

ENOVA SYSTEMS INC
Form S-3
February 02, 2012
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As filed with the Securities and Exchange Commission on February 2, 2012

Registration No. 333-

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

ENOVA SYSTEMS, INC.

(Exact name of registrant as specified in its charter)

California
(State or other jurisdiction of

95-3056150
(I.R.S. Employer

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incorporation or organization)

1560 West 190th Street

Torrance, CA 90501

(310) 527-2800

Identification Number)

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Michael Staran

President and Chief Executive Officer

Enova Systems, Inc.

1560 West 190th Street

Torrance, CA 90501

(310) 527-2800

(Address, including zip code, and telephone number, including area code, of agent for service)

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Copies to:

Donald C. Reinke, Esq.

Reed Smith LLP

101 Second Street, Suite 1800

San Francisco, California 94105-3659

(415) 543-8700

Approximate date of commencement of proposed sale to the public: From time to time after the effective date of this registration statement.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See the definitions of "large accelerated filer", "non-accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

| | | | |
|-------------------------|--|---------------------------|-------------------------------------|
| Large accelerated filer | <input type="checkbox"/> | Accelerated filer | <input type="checkbox"/> |
| Non-accelerated filer | <input type="checkbox"/> (Do not check if a smaller reporting company) | Smaller reporting company | <input checked="" type="checkbox"/> |

CALCULATION OF REGISTRATION FEE

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| Title of each class of securities to be registered | Amount to be registered ⁽¹⁾⁽²⁾ | Proposed maximum offering price per share ⁽³⁾ | Proposed maximum aggregate offering price ⁽³⁾ | Amount of registration fee |
|--|---|--|--|----------------------------|
| Common stock, no par value | 22,500,000 | \$0.38 | \$8,550,000 | \$979.83 |

- (1) Consists of an aggregate of 11,250,000 shares of common stock and 11,250,000 shares of common stock that may be issued upon exercise of warrants, all of which were acquired by the selling shareholders in a private placement.
- (2) Pursuant to Rule 416 under the Securities Act of 1933, as amended (the Securities Act), the shares being registered hereunder include such indeterminate number of shares of the Registrant's common stock as may be issuable with respect to the shares being registered hereunder to prevent dilution by reason of any stock dividend, stock split, recapitalization or other similar transaction.
- (3) Estimated solely for the purpose of calculating the amount of the registration fee in accordance with Rule 457(c) under the Securities Act for the common stock outstanding. The proposed maximum offering price per share and proposed maximum aggregate offering price are based upon the average of the high \$0.40 and low \$0.35 sales prices of the Registrant's common stock on January 27, 2012, as reported on the NYSE Amex. The Registrant is not selling any shares of common stock in this offering and therefore will not receive any proceeds from this offering.

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to Section 8(a), may determine.

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The information in this preliminary prospectus is not complete and may be changed. The selling shareholders may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell, and the selling shareholders are not soliciting offers to buy, these securities in any state where the offer or sale of these securities is not permitted.

SUBJECT TO COMPLETION, DATED FEBRUARY 2, 2012

PROSPECTUS

22,500,000 SHARES

ENOVA SYSTEMS, INC.

Common Stock

This prospectus covers the sale or other disposition of up to 22,500,000 shares of our common stock, including 11,250,000 shares issuable upon exercise of warrants, by the selling shareholders identified in this prospectus. The selling shareholders may, from time to time, sell, transfer, or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

We are not offering any shares of our common stock for sale under this prospectus. We will not receive any of the proceeds from the sale or other disposition of the shares of our common stock by the selling shareholders, other than any proceeds from the cash exercise of warrants to purchase shares of our common stock.

Our common stock is quoted on the NYSE Amex under the symbol ENA. On February 1, 2012, the last reported sales price of our common stock, as reported on the NYSE Amex, was \$ 0.39 per share.

Investing in our common stock involves certain risks. See Risk Factors in our Annual Report on Form 10-K for the year ended December 31, 2010, our Quarterly Report on Form 10-Q for the period ended September 30, 2011, as well as our subsequently filed periodic and current reports, which have been filed with the Securities and Exchange Commission and are incorporated by reference into this prospectus. You should read the entire prospectus carefully before you make your investment decision.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (the SEC) using a shelf registration or continuous offering process.

You should read this prospectus and the information and documents incorporated by reference carefully. Such documents contain important information you should consider when making your investment decision. See *Where You Can Find More Information* and *Incorporation of Certain Documents by Reference* in this prospectus.

You should rely only on the information provided in this prospectus or documents incorporated by reference into this prospectus. We have not, and the selling shareholders have not, authorized anyone to provide you with different information. This prospectus covers offers and sales of our common stock only in jurisdictions in which such offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of our common stock. You should not assume that the information contained in this prospectus is accurate as of any date other than the date on the front cover of this prospectus, or that the information contained in any document incorporated by reference is accurate as of any date other than the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any sale of a security.

In this prospectus, we refer to Enova Systems, Inc. as we, us, our, the Company or Enova. Reference to selling shareholders refers to those shareholders listed herein under *Selling Shareholders* and their successors, assignees, and permitted transferees.

CAUTIONARY STATEMENT CONCERNING FORWARD-LOOKING INFORMATION

Information in and incorporated by reference into this prospectus contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and the safe harbor provided by Section 27A of the Securities Act of 1933, as amended (the Securities Act) and Section 21E of the Securities Exchange Act of 1934, as amended (the Exchange Act). These forward-looking statements often can be, but are not always, identified by the use of words such as assume, expect, intend, plan, project, believe, estimate, predict, anticipate, should, could, goal, potential and similar expressions. Such forward-looking statements, including, without limitation, those relating to the future business prospects, revenues and income of Enova, wherever they occur, are necessarily estimates reflecting the best judgment of our senior management on the date on which they were made, or if no date is stated, as of the date of this prospectus. Forward-looking statements are subject to risks, uncertainties and assumptions, including those described in the section entitled *Risk Factors* and elsewhere in the documents incorporated by reference into this prospectus, including our Annual Report on Form 10-K for the fiscal year ended December 31, 2010, our Quarterly Report on Form 10-Q for the period ended September 30, 2011, and our subsequent SEC filings.

Because actual results or outcomes could differ materially from those expressed in any forward-looking statements made by us or on our behalf, you should not place undue reliance on any such forward-looking statements. New factors emerge from time to time, and it is not possible for us to predict which factors will arise. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements.

We undertake no obligation to publicly update or revise any forward-looking statements, whether as a result of new information, future events or any other reason. All subsequent forward-looking statements attributable to us or any person acting on our behalf are expressly qualified in their entirety by the cautionary statements contained or referred to herein. In light of these risks, uncertainties and assumptions, the forward-looking events discussed in this prospectus may not occur.

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PROSPECTUS SUMMARY

The following is only a summary and therefore does not contain all of the information you should consider before investing in our common stock. We urge you to read this entire prospectus, including the matters discussed under Risk Factors in this prospectus and the more detailed consolidated financial statements, notes to the consolidated financial statements and other information incorporated by reference from our other filings with the SEC.

Our Company

Enova believes it is a leader in the development, design and production of proprietary, power train systems and related components for electric and hybrid electric buses and medium and heavy duty commercial vehicles. Electric drive systems are comprised of an electric motor, an electronics control unit and a gear unit which power a vehicle. Hybrid electric systems, which are similar to pure electric drive systems, contain an internal combustion engine in addition to the electric motor, and may eliminate 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.

A fundamental element of our strategy is to develop and produce advanced proprietary software and hardware for applications in these alternative power markets. Our focus is powertrain systems including digital power conversion, power management and system integration, focusing chiefly on vehicle power generation.

Specifically, we develop, design and produce drive systems and related components for electric, hybrid electric and fuel cell powered vehicles in both the new and retrofit markets. We also perform internal research and development and funded third party research and development to augment our product development and support our customers.

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

Our primary market focus centers on aligning ourselves with key customers and integrating with original equipment manufacturers in our target markets. We believe that alliances will result in the latest technology being implemented and customer requirements being met, with an optimized level of additional time and expense. As we penetrate new market areas, we are continually refining both our market strategy and our product line to maintain our leading edge in power management and conversion systems for vehicle applications.

The Company, previously known as U.S. Electricar, Inc., a California corporation, was incorporated on July 30, 1976. Our address is 1560 West 190th Street, Torrance, California 90501 and our telephone number is 310-527-2800. Our website address is www.enovasystems.com. Information on our website is not incorporated by reference into this prospectus and does not constitute part of this prospectus.

Recent Financing

On December 30, 2011, the Company sold 11,250,000 shares of our common stock at \$0.15 per share for an aggregate purchase price of \$1,687,500, together with warrants to purchase up to 11,250,000 shares of common stock, to a total of seventeen investors. The warrants are subject to appropriate adjustment for stock splits, combinations, reclassifications and the like. The warrants are exercisable for a period of five years, with earlier termination in the case of certain extraordinary transactions and earlier call by the Company. The warrants are exercisable at the option of the holder at an exercise price of \$0.22 per share, which amount equals the volume weighted average price of our common stock for the twenty trading days immediately prior to the December 30, 2011 closing date. The warrants further provide that if, for a twenty consecutive trading day period, the average of the closing price quoted on the NYSE Amex is greater than or equal to \$0.44 per share, with at least an average of 10,000 shares traded per day, then, on the 10th calendar day following written notice from the Company, any outstanding warrants will be deemed automatically exercised pursuant to the cashless/net exercise provisions under the warrants.

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The Offering

| | |
|---|----------------------------------|
| Common stock outstanding: | 42,765,223 shares ⁽¹⁾ |
| Common stock offered by the selling shareholders: | 22,500,000 shares ⁽²⁾ |
| Common stock outstanding after the offering | 54,015,223 shares ⁽³⁾ |
| NYSE Amex symbol for common stock: | ENA |
| Alternative Investment Market | ENV and ENVS |

(London Stock Exchange)

symbols for common stock:

Use of proceeds: We will not receive any of the proceeds from the sale or other disposition of the shares covered by this prospectus. We may receive proceeds upon the cash exercise of warrants, and we intend to use any such proceeds for working capital and general corporate purposes.

Risk factors: See Risk Factors in our Annual Report on Form 10-K for the year ended December 31, 2010, our Quarterly Report on Form 10-Q for the period ended September 30, 2011, as well as our subsequently filed periodic and current reports, for a discussion of factors to consider before investing in shares of our common stock.

- (1) The number of shares shown to be outstanding is based on the number of shares of our common stock outstanding as of January 27, 2012, and does not include shares issuable upon exercise of warrants (including the shares of common stock underlying warrants registered hereunder), conversion of outstanding preferred stock, or reserved for issuance upon the exercise of options granted or available under our equity compensation plan.
- (2) The number of shares shown to be registered hereunder includes 11,250,000 shares of common stock outstanding and 11,250,000 shares of common stock issuable upon exercise of warrants. The number of shares being registered hereunder that are outstanding represents approximately 26% of the total numbers of shares of common stock outstanding. Assuming full cash exercise of the warrants for which underlying shares of common stock are being registered hereunder, the number of shares being registered hereunder represents approximately 42% of the total number of shares of common stock then outstanding. In each case, the number of shares outstanding does not include shares issuable upon conversion of outstanding preferred stock or reserved for issuance upon the exercise of options granted or available under our equity compensation plan.
- (3) The number of shares shown to be outstanding after the offering assumes full cash exercise by the selling shareholders of the 11,250,000 shares of common stock issuable upon exercise of warrants and being registered hereunder.

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RISK FACTORS

An investment in our common stock involves risks. Prior to making a decision about investing in our common stock, you should consider carefully the risks described below together with all of the other information contained or incorporated by reference in this prospectus and any prospectus supplement, including any additional specific risks described in the section entitled "Risk Factors" contained in any supplements to this prospectus and in our Annual Report on Form 10-K for the fiscal year ended December 31, 2010, our Quarterly Report on Form 10-Q for the period ended September 30, 2011, as well as any amendments or additions thereto reflected in subsequent filings with the SEC. Each of these risk factors could materially and adversely affect our business, financial condition, results of operations, and liquidity.

Sales of shares issued in our recent private placement may cause the market price of our shares to decline.

On December 30, 2011, we issued 11,250,000 shares of common stock and warrants to purchase an additional 11,250,000 shares of common stock to investors. Pursuant to a registration rights agreement with those investors, we are registering with the SEC 22,500,000 of those shares and warrant shares for resale as described in this prospectus. The shares issued on December 30, 2011 represent approximately 42% of our issued and outstanding shares of common stock, assuming full cash exercise of the warrants. Upon the effectiveness of the registration statement of which this prospectus is a part, these shares may be freely sold in the open market. The sale of a significant amount of shares in the open market, or the perception that these sales may occur, could cause the trading price of our common stock to decline or become highly volatile.

USE OF PROCEEDS

We will not receive any of the proceeds from any such sale or other disposition of the common stock covered by this prospectus. We will receive cash proceeds upon the exercise of the warrants for which underlying shares are being registered hereunder. Assuming full cash exercise of such warrants at the exercise price of \$0.22 per warrant, we would receive proceeds of \$2,475,000. We currently intend to use the cash proceeds from any warrant exercise for working capital and general corporate purposes. The amount and timing of our actual use of proceeds may vary significantly depending upon numerous factors, including the actual amount of proceeds we receive and the timing of when we receive such proceeds. However, the warrants provide that if, for a twenty consecutive trading day period, the average of the closing price quoted on the NYSE Amex is greater than or equal to \$0.44 per share, with at least an average of 10,000 shares traded per day, then, on the 10th calendar day following written notice from the Company, any outstanding warrants will be deemed automatically exercised pursuant to the cashless net exercise provisions under the warrants. We will not receive any cash proceeds as a result of warrants that are deemed automatically exercised pursuant to such cashless net exercise provision.

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We have prepared this prospectus to allow the selling shareholders or their successors, assignees or other permitted transferees to sell or otherwise dispose of, from time to time, up to 22,500,000 shares of our common stock which they acquired pursuant to the Warrant and Common Stock Purchase Agreement dated December 30, 2011. The table below presents information regarding the selling shareholders and the shares of our common stock that they may sell or otherwise dispose of from time to time under this prospectus. The table is based on information supplied to us by the selling shareholders. Percentages of beneficial ownership are based upon 42,765,223 shares of common stock issued and outstanding as of January 27, 2012. Beneficial ownership is determined under Section 13(d) of the Exchange Act and generally includes voting or investment power with respect to securities and including any securities that grant the selling shareholder the right to acquire common stock within 60 days of January 27, 2012. We do not know when or in what amounts the selling shareholders may sell or otherwise dispose of the shares covered hereby. The selling shareholders might not sell any or all of the shares covered by this prospectus or may sell or dispose of some or all of the shares other than pursuant to this prospectus. Because the selling shareholders may not sell or otherwise dispose of some or all of the shares covered by this prospectus and because there are currently no agreements, arrangements or understandings with respect to the sale or other disposition of any of the shares, we cannot estimate the number of the shares that will be held by the selling shareholders after completion of the offering.

| NAME OF SELLING SHAREHOLDERS | NUMBER OF SHARES BENEFICIALLY OWNED | | SHARES BENEFICIALLY OWNED AFTER OFFERING ⁽²⁾ | |
|--|--|----------------------------------|--|------------|
| | BEFORE OFFERING ⁽¹⁾ | COVERED HEREBY ⁽¹⁾ | NUMBER | PERCENTAGE |
| Anthony B. Low-Beer ⁽³⁾⁽⁴⁾⁽⁵⁾ | 4,000,000 | 4,000,000 | 0 | 0 |
| Phylis M. Esposito | 3,000,000 | 3,000,000 | 0 | 0 |
| ALB Private Investments, LLC ⁽⁴⁾⁽⁵⁾ | 2,000,000 | 2,000,000 | 0 | 0 |
| Sander A. Flaum | 1,500,000 | 1,500,000 | 0 | 0 |
| Cynthia A. Kohn | 1,500,000 | 1,500,000 | 0 | 0 |
| Helen R. Esposito | 1,000,000 | 1,000,000 | 0 | 0 |
| Mireille Gousseland | 1,000,000 | 1,000,000 | 0 | 0 |
| John F. Kohn | 1,000,000 | 1,000,000 | 0 | 0 |
| David N. Low Jr. | 1,000,000 | 1,000,000 | 0 | 0 |
| Pat Ltd. ⁽⁶⁾ | 1,000,000 | 1,000,000 | 0 | 0 |
| Christopher G. Thunen ⁽⁷⁾ | 1,000,000 | 1,000,000 | 0 | 0 |
| Douglas Thunen | 1,000,000 | 1,000,000 | 0 | 0 |
| The Thunen Family Trust, dated October 4, 2005 ⁽⁸⁾ | 1,000,000 | 1,000,000 | 0 | 0 |
| The Viswanath Khaitan Revocable Trust dtd 12-9-02 ⁽⁹⁾ | 1,000,000 | 1,000,000 | 0 | 0 |
| Ryan P. McCormack | 500,000 | 500,000 | 0 | 0 |
| Kevin McCormack | 500,000 | 500,000 | 0 | 0 |
| Mechelle Plotkin | 500,000 | 500,000 | 0 | 0 |

- (1) The number of shares for each selling shareholder consists of the aggregate of an equal number of shares of common stock outstanding and shares of common stock issuable upon cash exercise of presently exercisable warrants.
- (2) For purposes of this table, the Company assumes that all of the shares covered by this prospectus will be sold by the selling shareholders.
- (3) Mr. Low-Beer holds discretionary trading authority of all the shares registered hereunder, except for the shares owned by ALB Private Investments, LLC of which he is the beneficial owner and, as such may be deemed to be a beneficial owner of all 22,500,000 shares. Mr. Low-Beer disclaims beneficial ownership of these shares except to the extent of his pecuniary interest thereof. The 4,000,000 shares covered hereby attributable to Mr. Low-Beer reflect the shares he holds and is offering solely for his own account.
- (4) Mr. Low-Beer and ALB Private Investments, LLC are affiliates of a broker-dealer. Each of Mr. Low-Beer and ALB Private Investments, LLC have represented to the Company that they purchased their shares of common stock in the ordinary course of business and, at the time of such purchase, had no agreements or understandings, directly or indirectly, with any person to distribute such shares of common stock.
- (5) Mr. Low-Beer is the sole beneficial owner of ALB Private Investments, LLC. Mr. Francis A. Mlynarczyk, Jr. is Manager of ALB Investments, LLC. Mr. Mlynarczyk holds sole voting and investment discretion with respect to the shares beneficially owned by ALB Private Investments, LLC.

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- (6) John N. Hatsopoulos is President of Pat Ltd.
- (7) Mr. Thunen is an affiliate of a broker-dealer. He has represented to the Company that he purchased his shares of common stock in the ordinary course of business and, at the time of such purchase, had no agreements or understandings, directly or indirectly, with any person to distribute such shares of common stock.
- (8) Garret Thunen and Carol Thunen are trustees of The Thunen Family Trust, dated October 4, 2005.
- (9) Mona Khaitan and Viswanath Kaitain are trustees of the Viswanath Khaitan Revocable Trust dtd 12-9-02.

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PLAN OF DISTRIBUTION

The selling shareholders may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices.

The selling shareholders may use anyone or more of the following methods when disposing of shares or interests therein:

ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;

block trades in which the broker-dealer will attempt to sell the shares as agent, but may position and resell a portion of the block as principal to facilitate the transaction;

purchases by a broker-dealer as principal and resale by the broker-dealer for its account;

an exchange distribution in accordance with the rules of the applicable exchange;

privately negotiated transactions;

short sales effected after the date the registration statement of which this prospectus is a part is declared effective by the SEC;

through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;

broker-dealers may agree with the selling shareholders to sell a specified number of such shares at a stipulated price per share; and

a combination of any such methods of sale.

The aggregate proceeds to the selling shareholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling shareholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering.

The selling shareholders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act, provided that they meet the criteria and conform to the requirements of that rule.

The selling shareholders and any underwriters, broker-dealers or agents that participate in the sale of the common stock or interests therein may be underwriters within the meaning of Section 2(a)(11) of the Securities Act. Any discounts, commissions, concessions or profit they earn on any resale of the shares may be underwriting discounts and commissions under the Securities Act. Selling shareholders who are underwriters within the meaning of Section 2(a)(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act.

To the extent required, the shares of our common stock to be sold, the names of the selling shareholders, the respective purchase prices and public offering prices, the names of any agents, dealer or underwriter, any applicable commissions or discounts with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement that

includes this prospectus.

In order to comply with the securities laws of some states, if applicable, the common stock may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the common stock may not be sold unless it has been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

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We have advised the selling shareholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of shares in the market and to the activities of the selling shareholders and their affiliates. In addition, to the extent applicable we will make copies of this prospectus (as it may be supplemented or amended from time to time) available to the selling shareholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The selling shareholders may indemnify any broker-dealer that participates in transactions involving the sale of the shares against certain liabilities, including liabilities arising under the Securities Act.

We have agreed to indemnify the selling shareholders against liabilities, including liabilities under the Securities Act and state securities laws, relating to the registration of the shares offered by this prospectus.

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EXPERTS

The consolidated financial statements of Enova Systems, Inc. as of December 31, 2010 and 2009 have been incorporated by reference herein in reliance upon the report of PMB Helin Donovan, LLP, independent registered public accounting firm, given upon the authority of that firm as experts in accounting and auditing.

LEGAL MATTERS

The validity of our common stock offered hereby will be passed upon for us by Reed Smith LLP, San Francisco, California.

WHERE YOU CAN FIND MORE INFORMATION

We electronically file annual, quarterly and special reports, proxy and information statements and other information with the SEC. The public may read and copy any materials we file with the SEC at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC. The address of that site is <http://www.sec.gov>. Our website address is www.enovasystems.com. Information contained in, or accessible through, our website is not a part of this prospectus.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference the information we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and any filings that we will make with the SEC (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act on or after the initial filing date of the registration statement of which this prospectus forms a part and prior to the termination of this offering:

Our Annual Report on Form 10-K for the fiscal year ended December 31, 2010 filed on March 30, 2011;

Our Quarterly Reports on Form 10-Q for the fiscal quarter ended March 31, 2011 filed on May 12, 2011, for the fiscal quarter ended June 30, 2011 filed on August 15, 2011, and for the fiscal quarter ended September 30, 2011 filed on November 10, 2011;

Our Current Reports on Form 8-K filed on January 20, 2011, June 21, 2011, December 19, 2011, December 23, 2011, January 6, 2012, and January 26, 2012; and

The description of our common stock included in our registration statement on Form 8-A filed with the SEC on August 28, 2006. We will provide without charge upon written or oral request, to each person, including any beneficial owner, to whom a prospectus is delivered, a copy of any or all of the documents incorporated by reference, including exhibits to these documents. You should direct any requests for documents to:

Chief Financial Officer

Enova Systems, Inc.

1560 West 190th Street

Torrance, CA 90501

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The following table lists the costs and expenses payable by the registrant in connection with the sale of the securities covered by this prospectus other than any sales commissions or discounts, which expenses will be paid by the selling shareholders. All amounts shown are estimates except for the SEC registration fee.

| | |
|---------------------------------|-----------|
| SEC registration fee | \$ 980 |
| Legal fees and expenses | \$ 25,000 |
| Accounting fees and expenses | \$ 15,000 |
| Miscellaneous fees and expenses | \$ 5,000 |
| Total | \$ 45,980 |

Item 15. Indemnification of Directors and Officers

Sections 204(a)(10), 204(a)(11), 204.5 and 317 of the California General Corporation Law (CGCL) permit a corporation to indemnify its directors, officers, employees and other agents in terms sufficiently broad to permit indemnification (including reimbursement for expenses) under certain circumstances for liabilities arising under the Securities Act. Our Articles of Incorporation provide that the liability of directors for monetary damages shall be eliminated to the fullest extent permitted under California law. In addition, our Articles of Incorporation provide that we are authorized to provide indemnification of agents through bylaw provisions or through agreements with the agents, or both, in excess of the indemnification otherwise permitted by Section 317 of the CGCL, subject only to the applicable limits set forth in Section 204 of the CGCL.

Our Bylaws provide that we may indemnify any person who was or is a party or is threatened to be made a party to any proceeding by reason of the fact that such person was an agent of the Company, against expenses, judgments, fines, settlements and other amounts actually and reasonably incurred in connection with such proceeding. We may advance expenses incurred in defending any proceeding prior to the final disposition of such proceeding.

The above discussion of the CGCL and our Articles of Incorporation and Bylaws is not intended to be exhaustive and is qualified in its entirety by such statutes, Articles of Incorporation and Bylaws.

Indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers and controlling persons under the foregoing provisions, or otherwise. We have been advised that in the opinion of the Securities and Exchange Commission this indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

Item 16. Exhibits

| Number | Exhibit |
|--------|---|
| 4.1 | Warrant and Common Stock Purchase Agreement dated December 15, 2011 (incorporated by reference to Exhibit 99.1 of our Current Report on Form 8-K filed December 19, 2011) |
| 4.2 | Form of Warrant (incorporated by reference to Exhibit 99.2 of our Current Report on Form 8-K filed December 19, 2011) |
| 4.3 | Form of Registration Rights Agreement dated December 2011 (incorporated by reference to Exhibit 99.3 of our Current Report on Form 8-K filed December 19, 2011) |
| 5.1 | Opinion of Reed Smith LLP |
| 23.1 | Consent of Independent Registered Public Accounting Firm |
| 23.2 | Consent of Reed Smith LLP (included in their opinion filed as Exhibit 5.1) |

24 Power of Attorney (included in signature page hereto)

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Item 17. Undertakings

The undersigned registrant hereby undertakes:

To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

- (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
- (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement.
- (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

Provided, however, that paragraphs (i), (ii), and (iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

That, for purposes of determining liability under the Securities Act of 1933 to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. *Provided, however,* that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as amended that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be

governed by the final adjudication of such issue.

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Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Torrance, State of California, on the 2nd day of February, 2012.

ENOVA SYSTEMS, INC.

By: /s/ Michael Staran
Michael Staran
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Michael Staran and John Micek, and each of them, as his true and lawful attorney-in-fact and agent, each with the full power of substitution and resubstitution, for him and in his name, place or stead, in any and all capacities, to sign any and all amendments to this registration statement (including any and all post-effective amendments), and to sign any registration statement for the same offering covered by this registration statement that is to be effective upon filing pursuant to Rule 462(b) promulgated under the Securities Act of 1933, and all post-effective amendments thereto, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or their or his or substitutes, may lawfully do or cause to be done by virtue hereof. This Power of Attorney may be signed in several counterparts. Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

| Signature | Title(s) | Date |
|--|--|------------------|
| /s/ Michael Staran Michael Staran | President and Chief Executive Officer, and Director (<i>Principal Executive Officer</i>) | February 2, 2012 |
| /s/ John Micek John Micek | Chief Financial Officer, and Director (<i>Principal Financial and Accounting Officer</i>) | February 2, 2012 |
| /s/ Edwin O. Riddell Edwin O. Riddell | Director | February 2, 2012 |
| /s/ John R. Wallace John R. Wallace | Director | February 2, 2012 |
| /s/ Richard Davies Richard Davies | Director | February 2, 2012 |

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EXHIBIT INDEX

| Number | Exhibit |
|---------------|--|
| 5.1 | Opinion of Reed Smith LLP |
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