\$ -- =====	\$ 595,000 =====	\$ -- =====	\$595,000 =====
December 31, 2002	\$ -- =====	\$ -- =====	\$ -- =====	\$ -- =====
Reserve for obsolete inventories				
December 31, 2004	\$ 80,000 =====	\$ -- =====	\$ -- =====	\$ 80,000 =====
December 31, 2003	\$ 80,000 =====	\$ -- =====	\$ -- =====	\$ 80,000 =====
December 31, 2002	\$ 80,000 =====	\$ -- =====	\$ -- =====	\$ 80,000 =====