

ORION ENERGY SYSTEMS, INC.

Form 424B5

February 11, 2015

Table of Contents

Filed Pursuant to Rule 424(b)(5)

Registration No. 333-193411

The information in this preliminary prospectus supplement is not complete and may be changed. This preliminary prospectus supplement and the accompanying prospectus are not offers to sell these securities and are not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

Subject to Completion, Dated February 11, 2015

PRELIMINARY PROSPECTUS SUPPLEMENT

(To Prospectus dated February 3, 2014)

\$15,000,000

ORION ENERGY SYSTEMS, INC.

\$ per share

We are offering \$15,000,000 of shares of our common stock. Our common stock is listed on the NYSE MKT under the symbol OESX. The closing price of our common stock on February 10, 2015 was \$4.71 per share.

Investing in our common stock involves certain risks. You should review carefully the information described under the heading Risk Factors beginning on page S-7 of this prospectus supplement and in our Annual Report on Form 10-K for the year ended March 31, 2014 and our Quarterly Report on Form 10-Q for the quarter ended December 31, 2014 before you decide to invest in our common stock.

	Per Share	Total
Public offering price	\$	\$
Underwriting discounts and commissions ⁽¹⁾	\$	\$
Proceeds, before expenses, to us	\$	\$

(1) In addition to the underwriting discount, we have agreed to pay up to \$125,000 of the fees and expenses of the underwriter in connection with this offering. See Underwriting for additional information regarding underwriting compensation.

We have granted the underwriter a 30-day option to purchase up to an additional shares from us (15% of the number of shares we are offering) on the same terms and conditions as set forth above, to cover over-allotments, if any.

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

Craig-Hallum Capital Group

The date of this prospectus supplement is , 2015.

Table of Contents

TABLE OF CONTENTS

Prospectus Supplement

	Page
<u>ABOUT THIS PROSPECTUS SUPPLEMENT</u>	S-ii
<u>FORWARD-LOOKING STATEMENTS</u>	S-iii
<u>PROSPECTUS SUPPLEMENT SUMMARY</u>	S-1
<u>RISK FACTORS</u>	S-7
<u>USE OF PROCEEDS</u>	S-9
<u>DILUTION</u>	S-10
<u>COMMON STOCK PRICE RANGE AND DIVIDENDS</u>	S-11
<u>CAPITALIZATION</u>	S-12
<u>UNDERWRITING</u>	S-13
<u>LEGAL MATTERS</u>	S-16
<u>EXPERTS</u>	S-16
<u>WHERE YOU CAN FIND MORE INFORMATION</u>	S-16

Prospectus

	Page
<u>About This Prospectus</u>	1
<u>Orion Energy Systems, Inc.</u>	2
<u>Use of Proceeds</u>	2
<u>Securities To Be Offered</u>	2
<u>Description of Debt Securities</u>	2
<u>Description of Capital Stock</u>	11
<u>Description of Warrants</u>	16
<u>Description of Stock Purchase Contracts and Stock Purchase Units</u>	18
<u>Where You Can Find More Information</u>	19
<u>Selling Shareholders</u>	20
<u>Plan of Distribution</u>	20
<u>Legal Matters</u>	23

Experts

23

S-i

Table of Contents

ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this offering. The second part, the accompanying prospectus, gives more general information, some of which may not apply to this offering. Generally, when we refer only to the prospectus, we are referring to both parts combined.

If information in this prospectus supplement is inconsistent with the accompanying prospectus, you should rely on this prospectus supplement. This prospectus supplement, the accompanying prospectus, any other offering material and the documents incorporated into each by reference include important information about us, the shares of our common stock being offered and other information you should know before investing. You should read this prospectus supplement and the accompanying prospectus as well as additional information described under **Where You Can Find More Information** in this prospectus supplement and the accompanying prospectus before investing in shares of our common stock.

In making your investment decision, you should rely only on the information contained in or incorporated by reference in this prospectus supplement, the accompanying prospectus and any free writing prospectus filed by us with the Securities and Exchange Commission (SEC) and any other offering material we or the underwriter provide. We have not, and the underwriter has not, authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. Neither we nor the underwriter are making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should assume that the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus is accurate only as of the date of this prospectus supplement or the accompanying prospectus, as the case may be, or in the case of the documents incorporated by reference, the date of such documents, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus or any sales of our common stock. Our business, financial condition, results of operations and prospects may have changed since those dates.

Unless the context otherwise requires, in this prospectus, Orion, company, we, us, our and ours refer to Orion Systems, Inc. and its subsidiaries.

Table of Contents

FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus, the documents that are incorporated by reference in this prospectus supplement and the accompanying prospectus and any free writing prospectuses filed by us with the SEC may contain statements that constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These forward-looking statements generally relate to our plans, intentions, objectives, estimates and expectations for future events and include statements about our plans, intentions, objectives, estimates and expectations, assumptions and other statements that are not historical facts. Such forward-looking statements, including those concerning our expectations and estimates, are subject to known and unknown risks and uncertainties, which could cause actual results to differ materially from the results, projected, expected or implied by the forward-looking statements, some of which are beyond our control, that may cause our actual results, performance or achievements, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. These risks and uncertainties include but are not limited to:

our development of, and participation in, new product and technology offerings or applications, including customer acceptance of our new light emitting diode product lines;

deterioration of market conditions, including our dependence on customers' capital budgets for sales of products and services;

our ability to compete and execute our strategy in a highly competitive market and our ability to respond successfully to market competition;

our ability to successfully implement our strategy of focusing on lighting solutions using new LED technologies in lieu of traditional HIF lighting upon which our business has historically relied;

our ability to realize expected cost savings from our transition to focusing on new LED technologies;

our ability to effectively manage the acquisition of Harris Manufacturing, Inc. and Harris LED, LLC, collectively Harris, and our ability to successfully complete and fund potential future acquisitions;

our ability to effectively manage the growth of our business, including expansion of our business internationally through our Orion distribution services division;

adverse developments with respect to litigation and other legal matters that we are subject to;

our failure to comply with the covenants in our revolving credit agreement;

increasing duration of customer sales cycles;

fluctuating quarterly results of operations from as we focus on new LED technologies;

the market acceptance of our products and services;

our ability to recruit and hire sales talent to increase our in-market sales;

price fluctuations, shortages or interruptions of component supplies and raw materials used to manufacture our products;

loss of one or more key customers or suppliers, including key contacts at such customers;

our ability to effectively manage our product inventory to provide our products to customers on a timely basis;

our ability to effectively manage the credit risk associated with our debt funded Orion Throughput Agreement contracts;

a reduction in the price of electricity;

the cost to comply with, and the effects of, any current and future government regulations, laws and policies;

S-iii

Table of Contents

increased competition from government subsidies and utility incentive programs;

the availability of additional debt financing and/or equity capital;

potential warranty claims; and

the other risks described in our filings with the SEC.

We urge you to consider these factors before investing in our common stock. The forward-looking statements included in this prospectus supplement, the accompanying prospectus and any other offering material, or in the documents incorporated by reference into this prospectus supplement, the accompanying prospectus and any other offering material, are made only as of the date of the prospectus supplement, the accompanying prospectus, any other offering material or the incorporated document. We undertake no obligation to publicly revise any forward-looking statements or cautionary factors except as required by law. For more detail on these and other risks, please see **Risk Factors** in this prospectus supplement, our Annual Report on Form 10-K for our fiscal year ended March 31, 2014 and our Quarterly Report on Form 10-Q for the quarter ended December 31, 2014.

S-iv

Table of Contents

PROSPECTUS SUPPLEMENT SUMMARY

*The following information is only a summary of more detailed information included elsewhere in, or incorporated by reference in, this prospectus supplement and the accompanying prospectus, and should be read together with the information contained or incorporated by reference in other parts of this prospectus supplement and the accompanying prospectus. This summary highlights selected information about us and this offering. This summary may not contain all of the information that may be important to you. You should read carefully all of the information contained in or incorporated by reference into this prospectus supplement and the accompanying prospectus, including the information set forth under the caption *Risk Factors* in this prospectus supplement and our Annual Report on Form 10-K for our fiscal year ended March 31, 2014 and our Quarterly Report on Form 10-Q for the quarter ended December 31, 2014, as well as our consolidated financial statements and the related notes thereto incorporated by reference in this prospectus supplement and the accompanying prospectus, before making a decision to invest in our common stock.*

Our Company

Business Overview

We are a leading designer and manufacturer of high-performance, energy-efficient lighting platforms. We research, develop, design, manufacture, market, sell and implement energy management systems consisting primarily of high-performance, energy efficient commercial and industrial interior and exterior lighting systems and related services. We believe that energy efficient lighting systems are cost-effective and environmentally responsible solutions allowing end users to significantly reduce operating expenses.

Our Market Opportunity

We are primarily focused on providing commercial and industrial facilities lighting retrofit solutions in North America using new solid state light emitting diode (LED) technology. While we continue to provide solutions using our legacy high intensity fluorescent (HIF) technology, we believe the market for lighting products is currently in a significant technology shift to LED lighting systems. Compared to legacy lighting systems, we believe that LED lighting technology allows for better optical performance, significantly reduced maintenance costs due to performance longevity and reduced energy consumption. Due to their size and flexibility in application we also believe that LED lighting systems can address opportunities for retrofit applications that cannot be satisfied by fluorescent or other legacy technologies.

In fiscal 2014, our LED lighting sales totaled \$4.8 million, or 7.2% of our total lighting revenue, compared to \$1.9 million, or 2.8% of our total lighting revenue for fiscal 2013. For the first nine months of fiscal 2015, LED lighting sales totaled \$20.5 million, or 39.9% of our total lighting revenue, compared to \$3.5 million, or 6.4% of our total lighting revenue, for the first nine months of fiscal 2014. We expect our LED lighting technologies to become the primary component of our future revenue as we strive to be the leader in the industry transition to LED lighting technology.

According to a May 2013 report published by the United States Department of Energy, or DOE, we estimate the potential North American retrofit market within our primary markets to be approximately 1.1 billion lighting fixtures. Our primary markets are: (i) commercial office and retail; (ii) area lighting; and (iii) industrial facilities.

Commercial office and retail. Our commercial office and retail market includes commercial office buildings, retail store fronts, government offices, schools and other buildings with traditional ten to 12 foot ceiling heights. The DOE

estimates that there are approximately 957 million office troffer fixtures within the United States, which is a rectangular light fixture that fits into a modular dropped ceiling grid.

S-1

Table of Contents

Area lighting. Our market for area lighting includes parking garages, surface lots, automobile dealerships and gas service stations. The DOE estimates that there are approximately 54 million area lighting fixtures within the United States.

Industrial facilities. Our market for industrial facilities includes manufacturing facilities, distribution and warehouse facilities, government buildings and agricultural buildings. These facilities typically contain high bay lighting fixtures. The DOE estimates that there are approximately 67 million high bay fixtures within the United States.

Products and Solutions

Our lighting products consist primarily of LED and HIF lighting fixtures, although our primary focus in the future will be emphasizing our LED lighting fixtures. Substantially all of our products are manufactured at our production facility located in Wisconsin, although we are increasingly sourcing products and components from third parties. We are focused on researching, developing and/or acquiring new LED products and technologies that are innovative in the retrofit markets, such as the LED door retrofit and exterior LED lighting products introduced in October 2014. We plan to focus our efforts into creating innovative LED retrofit products while continuing to market and sell legacy HIF solutions to customers in markets where LED technology adoption is in its infancy. Together with these products, we offer our customers a variety of integrated energy management services, such as system design, project management and installation.

Our Primary Products

Our LED Door Retrofit. We introduced our LED door retrofit, or LDR™, product to the marketplace in January 2014. Our LDR™ is designed to replace existing fluorescent troffers that are frequently found in office or retail grid ceilings. Our LDR™ product is unique in that the LED optics and electronics are housed within the door frame which allows for easy and inexpensive installation in approximately one minute. Additionally, our LDR™ offers our customers reduced maintenance expenses based upon LED chip lives ranging from 187,000 to 375,000 hours, which we equate to a performance life of the fixture's light source of between 60 and 100 years.

Exterior LED Fixtures. In October 2014, we launched a suite of new exterior LED lighting products:

Orion ISON® Class LED Exterior Area Fixture. Our patent pending ISON® class LED exterior area fixture offers a full package of premium features, including low total cost of ownership, optics that exceed competitors in terms of lumen package, delivered light, modularity, advanced thermal management, and numerous accessory options (such as ambient sensors and fixture color). Our ISON® class LED Wall Pack is a wall mounted fixture to complement our ISON® class LED Area Light.

Apollo™ LED Exterior Area Light and Apollo™ LED Wall Pack. Our Apollo™ LED Exterior Area Light and Apollo™ LED Wall Pack are designed to meet the market demand for long life exterior applications. Our exterior Apollo™ line products are ideal for new construction and restoration projects where initial cost is the largest factor in the purchase decision.

Our Compact Modular. Historically, our primary product has been our line of high-performance HIF lighting systems, the Compact Modular, which includes a variety of fixture configurations to meet customer specifications. Our Compact Modular generally operates at 224 watts per six-lamp fixture, compared to approximately 465 watts for the high intensity discharge, or HID, fixtures that it typically replaces.

InteLite® Dynamic Control Device. Our InteLite® wireless dynamic control products allow customers to remotely communicate with, and give commands to, individual light fixtures and other peripheral devices through web-based software, and allow the customer to configure and easily change the control parameters of

S-2

Table of Contents

each fixture based on a number of inputs and conditions, including time-of-day, motion and ambient light levels. These capabilities allow for our customers to measure and evaluate energy consumption at the process level. Data can be collected and exported, allowing our customers to perform energy analysis across their facilities to identify operational practices and behaviors that better manage energy costs.

Apollo® Solar Light Pipe. Our Apollo® Solar Light Pipe is a lens-based device that collects and focuses renewable daylight, bringing natural light indoors without consuming electricity.

Our Solutions

50/50 Value Proposition. We estimate our industrial high-bay lighting systems generally reduce lighting-related electricity costs by approximately 50% to 80% compared to legacy fixtures, while increasing the quantity of light by approximately 50% and improving lighting quality. In the commercial office and retail markets, we estimate our lighting systems generally reduce electricity costs by 50%.

Multi-Facility Roll-Out Capability. We offer our customers a single source, turn-key solution for project implementation in which we manage and maintain responsibility for entire multi-facility roll-outs of our energy management solutions across North American commercial and industrial facility portfolios. This capability allows us to offer our customers an orderly, timely and scheduled process for recognizing energy reductions and cost savings.

Rapid Payback Period. In most retrofit projects where we replace HID or HIF fixtures, our customers typically realize a one-to three-year payback period on our lighting systems without considering utility incentives or government subsidies.

Comprehensive Energy Management System. Our comprehensive energy management system enables us to reduce our customers' base and peak load electricity consumption.

Easy Installation, Implementation and Maintenance. Most of our fixtures are designed with a lightweight construction and modular plug-and-play architecture that allows for fast and easy installation, facilitates maintenance and allows for easy integration of other components of our energy management system.

Environmental Benefits. By allowing for the permanent reduction of electricity consumption, our energy management systems reduce indirect CO2 emissions that are a negative by-product of energy generation.

Our Competitive Strengths

Compelling Value Proposition. By permanently reducing lighting-related electricity usage, our systems enable our customers to achieve significant cost savings, without compromising the quantity or quality of light in their facilities.

Large and Growing Customer Base. We have developed a large and growing national customer base, and have installed our products in more than 10,400 commercial and industrial facilities across North America.

Innovative Technology. We believe that our demonstrated ability to innovate provides us with significant competitive advantages. We believe that our lighting solutions offer significantly more light output as measured in foot-candles of light delivered per watt of electricity consumed when compared to HID, HIF or traditional fluorescent fixtures. Our commercial office and retail LED product is designed to reduce installation costs. Our modular LED exterior products allow for a customizable product which can be configured to meet customer requirements without additional costs.

S-3

Table of Contents

Expanded Reseller Network. In addition to selling directly to commercial and industrial customers, we sell our lighting products and services indirectly to end users through wholesale sales to our growing network of electrical contractors and energy service companies. As of December 31, 2014, we had increased our network of regional resellers to 101, up from 30 at March 31, 2014.

Strong, Experienced Leadership Team. We have a strong and experienced senior management team led by our chief executive officer, John Scribante. Our senior leadership team of six individuals has a combined 58 years of experience with our company and a combined 72 years of experience in the lighting and energy management industries.

Efficient, Scalable Manufacturing Process. We have made significant investments in our manufacturing facility, including investments in production efficiencies, automated processes and modern production equipment. Additionally, we have implemented LEAN manufacturing concepts which have improved production efficiencies and further reduced manufacturing costs.

Innovative Financing Solutions. We have developed a financing program called the Orion Throughput Agreement, or OTA. Our OTA is structured similarly to a supply contract under which we commit to deliver a set amount of energy savings to the customer at a fixed monthly rate. Our OTA program allows customers to deploy our energy management systems without having to make upfront investments or capital outlays. After the pre-determined amount of energy savings are delivered, our customers assume full ownership of the energy management system and benefit from the entire amount of energy savings over the remaining useful life of the technology.

Our Growth Strategies

Emphasize LED Product and Market. We believe that the market for lighting products is currently experiencing a significant technology shift to LED lighting systems. Accordingly, our primary focus in the future will be emphasizing our lighting retrofit solutions using new LED technologies.

Develop New Sources of Revenue Through Expanded LED Product Offerings. We plan to research, develop and/or acquire new LED technologies that are innovative in the retrofit markets in order to expand our LED product offerings and lead the industry transformation to LED lighting systems.

Leverage Existing Customer Base. We are working to expand relationships with our existing customers by transitioning from single-site facility implementations to comprehensive enterprise-wide roll-outs of our lighting systems and leveraging our large installed base of HIF lighting systems to implement all aspects of our energy management system, particularly new LED lighting products, wireless controls, cloud-based power data analysis and storage capabilities for our existing customers.

Expanded Reseller Network and Salesforce. In addition to selling directly to national account customers, we sell our lighting products and services indirectly to end users through wholesale sales to electrical contractors and energy service companies. We continue to build out our reseller network and we are also increasing our in-market sales force which generates revenue through our reseller channels.

Continue to Improve Operational Efficiencies. We are focused on continually improving the efficiency of our operations to increase the profitability of our business, including LEAN process initiatives at our manufacturing facility.

Pursue Additional Acquisitions. We acquired Harris Manufacturing, Inc. and Harris LED, LLC, or collectively, Harris, in July 2013. Harris engineered, designed, sourced and manufactured energy efficient

S-4

Table of Contents

lighting systems, including fluorescent and LED lighting solutions, and day-lighting products. In the future, we intend to pursue additional acquisition opportunities to increase the breadth of our energy technologies, expand our customer base, or provide us entry into new markets.

Create a Culture to Support Growth. We are focused on establishing a corporate culture that embraces high-expectations and performance to continue to drive efficiency and deliver superior results to our customers.

Recent Developments

Cost Containment Initiative in Connection with Our Transition to LED Products. During the fiscal 2015 fourth quarter, we identified potential annualized cost reductions of up to approximately \$10.0 million resulting from our ongoing business transition from our historical focus on our legacy fluorescent lighting products to our current focus on our new LED lighting products. These reductions include expected cost reductions from strategic sourcing initiatives, reduced compensation costs in our manufacturing and corporate operations, and other reductions in our operating expenses. We expect to fully implement these cost reductions before the first quarter of our fiscal 2016, although the cost savings will not be fully realized until fiscal 2016. We expect to incur approximately \$0.4 million of severance expense related to headcount reductions during our fiscal 2015 fourth quarter.

New Initiatives to Support Our Continued Transition to LED Products. During fiscal 2015, we have focused on converting our manufacturing production assembly lines from predominantly HIF lighting assembly lines to LED lighting assembly lines. We are considering implementing additional significant changes to our manufacturing production and assembly facility and processes that will provide us additional flexibility to continue to adapt and respond to the changing market dynamics of the lighting products industry and to continue to enhance our competitiveness. It is possible that the implementation of such changes could result in us recognizing asset impairment charges or other similar write downs, and incurring other repositioning expenses and charges. As part of our business initiatives to adapt to the rapidly evolving LED market, we are also currently considering options related to our properties, including the sale and leaseback of our manufacturing and corporate facilities that, if executed, may result in a significant impairment charge. Additionally, we have been managing through significant change in our vendor supply chain as our LED product portfolio and our product revenue continues to increase and we place most of our focus on this product line. We believe that our recent efforts to negotiate future lower material input costs will improve our LED product gross margins beginning during our fiscal 2016, and after we have completed our existing inventory purchase commitments. However, we may not be able to realize the gross margin benefits in the amounts or on the timetable anticipated and we may experience higher warranty expenses in the future as we implement our manufacturing and assembly process changes. It is also possible that, as we continue to focus our sales efforts on our LED product portfolio, we may increase our risk of inventory obsolescence for our legacy lighting product lines or even outmoded LED products. During fiscal 2016, we intend to open an innovation hub in Chicago, Illinois to develop and design new LED products. We believe that this location is in close proximity to highly-regarded engineering and business schools and will offer us a greater supply of technical talent to help us develop new LED products in the future. We may incur additional start-up expenses for this new innovation hub, as well as additional compensation expense as we add research and development and engineering personnel.

Corporate Information

We are a Wisconsin corporation and our corporate headquarters are located at 2210 Woodland Drive, Manitowoc, Wisconsin 54220. Our telephone number is (920) 892-9340. Our Internet website address is www.oesx.com. We do not incorporate the information on our website into this prospectus, and you should not consider it part of this prospectus.

S-5

Table of Contents**The Offering**

The following summary contains basic information about this offering. The summary is not intended to be complete. You should read the full text and more specific details contained elsewhere in this prospectus supplement.

Issuer	Orion Energy Systems, Inc.
Common stock offered by us	shares.
Option to purchase additional shares of common stock	We have granted the underwriter an option exercisable for a period of 30 days from the date of this prospectus supplement to purchase up to an additional shares of common stock (15% of the number of shares of common stock offered by us) at the public offering price, less the underwriting discount, to cover over-allotments, if any.
Common stock to be outstanding after this offering⁽¹⁾	shares (or shares if the over-allotment option is exercised in full)
NYSE MKT symbol	OESX
Use of proceeds	<p>We estimate that the net proceeds from this offering will be approximately \$13.6 million, assuming \$15.0 million of common stock is sold in this offering, or approximately \$15.8 million if the underwriter exercises in full its option to purchase additional shares of common stock to cover over-allotments, in each case, after deducting underwriting discounts and commissions and our estimated expenses related to the offering.</p> <p>We intend to use the net proceeds from this offering for general corporate purposes, which may include, but are not limited to pursuing acquisitions, expanding our LED lighting business and supporting our working capital needs, although no acquisitions are currently contemplated. See Use of Proceeds.</p>
Risk factors	See Risk Factors and the other information included or incorporated by reference in this prospectus supplement and the accompanying prospectus for a discussion of certain factors you should carefully consider before deciding to invest in shares of our common stock.

- (1) The number of shares outstanding after this offering is based on 21,943,550 shares of common stock outstanding as of February 9, 2015. The number of shares of common stock to be outstanding after this offering excludes the following as of February 9, 2015: (i) 2,451,410 shares of common stock issuable upon the exercise of outstanding stock options; (ii) 728,084 shares of common stock issuable upon vesting of outstanding restricted common stock; (iii) 1,046,108 shares of common stock available for future stock award grants; and (iv) 2,218,082 shares of common stock available for issuance under our employee stock purchase plan.

Table of Contents

RISK FACTORS

Investing in our common stock involves risk. Before you invest in our common stock you should carefully consider the following risk factors, as well as the other information in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, and carefully read the risks described in the documents incorporated by reference in this prospectus supplement and the accompanying prospectus, including those set forth under the caption "Risk Factors" in our Annual Report on Form 10-K for our fiscal year ended March 31, 2014, and our Quarterly Report on Form 10-Q for the quarter ended December 31, 2014. Any of these risks could cause our actual results to vary materially from recent results or from anticipated future results or could materially and adversely affect our business, financial condition and results of operations. This effect could be compounded if multiple risks were to occur. The occurrence of any of these risks might cause you to lose all or part of your investment. Please also refer to the section above entitled

Forward-Looking Statements regarding forward-looking statements included or incorporated herein by reference.

Risks Related to the Offering

Fluctuations in the price of our common stock, including as a result of actual or anticipated sales of shares by shareholders, may make our common stock more difficult to resell.

The market price and trading volume of our common stock have been and may continue to be subject to significant fluctuations due not only to general stock market conditions, but also to a change in sentiment in the market regarding the industry in which we operate, our operations, business prospects or liquidity or this offering. During the period from April 1, 2012 to February 10, 2015, our common stock has fluctuated from a high of \$8.11 per share to a low of \$1.12 per share. In addition to the risk factors discussed in our periodic reports and in this prospectus supplement, the price and volume volatility of our common stock may be affected by actual or anticipated sales of common stock by existing shareholders, including of shares purchased in this offering, whether in the market or in subsequent public offerings. Stock markets in general have experienced extreme volatility recently that has at times been unrelated to the operating performance of particular companies. These broad market fluctuations may adversely affect the trading price of our common stock, regardless of our operating results.

As a result, these fluctuations in the market price and trading volume of our common stock may make it difficult to predict the market price of our common stock in the future, cause the value of your investment to decline and make it more difficult to resell our common stock.

We have broad discretion as to the use of the net proceeds we receive from this offering and may not use them effectively.

We retain broad discretion to use the net proceeds from this offering of our common stock. Accordingly, you will have to rely upon the judgment of our management with respect to the use of those net proceeds. Our management may spend a portion or all of the net proceeds we receive from this offering in ways that our shareholders may not desire or that may not yield a favorable return. The failure by our management to apply these funds effectively could harm our business.

Purchasers will suffer immediate and substantial dilution as a result of this offering.

Purchasers of shares of our common stock offered by this prospectus will suffer immediate and substantial dilution of their investment. Purchasers in this offering will suffer immediate dilution of approximately \$ _____ per share in the net tangible book value of the common stock. See "Dilution" on page S-10 of this prospectus supplement for a more

detailed discussion of the dilution purchasers will incur in this offering.

S-7

Table of Contents

Our shareholders may experience further dilution if we issue additional shares of common stock in the future.

Any additional future issuances of common stock by us will reduce the percentage of our common stock owned by investors purchasing shares in this offering who do not participate in such future issuances. In most circumstances shareholders will not be entitled to vote on whether or not we issue additional common stock. In addition, depending on the terms and pricing of an additional offering of our common stock and the value of our assets, our shareholders may experience dilution in both the book value and fair value of their shares.

There may be future sales or other dilution of our equity which may adversely affect the market price of our common stock.

Except as described under **Underwriting**, we are not restricted from issuing additional common stock, including securities that are convertible into or exchangeable for, or that represent the right to receive, common stock. We are offering _____ shares of common stock, and potentially an additional _____ shares of common stock if the over-allotment option is exercised in full. The issuance of additional shares of our common stock in this offering or other issuances of our common stock or convertible or other equity linked securities, including options and warrants, or otherwise, in connection with capital raising transactions, as payment of the consideration for acquisitions or for employee compensation or other purposes will dilute the ownership interest of our common shareholders. As of February 9, 2015, we had 21,943,550 outstanding shares of common stock, which excludes the following as of February 9, 2015: (i) 2,451,410 shares of common stock issuable upon the exercise of outstanding stock options; (ii) 728,084 shares of common stock issuable upon vesting of outstanding restricted common stock; (iii) 1,046,108 shares of common stock available for future stock award grants; and (iv) 2,218,082 shares of common stock available for issuance under our employee stock purchase plan.

Sales of a substantial number of shares of our common stock or other equity-related securities in the public market could depress the market price of our common stock and impair our ability to raise capital through the sale of additional equity securities. We cannot predict the effect that future sales of our common stock or other equity-related securities would have on the market price of our common stock.

We are not currently paying dividends and will likely continue not paying dividends for the foreseeable future.

We have never paid or declared any cash dividends on our common stock. We currently intend to retain all available funds and any future earnings to fund the development and expansion of our business, and we do not anticipate paying any cash dividends in the foreseeable future. In addition, the terms of our existing revolving credit agreement restrict the payment of cash dividends on our common stock. Any future determination to pay dividends will be at the discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements, contractual restrictions and other factors that our board of directors deems relevant.

Table of Contents

USE OF PROCEEDS

We estimate that the net proceeds from the sale of our common stock in this offering will be approximately \$13.6 million, assuming \$15.0 million of shares of common stock is sold in this offering, or approximately \$15.8 million if the underwriter exercises in full its option to purchase additional shares of common stock to cover over-allotments, in each case, after deducting underwriting discounts and commissions and our estimated expenses related to the offering. We intend to use the net proceeds from the sale of our common stock for general corporate purposes, which may include pursuing acquisitions, expanding our LED lighting business and supporting our working capital needs, although no acquisitions are currently contemplated. Pending such use, we may temporarily invest the net proceeds in short-term investments or reduce our line of credit borrowings.

S-9

Table of Contents**DILUTION**

Purchasers of shares of our common stock offered by this prospectus supplement and the accompanying prospectus will experience an immediate dilution in the net tangible book value of their common stock from the public offering price of the shares of common stock. The net tangible book value of our common stock as of December 31, 2014 was approximately \$40.5 million, or \$1.85 per share. Net tangible book value per share of our common stock is equal to our net tangible assets (shareholders' equity less goodwill and intangible assets) divided by the number of shares of our common stock issued and outstanding as of December 31, 2014.

Dilution per share represents the difference between the public offering price per share of our common stock and the adjusted net tangible book value per share of our common stock after giving effect to this offering. After reflecting the sale in this offering of _____ shares of our common stock offered by us at the public offering price of \$ _____ per share, less underwriting discount and estimated offering expenses, our adjusted net tangible book value per share of our common stock as of December 31, 2014 would have been approximately \$ _____ million or \$ _____ per share. The change represents an immediate increase in net tangible book value per share of our common stock of \$ _____ per share to existing shareholders and an immediate dilution of \$ _____ per share to new investors purchasing the shares of our common stock in this offering. The following table illustrates this per share dilution:

Public offering price per share of common stock	\$
Net tangible book value per share as of December 31, 2014	\$ 1.85
Increase per share attributable to this offering	\$
Adjusted net tangible book value per share as of December 31, 2014	\$
Dilution per share attributable to this offering	\$

If the underwriter exercises in full its option to purchase _____ additional shares of common stock at the public offering price of \$ _____ per share, the as adjusted net tangible book value after this offering would be approximately \$ _____ per share, representing an increase in net tangible book value of approximately \$ _____ per share to existing stockholders and immediate dilution in net tangible book value of approximately \$ _____ per share to new investors purchasing our common stock in this offering at the public offering price.

The foregoing calculations are based on 21,925,676 shares of our common stock outstanding as of December 31, 2014 and exclude (i) 2,529,484 shares of common stock issuable upon the exercise of outstanding stock options, (ii) 718,684 shares of common stock issuable upon vesting of outstanding restricted common stock, (iii) 995,308 shares of common stock available for future stock award grants; and (iv) 2,218,082 shares of common stock available for issuance under our employee stock purchase plan.

Table of Contents**COMMON STOCK PRICE RANGE AND DIVIDENDS****Price of Our Common Stock**

Our common stock is listed on the NYSE MKT under the symbol OESX . The following table sets forth, for the periods indicated, the intraday high and low sales prices per share of our common stock as reported on the NYSE MKT.

	High	Low
Fiscal Year Ended March 31, 2013		
First Quarter	\$ 2.51	\$ 1.90
Second Quarter	\$ 2.41	\$ 1.40
Third Quarter	\$ 1.98	\$ 1.12
Fourth Quarter	\$ 3.09	\$ 1.60
Fiscal Year Ended March 31, 2014		
First Quarter	\$ 2.51	\$ 2.00
Second Quarter	\$ 4.44	\$ 2.30
Third Quarter	\$ 7.22	\$ 3.50
Fourth Quarter	\$ 8.11	\$ 4.71
Fiscal Year Ending March 31, 2015		
First Quarter	\$ 7.42	\$ 3.75
Second Quarter	\$ 6.32	\$ 4.00
Third Quarter	\$ 5.94	\$ 4.23
Fourth Quarter (through February 10, 2015)	\$ 5.50	\$ 4.47

The last reported sale price of our common stock on the NYSE MKT on February 10, 2015 was \$4.71 per share. As of February 9, 2015, there were 21,943,550 shares of our common stock outstanding.

Dividend Payments and Policy

We have never paid or declared any cash dividends on our common stock. We currently intend to retain all available funds and any future earnings to fund the development and expansion of our business, and we do not anticipate paying any cash dividends in the foreseeable future. In addition, the terms of our existing credit agreement restrict the payment of cash dividends on our common stock. Any future determination to pay dividends will be at the discretion of our board of directors and will depend on our financial condition, results of operations, capital requirements, contractual restrictions (including those under our loan agreements) and other factors that our board of directors deems relevant.

Table of Contents**CAPITALIZATION**

The following table sets forth our cash and cash equivalents and capitalization as of December 31, 2014 on (i) an actual basis, and (ii) an as adjusted basis to give effect to the assumed sale of \$15.0 million of shares of common stock in this offering resulting in net proceeds to us of approximately \$13.6 million.

You should read this table in conjunction with Use of Proceeds and our consolidated financial statements and related notes incorporated herein by reference.

	At December 31, 2014	
	Actual	As Adjusted
	(in thousands, except	
	share amounts)	
	(unaudited)	
Cash and cash equivalents	\$ 4,755	\$ 18,355
Long-term debt:		
Harris seller's note	\$ 1,866	\$ 1,866
Customer equipment finance notes payable	1,147	1,147
First mortgage note payable	539	539
Debenture payable	638	638
Other long-term debt	166	166
Total long-term debt	\$ 4,356	\$ 4,356
Shareholders' equity:		
Common stock, no par value: Shares authorized: 200,000,000; shares outstanding: 21,925,676 on an actual basis and _____ shares outstanding on an as adjusted basis		
Additional paid-in capital	\$ 132,506	\$ 146,106
Treasury stock: 9,412,829 common shares	(35,811)	(35,811)
Shareholder notes receivable	(39)	(39)
Retained deficit	(45,259)	(45,259)
Total shareholders' equity	51,397	64,997
Total capitalization	\$ 55,753	\$ 69,353

The foregoing calculations assume no exercise of the underwriter's over-allotment option and are based on 21,925,676 shares of our common stock outstanding as of December 31, 2014 and exclude (i) 2,529,484 shares of common stock issuable upon the exercise of outstanding stock options, (ii) 718,684 shares of common stock issuable upon vesting of outstanding restricted common stock, (iii) 995,308 shares of common stock available for future stock award grants; and (iv) 2,218,082 shares of common stock available for issuance under our employee stock purchase plan.

Table of Contents**UNDERWRITING**

The underwriter named below has agreed to buy, subject to the terms of the underwriting agreement, the number of shares of common stock listed opposite its name below. The underwriter is committed to purchase and pay for all of the shares if any are purchased, other than those shares covered by the over-allotment option described below.

Underwriter	Number of Shares
Craig-Hallum Capital Group LLC	

The underwriter has advised us that it proposes to offer the shares of common stock to the public at a price of \$ per share. The underwriter proposes to offer the shares of common stock to certain dealers at the same price less a concession of not more than \$ per share. After the offering, these figures may be changed by the underwriter.

We have granted to the underwriter an option to purchase up to an additional shares of common stock from us at the same price to the public, and with the same underwriting discount, as set forth in the table below. The underwriter may exercise this option any time during the 30 day period after the date of this prospectus supplement, but only to cover over-allotments, if any. To the extent the underwriter exercises the option, the underwriter will become obligated, subject to certain conditions, to purchase the shares for which it exercises the option.

The underwriter expects to deliver the shares against payment on or about , 2015.

The table below summarizes the underwriting discounts that we will pay to the underwriter. These amounts are shown assuming both no exercise and full exercise of the over-allotment option. In addition to the underwriting discount, we have agreed to pay up to \$125,000 of the fees and expenses of the underwriter, which may include the fees and expenses of counsel to the underwriter. The fees and expenses of the underwriter that we have agreed to reimburse are not included in the underwriting discounts set forth in the table below. The underwriting discount and other items of compensation the underwriter will receive were determined through arms length negotiations between us and the underwriter.

	Per Share	Total with no Over-Allotment	Total with Over-Allotment
Underwriting discount to be paid to the underwriter by us	\$	\$	\$

We estimate that the total expenses of this offering, excluding underwriting discounts, will be \$550,000. This includes \$125,000 of fees and expenses of the underwriter. These expenses are payable by us.

We also have agreed to indemnify the underwriter against certain liabilities, including civil liabilities under the Securities Act of 1933, as amended (the Securities Act) or to contribute to payments the underwriter may be required to make because of any of those liabilities.

Lock-up Agreements

We and our executive officers and our directors have agreed with the underwriter, subject to certain exceptions, not to sell or transfer any common stock or securities convertible into, exchangeable for, exercisable for, or repayable with common stock, during the period from the date of this prospectus supplement continuing through the date 90 days after the date of this prospectus supplement, except with the prior written consent of the underwriter. This 90-day

lock-up period will be automatically extended if (1) during the last 17 days of the lock-up period we issue an earnings release or announce material news or a material event relating to us occurs or (2) prior to the expiration of the lock-up period, we announce that we will release earnings results during the

S-13

Table of Contents

16-day period following the last day of the lock-up period, in which case the restrictions described in this paragraph will continue to apply until the expiration of the 18-day period beginning on the date of the issuance of the earnings release or the announcement of the material news or the occurrence of such material event. These lock-up agreements provide limited exceptions and their restrictions may be waived at any time by the underwriter.

Director and Officer Indications of Interest of Purchase Shares in the Offering

Certain of our directors and officers have preliminarily indicated an interest in purchasing an aggregate of up to approximately \$208,000 of shares in this offering. However, because indications of interest are not binding agreements or commitments to purchase, these directors and officers may determine to purchase fewer or more shares than they have indicated an interest in purchasing or not to purchase any shares in this offering. It also is possible that the underwriter could determine to sell fewer shares to any of the directors or officers than they have indicated an interest in purchasing or not to sell any shares to these persons.

Price Stabilization, Short Positions and Penalty Bids

To facilitate this offering, the underwriter may engage in transactions that stabilize, maintain or otherwise affect the price of our common stock during and after the offering. Specifically, the underwriter may over-allot or otherwise create a short position in our common stock for its own account by selling more shares of common stock than we have sold to the underwriter. The underwriter may close out any short position by either exercising its option to purchase additional shares or purchasing shares in the open market.

In addition, the underwriter may stabilize or maintain the price of our common stock by bidding for or purchasing shares in the open market and may impose penalty bids. If penalty bids are imposed, selling concessions allowed to broker-dealers participating in this offering are reclaimed if shares previously distributed in this offering are repurchased, whether in connection with stabilization transactions or otherwise. The effect of these transactions may be to stabilize or maintain the market price of our common stock at a level above that which might otherwise prevail in the open market. The imposition of a penalty bid may also affect the price of our common stock to the extent that it discourages resales of our common stock. The magnitude or effect of any stabilization or other transactions is uncertain. These transactions may be effected on the NYSE MKT or otherwise and, if commenced, may be discontinued at any time.

In connection with this offering, the underwriter and selling group members may also engage in passive market making transactions in our common stock on the NYSE MKT. Passive market making consists of displaying bids on the NYSE MKT limited by the prices of independent market makers and effecting purchases limited by those prices in response to order flow. Rule 103 of Regulation M promulgated by the SEC limits the amount of net purchases that each passive market maker may make and the displayed size of each bid. Passive market making may stabilize the market price of our common stock at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

Electronic Distribution

A prospectus supplement in electronic format may be made available on websites or through other online services maintained by the underwriter of the offering, or by its affiliates. Other than the prospectus supplement in electronic format, the information on the underwriter's websites and any information contained in any other website maintained by the underwriter is not part of this prospectus supplement or the registration statement of which this prospectus supplement forms a part, has not been approved and/or endorsed by us or the underwriter in its capacity as underwriter and should not be relied upon by investors.

Listing

Our common stock is listed on the NYSE MKT under the symbol OESX.

S-14

Table of Contents

Selling Restrictions

No action has been taken in any jurisdiction (except in the United States) that would permit a public offering of our common stock, or the possession, circulation or distribution of this prospectus supplement, the accompanying prospectus or any other material relating to us or our common stock in any jurisdiction where action for that purpose is required. Accordingly, our common stock may not be offered or sold, directly or indirectly, and none of this prospectus supplement, the accompanying prospectus or any other offering material or advertisements in connection with our common stock may be distributed or published, in or from any country or jurisdiction, except in compliance with any applicable rules and regulations of any such country or jurisdiction.

The underwriter may arrange to sell common stock offered hereby in certain jurisdictions outside the United States, either directly or through affiliates, where they are permitted to do so.

Affiliations

The underwriter and its affiliates have provided, and may in the future provide, various investment banking, financial advisory and other financial services to us and our affiliates for which they have received, and in the future may receive, advisory or transaction fees, as applicable, plus out-of-pocket expenses of the nature and in amounts customary in the industry for these financial services.

Table of Contents

LEGAL MATTERS

The validity of the common stock offered by this prospectus supplement will be passed on for us by Foley & Lardner LLP, Milwaukee, Wisconsin. Certain legal matters in connection with this offering will be passed on for the underwriter by Faegre Baker Daniels LLP, Minneapolis, Minnesota.

EXPERTS

The financial statements and schedule as of March 31, 2014 and 2013 and for each of the three years in the period ended March 31, 2014 and management's assessment of the effectiveness of internal control over financial reporting as of March 31, 2014 incorporated by reference in this Prospectus have been so incorporated in reliance on the reports of BDO USA, LLP, an independent registered public accounting firm, incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. We also filed a registration statement on Form S-3, including exhibits, under the Securities Act of 1933, as amended, or the Securities Act, with respect to the common stock offered by this prospectus supplement. This prospectus supplement and the accompanying prospectus is a part of the registration statement, but does not contain all of the information included in the registration statement or the exhibits. You may read and copy the registration statement and any other document that we file at the SEC's public reference room at 100 F Street, N.E., Washington D.C. 20549. You can call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference room. You can also find our public filings with the SEC on the internet at a web site maintained by the SEC located at <http://www.sec.gov>.

We are incorporating by reference specified documents that we file with the SEC, which means:

incorporated documents are considered part of this prospectus supplement;

we are disclosing important information to you by referring you to those documents; and

information we file with the SEC will automatically update and supersede information contained in this prospectus supplement.

We incorporate by reference the documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus supplement and prior to the termination of the offering under this prospectus supplement:

our Annual Report on Form 10-K for our fiscal year ended March 31, 2014;

our Definitive Proxy Statement on Schedule 14A filed June 24, 2014;

Edgar Filing: ORION ENERGY SYSTEMS, INC. - Form 424B5

our Quarterly Reports on Form 10-Q for the quarters ended June 30, 2014, September 30, 2014 and December 31, 2014;

our Current Reports on Form 8-K filed August 11, 2014 and September 3, 2014; and

the description of our common stock contained in or incorporated into our Registration Statement on Form 8-A, filed March 31, 2010, and any amendment or report updating that description.

Information in this prospectus supplement supersedes related information in the documents listed above, and information in subsequently filed documents supersedes related information in both this prospectus supplement and the incorporated documents.

S-16

Table of Contents

We will promptly provide, without charge to you, upon written or oral request, a copy of any or all of the documents incorporated by reference in this prospectus supplement, other than exhibits to those documents, unless the exhibits are specifically incorporated by reference in those documents. Requests should be directed to:

Investor Relations

Orion Energy Systems, Inc.

2210 Woodland Drive

Manitowoc, WI 54220

(800) 660-9340

You can also find these filings on our website at www.oesx.com. We are not incorporating the information on our website other than these filings into this prospectus supplement.

S-17

Table of Contents

Prospectus

Orion Energy Systems, Inc.

Debt Securities

Common Stock

Preferred Stock

Warrants

Stock Purchase Contracts

Stock Purchase Units

We may offer and sell from time to time up to \$75 million of any combination of the securities described in this prospectus, in one or more classes or series and in amounts, at prices and on terms that we will determine at the times of the offerings. In addition, selling shareholders may from time to time sell up to 839,855 shares of our common stock. We will not receive any proceeds from the sale, if any, of common stock by selling shareholders.

This prospectus describes the general manner in which our securities may be offered using this prospectus. We will provide specific terms of the securities, including the offering prices, in one or more supplements to this prospectus. The supplements may also add, update or change information contained in this prospectus. You should read this prospectus and the prospectus supplement relating to the specific issue of securities carefully before you invest.

We and/or the selling shareholders may offer the securities independently or together in any combination for sale directly to purchasers or through underwriters, dealers or agents to be designated at a future date. The supplements to this prospectus will provide the specific terms of the plan of distribution.

Our common stock is listed on the NYSE MKT under the symbol OESX. The last reported sale price of the common stock on January 14, 2014 was \$7.60 per share.

Investment in our securities involves risks. Please read carefully the section entitled **Risk Factors in our most recent Annual Report on Form 10-K and in any applicable prospectus supplement and/or other offering material for a discussion of certain factors which should be considered in an investment of the securities which may be offered hereby.**

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 February 3, 2014.

Table of Contents**TABLE OF CONTENTS**

	Page
<u>About This Prospectus</u>	1
<u>Orion Energy Systems, Inc.</u>	2
<u>Use of Proceeds</u>	2
<u>Securities To Be Offered</u>	2
<u>Description of Debt Securities</u>	2
<u>Description of Capital Stock</u>	11
<u>Description of Warrants</u>	16
<u>Description of Stock Purchase Contracts and Stock Purchase Units</u>	18
<u>Where You Can Find More Information</u>	19
<u>Selling Shareholders</u>	20
<u>Plan of Distribution</u>	20
<u>Legal Matters</u>	23
<u>Experts</u>	23

ABOUT THIS PROSPECTUS

Unless the context otherwise requires, in this prospectus, Orion, company, we, us, our and ours refer to Orion Energy Systems, Inc.

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, using a shelf registration process. Under this shelf registration process, we may, from time to time, sell the securities or combinations of the securities described in this prospectus in one or more offerings up to an aggregate dollar amount of \$75,000,000. In addition, selling shareholders may from time to time sell up to 839,855 shares of our common stock in one or more secondary offerings. This prospectus provides you with a general description of the securities that we and our selling shareholders may offer. Each time we or our selling shareholders offer securities, we will provide a prospectus supplement and/or other offering material that will contain specific information about the terms of that offering. The prospectus supplement and/or other offering material may also add, update or change information contained in this prospectus. You should read this prospectus, any prospectus supplement and any other offering material together with additional information described under the heading **Where You Can Find More Information**.

You should rely only on the information contained or incorporated by reference in this prospectus and in any prospectus supplement or other offering material. Neither we nor the selling shareholders have authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. Neither we nor the selling shareholders are making offers to sell or solicitations to buy the securities in any jurisdiction in which an offer or solicitation is not authorized or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation. You should not assume that the information in this prospectus, any prospectus supplement or any other offering material, or the information we previously filed with the SEC that we incorporate by reference in this prospectus or any prospectus supplement, is accurate as of any date other than its respective date. Our business, financial condition, results of operations and prospects may have changed since those dates.

Table of Contents

ORION ENERGY SYSTEMS, INC.

We are a leading power technology enterprise. We research, develop, design, manufacture, market and implement energy management systems consisting primarily of high-performance, energy efficient lighting systems, controls and related services. We also market and implement renewable energy systems consisting primarily of solar generating photovoltaic systems and wind turbines. We operate in two business segments, which we refer to as our energy management division and our engineered systems division.

We are a Wisconsin corporation and our corporate headquarters are located at 2210 Woodland Drive, Manitowoc, Wisconsin 54220. Our telephone number is (920) 892-9340. Our Internet website address is www.oesx.com. We do not incorporate the information on our website into this prospectus, and you should not consider it part of this prospectus.

USE OF PROCEEDS

Unless otherwise described in the applicable prospectus supplement, we intend to use the net proceeds from the sale of the securities for general corporate purposes, including potentially expanding existing businesses, acquiring businesses and investing in other business opportunities. Pending such use, we may temporarily invest the net proceeds in short-term investments.

We will not receive any proceeds from the sale of shares of common stock by selling shareholders.

SECURITIES TO BE OFFERED

We may offer debt securities, shares of common stock, shares of preferred stock, warrants, stock purchase contracts and stock purchase units from time to time in one or more primary offerings, and selling shareholders may offer common stock from time to time in one or more secondary offerings. We will set forth in the applicable prospectus supplement a description of the securities that may be offered under this prospectus. The terms of the offering of securities, the initial offering price and the net proceeds to us or the selling shareholders will be contained in the prospectus supplement and/or other offering material relating to such offering.

DESCRIPTION OF DEBT SECURITIES

The following description of the terms of the debt securities sets forth general terms that may apply to the debt securities and provisions of the indenture that will govern the debt securities, and is not complete. We will describe the particular terms of any debt securities in the prospectus supplement relating to those debt securities.

The debt securities will be our senior debt securities and will be issued under an indenture between us and a trustee, a form of which is incorporated by reference into this prospectus and attached as an exhibit to the registration statement of which this prospectus is a part. See [Where You Can Find More Information](#). We refer to this indenture as the indenture.

The following is a summary of some provisions of the indenture. The following summary does not purport to be complete, and is subject to, and qualified in its entirety by reference to, all of the provisions of the indenture, including the definitions of specified terms used in the indenture, and the debt securities. We encourage you to read the indenture and the debt securities because they, and not this description, set forth your rights as a holder of our debt securities. We will describe the particular terms of any debt securities in the prospectus supplement relating to those debt securities. Parenthetical section references under this heading are references to sections in the indenture unless

we indicate otherwise.

- 2 -

Table of Contents

General Terms

The indenture does not limit the amount of debt securities that we may issue. (Section 301). The indenture provides that debt securities may be issued up to the principal amount authorized by us from time to time. The debt securities will be unsecured and will have the same rank as all of our other unsecured debt. None of our subsidiaries, if any, will have any obligations with respect to the debt securities. Therefore, our rights and the rights of our creditors, including holders of senior debt securities and subordinated debt securities, to participate in the assets of any subsidiary will be subject to the prior claims of the creditors of any such subsidiaries.

We may issue the debt securities in one or more separate series of senior debt securities. (Section 301). The prospectus supplement relating to the particular series of debt securities being offered will specify the particular amounts, prices and terms of those debt securities. These terms may include:

the title of the debt securities and the series in which the debt securities will be included;

the authorized denominations and aggregate principal amount of the debt securities;

the date or dates on which the principal and premium, if any, are payable;

the rate or rates per annum at which the debt securities will bear interest, if there is any interest, or the method or methods of calculating interest and the date from which interest will accrue;

the place or places where the principal of and any premium and interest on the debt securities will be payable;

the dates on which the interest will be payable and the corresponding record dates;

the period or periods within which, the price or prices at which, and the terms and conditions on which, the debt securities may be redeemed, in whole or in part, at our option;

whether the debt securities of the series will be issued in whole or in part;

whether the debt securities of the series will be issued in the form of a global security and, if so, the name of the applicable depositary and global exchange agent;

any obligation to redeem, repay or purchase debt securities pursuant to any sinking fund or analogous provisions or at the option of a holder;

the portion of the principal amount of the debt securities payable upon declaration of the acceleration of the maturity of the debt securities;

the person to whom any interest on any debt security will be payable if other than the person in whose name the debt security is registered on the applicable record date;

any events of default, covenants or warranties applicable to the debt securities;

the currency, currencies or composite currency of denomination of the debt securities;

the currency, currencies or composite currencies in which payments on the debt securities will be payable and whether the holder may elect payment to be made in a different currency;

whether and under what conditions we will pay additional amounts to holders of the debt securities;

the terms and conditions of any conversion or exchange provisions in respect of the debt securities;

the terms pursuant to which our obligation under the indenture may be terminated through the deposit of money or government obligations;

whether the debt securities of the series will be subordinated in right of payment to senior indebtedness; and

any other specific terms of the debt securities not inconsistent with the indenture. (Section 301).

Table of Contents

Unless otherwise specified in the applicable prospectus supplement, the debt securities will not be listed on any securities exchange.

Unless the applicable prospectus supplement specifies otherwise, we will issue the debt securities in fully registered form without coupons. If we issue debt securities of any series in bearer form, the applicable prospectus supplement will describe the special restrictions and considerations, including special offering restrictions and special federal income tax considerations, applicable to those debt securities and to payment on and transfer and exchange of those debt securities.

U.S. Federal Income Tax Considerations

We may issue the debt securities as original issue discount securities, bearing no interest or bearing interest at a rate, which, at the time of issuance, is below market rates, to be sold at a substantial discount below their principal amount. We will describe some special U.S. federal income tax and other considerations applicable to any debt securities that are issued as original issue discount securities in the applicable prospectus supplement. We encourage you to consult with your own tax and financial advisors on these important matters.

Payment, Registration, Transfer and Exchange

Subject to any applicable laws or regulations, we will make payments on the debt securities at a designated office or agency, unless the applicable prospectus supplement otherwise sets forth. At our option, however, we may also make interest payments on the debt securities in registered form:

by checks mailed to the persons entitled to interest payments at their registered addresses; or

by wire transfer to an account maintained by the person entitled to interest payments as specified in the security register.

Unless the applicable prospectus supplement otherwise indicates, we will pay any installment of interest on debt securities in registered form to the person in whose name the debt security is registered at the close of business on the regular record date for that installment of interest. (Section 307). If a holder wishes to receive payment by wire transfer, the holder should provide the paying agent with written wire transfer instructions at least 15 days prior to the payment date.

Unless the applicable prospectus supplement otherwise sets forth, debt securities issued in registered form will be transferable or exchangeable at the agency we may designate from time to time. Debt securities may be transferred or exchanged without service charge, other than any tax or other governmental charge imposed in connection with the transfer or exchange. (Section 305).

Book-Entry Procedures

The applicable prospectus supplement for each series of debt securities will state whether those debt securities will be subject to the following provisions.

Unless debt securities in physical form are issued, the debt securities will be represented by one or more fully-registered global certificates, in denominations of \$1,000 or any integral multiple of \$1,000. Each global

certificate will be deposited with, or on behalf of, The Depository Trust Company, which we refer to in this prospectus as DTC, and registered in its name or in the name of Cede & Co. or other nominee of DTC. No holder of debt securities initially issued as a global certificate will be entitled to receive a certificate in physical form, except as set forth below.

- 4 -

Table of Contents

DTC has advised us that:

DTC is:

- a banking organization within the meaning of the New York banking law;
- a limited purpose trust company organized under the New York banking law;
- a member of the Federal Reserve System;
- a clearing corporation within the meaning of the New York Uniform Commercial Code; and
- a clearing agency registered pursuant to Section 17A of the Securities Exchange Act of 1934, as amended, or the Exchange Act.

DTC holds securities for DTC participants and facilitates the settlement of securities transactions between DTC participants through electronic book-entry transfers and pledges, thereby eliminating the need for physical movement of certificates.

DTC participants include securities brokers and dealers, banks, trust companies, clearing corporations and other organizations.

Access to DTC's book-entry system is also available to others, such as banks, brokers, dealers, trust companies and clearing corporations that clear through or maintain a custodial relationship with a DTC participant, either directly or indirectly.

Holders that are not DTC participants but desire to purchase, sell or otherwise transfer ownership of, or other interests in, the debt securities may do so only through DTC participants. In addition, holders of the debt securities will receive all distributions of principal and interest from the trustee through DTC participants. Under the rules, regulations and procedures creating and affecting DTC and its operation, DTC is required to make book-entry transfers of debt securities among DTC participants on whose behalf it acts and to receive and transmit distributions of principal of, and interest on, the debt securities. Under the book-entry system, holders of debt securities may experience some delay in receipt of payments, since the trustee will forward such payments to Cede & Co., as nominee for DTC, and DTC, in turn, will forward the payments to the appropriate DTC participants.

DTC participants will be responsible for distributions to holders of debt securities, which distributions will be made in accordance with customary industry practices. Although holders of debt securities will not have possession of the debt securities, the DTC rules provide a mechanism by which those holders will receive payments and will be able to transfer their interests. Although the DTC participants are expected to convey the rights represented by their interests

in any global security to the related holders, because DTC can act only on behalf of DTC participants, the ability of holders of debt securities to pledge the debt securities to persons or entities that are not DTC participants or to otherwise act with respect to the debt securities may be limited due to the lack of physical certificates for the debt securities.

Neither we nor the trustee will be responsible or liable for any aspect of the records relating to, or payments made on account of, beneficial ownership interests in the debt securities or for supervising or reviewing any records relating to such beneficial ownership interests. Since the only holder of debt securities, for purposes of the indenture, will be DTC or its nominee, the trustee will not recognize beneficial holders of debt securities as holders of debt securities, and beneficial holders of debt securities will be permitted to exercise the rights of holders only indirectly through DTC and DTC participants. DTC has advised us that it will take any action permitted to be taken by a holder of debt securities under the indenture only at the direction of one or more DTC participants to whose accounts with DTC the related debt securities are credited.

All payments we make to the trustee will be in immediately available funds and will be passed through to DTC in immediately available funds.

Table of Contents

Physical certificates will be issued to holders of a global security, or their nominees, if:

DTC advises the trustee in writing that DTC is no longer willing, able or eligible to discharge properly its responsibilities as depository and we are unable to locate a qualified successor; or

we decide in our sole discretion to terminate the book-entry system through DTC. (Section 305).

In such event, the trustee will notify all holders of debt securities through DTC participants of the availability of such physical debt securities. Upon surrender by DTC of a definitive global note representing the debt securities and receipt of instructions for reregistration, the trustee will reissue the debt securities in physical form to holders or their nominees. (Section 305).

Debt securities in physical form will be freely transferable and exchangeable at the office of the trustee upon compliance with the requirements set forth in the indenture.

No service charge will be imposed for any registration of transfer or exchange, but payment of a sum sufficient to cover any tax or other governmental charge may be required. (Section 305).

Consolidation, Merger or Sale by the Company

The indenture generally permits a consolidation or merger between us and another U.S. legal entity. It also permits the sale or transfer by us of all or substantially all of our property and assets to another legal entity. These transactions are permitted if:

(A) we are the continuing or surviving legal entity, or (B) the resulting or acquiring legal entity, if other than us, assumes all of our responsibilities and liabilities under the indenture, including the payment of all amounts due on the debt securities and performance of the covenants in the indenture;

immediately after the transaction, no event of default exists. (Section 801); and

the trustee shall have received an officer's certificate and an opinion stating such consolidation, merger, conveyance, transfer or lease and, if applicable, the corresponding supplemental indenture, are in compliance with the base indenture.

Even though the indenture contains the provisions described above, we are not required by the indenture to comply with those provisions if we sell all of our property and assets to another U.S. legal entity if, immediately after the sale, that legal entity is one of our wholly-owned subsidiaries. (Section 801).

If we consolidate or merge with or into any other legal entity or sell all or substantially all of our assets according to the terms and conditions of the indenture, the resulting or acquiring legal entity will be substituted for us in the indenture with the same effect as if it had been an original party to the indenture. As a result, the successor legal entity may exercise our rights and powers under the indenture, in our name or in its own name and we will be released from all our liabilities and obligations under the indenture and under the debt securities. (Section 801).

Events of Default, Notice and Certain Rights on Default

Unless otherwise stated in the applicable prospectus supplement, an event of default, when used with respect to any series of debt securities, means any of the following:

failure to pay interest on any debt security of that series for 30 days after the payment is due;

failure to pay the principal of or any premium on any debt security of that series when due;

failure to deposit any sinking fund payment on debt securities of that series when due;

- 6 -

Table of Contents

failure to perform any other covenant in the indenture that applies to debt securities of that series for 90 days after we have received written notice of the failure to perform in the manner specified in the indenture;

an event of default under any debt by the company or any significant subsidiary of the company (including a default with respect to any series of debt securities) that results in debt of an outstanding principal amount greater than \$75,000,000 becoming or being declared due and payable;

certain events in bankruptcy, insolvency or reorganization; or

any other event of default that may be specified for the debt securities of that series when that series is created. (Section 502).

If an event of default for any series of debt securities occurs and continues, the trustee or the holders of at least 25% in aggregate principal amount of the outstanding debt securities of the series may declare the entire principal of all the debt securities of that series to be due and payable immediately. If a declaration occurs, the holders of a majority of the aggregate principal amount of the outstanding debt securities of that series can, subject to certain conditions, rescind the declaration. (Section 502).

The prospectus supplement relating to each series of debt securities which are original issue discount securities will describe the particular provisions that relate to the acceleration of maturity of a portion of the principal amount of that series when an event of default occurs and continues.

An event of default for a particular series of debt securities does not necessarily constitute an event of default for any other series of debt securities issued under the indenture.

The indenture requires us to furnish an officer's certificate to the trustee each year as to the knowledge of our principal executive, financial or accounting officer of our compliance with all conditions and covenants under the indenture. (Section 1008). The trustee will transmit by mail to the holders of debt securities of a series notice of any default.

Other than its duties in the case of a default, the trustee will not be obligated to exercise any of its rights or powers under an indenture at the request, order or direction of any holders, unless the holders offer the trustee indemnification satisfactory to the trustee. (Section 603). If indemnification satisfactory to the trustee is provided, then, subject to certain other rights of the trustee, the holders of a majority in principal amount of the outstanding debt securities of any series may, with respect to the debt securities of that series, direct the time, method and place of:

conducting any proceeding for any remedy available to the trustee; or

exercising any trust or power conferred upon the trustee. (Section 512).

The holder of a debt security of any series will have the right to begin any proceeding with respect to the indenture or for any remedy only if:

the holder has previously given the trustee written notice of a continuing event of default with respect to that series;

the holders of at least 25% in aggregate principal amount of the outstanding debt securities of that series have made a written request of, and offered reasonable indemnification to, the trustee to begin the proceeding;

the trustee has not started the proceeding within 60 days after receiving the request; and

the trustee has not received directions inconsistent with the request from the holders of a majority in aggregate principal amount of the outstanding debt securities of that series during those 60 days. (Section 507).

Table of Contents

The holders of not less than a majority in aggregate principal amount of any series of debt securities, by notice to the trustee for that series, may waive, on behalf of the holders of all debt securities of that series, any past default or event of default with respect to that series and its consequences. (Section 513). A default or event of default in the payment of the principal of, or premium or interest on, any debt security and certain other defaults may not, however, be waived. (Sections 508 and 513).

Modification of the Indenture

We, as well as the trustee for a series of debt securities, may enter into one or more supplemental indentures, without the consent of, or notice to, the holders of any of the debt securities, in order to:

evidence the succession of another corporation to us and the assumption of our covenants by a successor;

add to our covenants or surrender any of our rights or powers;

add additional events of default for any series;

change or eliminate any restrictions on the payment of principal of (or premium, if any, on) debt securities, provided such action will not adversely affect the interest of holders of any series of debt securities in any material respect;

permit or facilitate the issuance of debt securities in uncertificated form, provided such action will not adversely affect the interests of holders of any series of debt securities in any material respect;

secure the debt securities;

establish the form or terms of debt securities not yet issued;

evidence and provide for successor trustees;

add, change or eliminate any provision affecting registration as to principal of debt securities;

change or eliminate provisions or add any other provisions that are required or desirable in accordance with any amendments to the Trust Indenture Act of 1939, which we refer to in this prospectus as the Trust Indenture Act, on the condition that this action does not adversely affect the interests of any holder of debt securities of any series issued under the indenture in any material respect;

comply with requirements of the SEC in order to maintain the qualification of the indenture under the Trust Indenture Act;

provide for uncertificated debt securities in addition to or in place of certificated debt securities;

make any change that would provide additional rights or benefits to holders of debt securities or any series, or that does not adversely affect the legal rights of such holders under the indenture;

supplement any provisions of the indenture to facilitate defeasance and discharge of any series of debt securities, provided such action will not adversely affect the interest of the holders of debt securities of such series or any other series;

conform text of the indenture or any debt securities to the description thereof in any prospectus supplement;

cure any ambiguity or correct any mistake; or

to make any other provision with respect to the indenture, provided that such actions will not adversely affect the interests of the holders, as determined in good faith by the board of directors of the company (Section 901).

Table of Contents

In addition, with the consent of the holders of not less than a majority in aggregate principal amount of the outstanding debt securities of all series affected by the supplemental indenture, we and the trustee may execute supplemental indentures adding any provisions to or changing or eliminating any of the provisions of the indenture or any supplemental indenture or modifying the rights of the holders of debt securities of that series. No such supplemental indenture may, however, without the consent of the holder of each debt security that is affected:

change the time for payment of principal or interest on any debt security;

reduce the principal of, or any installment of principal of, or interest on, any debt security;

reduce the amount of premium, if any, payable upon the redemption of any debt security;

change any obligation of the company to pay additional amounts;

reduce the amount of principal payable upon acceleration of the maturity of an original issue discount debt security;

impair the right to institute suit for the enforcement of any payment on or for any debt security;

reduce the percentage in principal amount of the outstanding debt securities of any series the consent of whose holders is required for modification or amendment of the indenture or for waiver of compliance with certain provisions of the indenture or for waiver of certain defaults;

modify the provisions relating to waiver of some defaults or any of the foregoing provisions;

change the currency of payment;

adversely affect the right to repayment of debt securities of any series at the option of the holders of those debt securities; or

change the place of payment. (Section 902).

Any supplemental indenture will be filed with the SEC as an exhibit to:

a post-effective amendment to the registration statement of which this prospectus is a part;

an annual report on Form 10-K;

a quarterly report on Form 10-Q; or

a current report on Form 8-K.

Defeasance and Covenant Defeasance

When we use the term defeasance, we mean discharge from some or all of our obligations under the indenture. If we deposit with the trustee sufficient cash or government obligations to pay the principal, interest, any premium and any mandatory sinking fund or analogous payments due to the stated maturity or a redemption date of the debt securities of a particular series, then at our option:

we will be discharged from our obligations for the debt securities of that series, the holders of the debt securities of the affected series will no longer be entitled to the benefits of the indenture, except for registration of transfer and exchange of debt securities and replacement of lost, stolen or mutilated debt securities, and those holders may look only to the deposited funds or obligations for payment, which is referred to as defeasance ; or

we will no longer be under any obligation to comply with certain covenants under the indenture as it relates to that series, and some events of default will no longer apply to us, which is referred to as covenant defeasance. (Sections 403 and 1501).

Table of Contents

Unless the applicable prospectus supplement specifies otherwise and except as described below, the conditions to both defeasance and covenant defeasance are as follows:

it must not result in a breach or violation of, or constitute a default or event of default under, the indenture, or result in a breach or violation of, or constitute a default under, any other of our material agreements or instruments;

certain bankruptcy-related defaults or events of default with respect to us must not have occurred and be occurring during the period commencing on the date of the deposit of the trust funds to defease the debt securities and ending on the 91st day after that date;

we must deliver to the trustee an officer's certificate and an opinion of counsel addressing compliance with the conditions of the defeasance or covenant defeasance; and

we must comply with any additional conditions to the defeasance or covenant defeasance that the indenture may impose on us. (Sections 403 and 1501).

In the event that government obligations deposited with the trustee for the defeasance of such debt securities decrease in value or default subsequent to their being deposited, we will have no further obligation, and the holders of the debt securities will have no additional recourse against us, for any decrease in value or default. If indicated in the prospectus supplement, in addition to obligations of the United States or an agency or instrumentality of the United States, government obligations may include obligations of the government or an agency or instrumentality of the government issuing the currency in which debt securities of such series are payable.

We may exercise our defeasance option for the debt securities even if we have already exercised our covenant defeasance option. If we exercise our defeasance option, payment of the debt securities may not be accelerated because of default or an event of default. If we exercise our covenant defeasance option, payment of the debt securities may not be accelerated because of default or an event of default with respect to the covenants to which the covenant defeasance is applicable. If, however, acceleration occurs, the realizable value at the acceleration date of the money and government obligations in the defeasance trust could be less than the principal and interest then due on the debt securities, because the required deposit in the defeasance trust is based on scheduled cash flow rather than market value, which will vary depending on interest rates and other factors.

Conversion and Exchange Rights

The debt securities of any series may be convertible into or exchangeable for other securities of our company or another issuer or property or cash on the terms and subject to the conditions set forth in the applicable prospectus supplement. (Section 301).

Governing Law

The indenture and the debt securities will be governed by, and construed under, the laws of the State of New York without regard to conflicts of laws principles thereof.

Regarding the Trustee

We may from time to time maintain lines of credit, and have other customary banking relationships, with the trustee under the indenture.

The indenture and provisions of the Trust Indenture Act that are incorporated by reference therein contain limitations on the rights of the trustee, should it become one of our creditors, to obtain payment of claims in certain cases or to realize on certain property received by it in respect of any such claim as security or otherwise. The trustee is permitted to engage in other transactions with us or any of our affiliates; provided, however, that if it acquires any conflicting interest (as defined under the Trust Indenture Act), it must eliminate such conflict or resign.

Table of Contents

DESCRIPTION OF CAPITAL STOCK

Our authorized capital stock consists of 230,000,000 shares, consisting of 200,000,000 shares of common stock, no par value per share, and 30,000,000 shares of preferred stock, par value \$0.01 per share. As of January 7, 2014, 21,399,373 shares of our common stock were outstanding. As of the date of this prospectus, no shares of our preferred stock were outstanding.

The description below summarizes the material terms of our common stock, preferred stock, and options and warrants to purchase our common stock and provisions of our amended and restated articles of incorporation and amended and restated bylaws. This description is only a summary. For more detailed information, you should refer to our amended and restated articles of incorporation and bylaws filed as exhibits to the registration statement, of which this prospectus is a part and incorporated by reference into this prospectus. See [Where You Can Find More Information](#).

Common Stock

Holder of our common stock are entitled to one vote for each share held on all matters submitted to a vote of shareholders and do not have cumulative voting rights. Holders of common stock are entitled to receive proportionately any dividends as may be declared by our board of directors, subject to any preferential dividend rights of outstanding preferred stock. Upon our liquidation, dissolution or winding up, the holders of common stock are entitled to receive proportionately our net assets available after the payment of all debts and other liabilities and subject to the prior rights of any outstanding preferred stock. Holders of common stock have no preemptive, subscription, redemption or conversion rights. Our outstanding shares of common stock are fully paid and nonassessable. The rights, preferences and privileges of holders of common stock are subject to, and may be adversely affected by, the rights of the holders of shares of any series of preferred stock that we may designate and issue in the future.

We have entered into a rights agreement pursuant to which each outstanding share of our common stock has attached a right to purchase one share of our common stock. A right will also attach to each share of common stock that we subsequently issue prior to the expiration of the rights agreement. Under circumstances described below, the rights will entitle the holder of the rights to purchase additional shares of common stock. In this prospectus and any accompanying prospectus supplement, unless the context requires otherwise, all references to our common stock include the accompanying rights.

Currently, the rights are not exercisable and trade with the common stock. If the rights become exercisable, each right, unless held by a person or group that beneficially owns more than 20% of our outstanding common stock, will initially entitle the holder to purchase one share of our common stock at a purchase price of \$30 per share, subject to adjustment. The rights will become exercisable only if a person or group has acquired, or announced an intention to acquire, 20% or more of our outstanding common stock. Under some circumstances, including the existence of a 20% acquiring party, each holder of a right, other than the acquiring party, will be entitled to purchase at the right's then-current exercise price, shares of our common stock having a market value of two times the exercise price. If another corporation acquires us after a party acquires 20% or more of our common stock, each holder of a right will be entitled to receive the acquiring corporation's common shares having a market value of two times the exercise price. The rights may be redeemed at a price of \$0.001 per right until a party acquires 20% or more of our common stock and, after that time, may be exchanged for one share of our common stock per right until a party acquires 50% or more of our common stock. The rights expire on January 7, 2019, subject to extension. Under the rights agreement, our board of directors may reduce the thresholds applicable to the rights from 20% to not less than 10%. The rights do not have voting or dividend rights and, until they become exercisable, have no dilutive effect on our earnings.

The rights have certain anti-takeover effects, in that they could have the effect of delaying, deferring or preventing a change of control of our company by causing substantial dilution to a person or group that attempts to acquire a significant interest in our company on terms not approved by our board of directors.

Table of Contents

Preferred Stock

Our board of directors is authorized to issue from time to time up to 30 million shares of preferred stock in one or more series without shareholder approval. Our board of directors has the discretion to determine the rights, preferences, privileges and restrictions, including voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences, of each series of preferred stock. It is not possible to state the actual effect of the issuance of any shares of preferred stock on the rights of holders of common stock until our board of directors determines the specific rights associated with that preferred stock. The effects of issuing preferred stock could include one or more of the following:

decreasing the amount of earnings and assets available for distribution to holders of common stock;

restricting dividends on the common stock;

diluting the voting power of the common stock;

impairing the liquidation rights of the common stock; or

delaying, deferring or preventing changes in our control or management.

As of the date of this prospectus, there were no shares of preferred stock outstanding.

Warrants

As of January 7, 2014, there were outstanding warrants to purchase 38,980 shares of our common stock at an exercise price of \$2.25 per share. These warrants expire on December 31, 2014.

Stock Options and Restricted Stock

As of January 7, 2014, we had outstanding options to purchase a total of 2,919,558 shares of common stock at a weighted average exercise price of \$3.40 per share. Of this total, options to purchase 1,646,581 were vested and 1,272,977 remain unvested.

As of January 7, 2014, we had outstanding 502,262 shares of restricted common stock subject to time vesting conditions.

As of January 7, 2014, an additional 1,299,288 shares of common stock were available for future award grants under our 2003 Stock Option and 2004 Stock and Incentive Awards Plans.

Wisconsin Anti-Takeover Law and Certain Articles of Incorporation and Bylaw Provisions

Wisconsin law and our amended and restated articles of incorporation and amended and restated bylaws that will be effective upon closing of this offering contain provisions that could delay or prevent a change of control of our

company or changes in our board of directors that our shareholders might consider favorable. The following is a summary of these provisions.

Amended and Restated Articles of Incorporation and Amended and Restated Bylaws

Classified board of directors; removal of directors for cause. Our amended and restated articles of incorporation and amended and restated bylaws provide that our board of directors is divided into three classes, with the term of office of each class expiring at successive annual meetings of shareholders. At each annual meeting of shareholders, each director is elected for a term ending on the date of the third annual shareholders meeting following the annual shareholders meeting at which such director was elected and until his or her successor shall be elected and shall qualify, subject to prior death, resignation or removal from office.

Table of Contents

Our amended and restated articles of incorporation also provide that the affirmative vote of shareholders possessing at least 75% of the voting power of the then outstanding shares of our capital stock is required to amend, alter, change or repeal, or to adopt any provision inconsistent with, the relevant sections of the bylaws establishing the classified board. The board of directors (or its remaining members, even if less than a quorum) is also empowered to fill vacancies on the board of directors occurring for any reason for the remainder of the term of the class of directors in which the vacancy occurred, unless the vacancy was caused by the action of shareholders (in which event such vacancy will be filled by the shareholders and may not be filled by the directors).

Members of the board of directors may be removed only for cause at a meeting of the shareholders called for the purpose of removing the director, and the meeting notice must state that the purpose, or one of the purposes, of the meeting is removal of the director and must state the alleged cause upon which the director's removal would be based.

These provisions are likely to increase the time required for shareholders to change the composition of our board of directors. For example, in general, at least two annual meetings will be necessary for shareholders to effect a change in a majority of the members of our board of directors.

Advance notice provisions for shareholder proposals and shareholder nominations of directors. Our amended and restated bylaws provide that, for nominations to the board of directors or for other business to be properly brought by a shareholder before a meeting of shareholders, the shareholder must first have given timely notice of the proposal in writing to our secretary. For an annual meeting, a shareholder's notice generally must be delivered on or before December 31 of the year immediately preceding the annual meeting, unless the date of the annual meeting is on or after May 1 in any year, in which case notice must be received not later than the close of business on the day which is determined by adding to December 31 of the year immediately preceding such annual meeting the number of days starting with May 1 and ending on the date of the annual meeting in such year. Detailed requirements as to the form of the notice and information required in the notice are specified in the amended and restated bylaws. If it is determined that business was not properly brought before a meeting in accordance with our amended and restated bylaws, such business will not be conducted at the meeting.

Wisconsin Business Corporation Law

Sections 180.1140 to 180.1144 of the Wisconsin Business Corporation Law, or the WBCL, restrict a broad range of business combinations between a Wisconsin corporation and an interested stockholder for a period of three years unless specified conditions are met. The WBCL defines a business combination as including certain mergers or share exchanges, sales of assets, issuances of stock or rights to purchase stock and other related party transactions. An interested stockholder is a person who beneficially owns, directly or indirectly, 10% of the outstanding voting stock of a corporation or who is an affiliate or associate of the corporation and beneficially owned 10% of the voting stock within the last three years. During the initial three-year period after a person becomes an interested stockholder in a Wisconsin corporation, with some exceptions, the WBCL prohibits a business combination with the interested stockholder unless the corporation's board of directors approved the business combination or the acquisition of the stock by the interested stockholder prior to the acquisition date. Following this three-year period, the WBCL also prohibits a business combination with an interested stockholder unless:

the board of directors approved the acquisition of the stock prior to the acquisition date;

the business combination is approved by a majority of the outstanding voting stock not owned by the interested stockholder;

the consideration to be received by shareholders meets certain requirements of the statute with respect to form and amount; or

the business combination is of a type specifically excluded from the coverage of the statute.

Table of Contents

Sections 180.1130 to 180.1133 of the WBCL govern certain mergers or share exchanges between public Wisconsin corporations and significant shareholders, and sales of all or substantially all of the assets of public Wisconsin corporations to significant shareholders. These transactions must be approved by 80% of all shareholders and two-thirds of shareholders other than the significant shareholder, unless the shareholders receive a statutory fair price. Section 180.1130 of the WBCL generally defines a significant shareholder as the beneficial owner of 10% or more of the voting power of the outstanding voting shares, or an affiliate of the corporation who beneficially owned 10% or more of the voting power of the then outstanding shares within the last two years.

Section 180.1150 of the WBCL provides that in particular circumstances the voting power of shares of a public Wisconsin corporation held by any person in excess of 20% of the voting power is limited to 10% of the voting power these excess shares would otherwise have. Full voting power may be restored if a majority of the voting power of shares represented at a meeting, including those held by the party seeking restoration, are voted in favor of the restoration. This voting restriction does not apply to shares acquired directly from the corporation.

Section 180.1134 of the WBCL requires shareholder approval for some transactions in the context of a tender offer or similar action for more than 5% of any class of a Wisconsin corporation's stock. Shareholder approval is required for the acquisition of more than 5% of the corporation's stock at a price above market value from any person who holds more than 3% of the voting shares and has held the shares for less than two years, unless the corporation makes an equal offer to acquire all shares. Shareholder approval is also required for the sale or option of assets that amount to at least 10% of the market value of the corporation, but this requirement does not apply if the corporation has at least three independent directors and a majority of the independent directors vote not to have this provision apply to the corporation.

Limitations of Directors Liability and Indemnification

Our amended and restated bylaws provide that, to the fullest extent permitted or required by Wisconsin law, we will indemnify all of our directors and officers, any trustee of any of our employee benefit plans, and person who is serving at our request as a director, officer, employee or agent of another entity, against certain liabilities and losses incurred in connection with these positions or services. We will indemnify these parties to the extent the parties are successful in the defense of a proceeding and in proceedings in which the party is not successful in defense of the proceeding unless, in the latter case only, it is determined that the party breached or failed to perform his or her duties to us and this breach or failure constituted:

a willful failure to deal fairly with us or our shareholders in connection with a matter in which the director or officer has a material conflict of interest;

a violation of criminal law, unless the director or officer had reasonable cause to believe his or her conduct was unlawful;

a transaction from which the director or officer derived an improper personal profit; or

willful misconduct.

Our amended and restated bylaws provide that we are required to indemnify our directors and executive officers and may indemnify our employees and other agents to the fullest extent required or permitted by Wisconsin law. Additionally, our amended and restated bylaws require us under certain circumstances to advance reasonable expenses incurred by a director or officer who is a party to a proceeding for which indemnification may be available.

Wisconsin law further provides that it is the public policy of the State of Wisconsin to require or permit indemnification, allowance of expenses and insurance to the extent required or permitted under Wisconsin law for any liability incurred in connection with a proceeding involving a federal or state statute, rule or regulation regulating the offer, sale or purchase of securities.

Table of Contents

Under Wisconsin law, a director is not personally liable for breach of any duty resulting solely from his or her status as a director, unless it is proved that the director's conduct constituted conduct described in the bullet points above. In addition, we maintain directors' and officers' liability insurance that will insure against certain liabilities, subject to applicable restrictions.

NYSE MKT Listing

Our common stock is listed on the NYSE MKT under the symbol OESX.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is Wells Fargo Shareowner Services.

Table of Contents

DESCRIPTION OF WARRANTS

As of January 7, 2014, warrants exercisable for a total of 38,980 shares of our common stock were outstanding. See Description of Capital Stock – Warrants for a description of the outstanding warrants.

We may issue other warrants in the future for the purchase of debt securities, common stock or other securities. Warrants may be issued independently or together with debt securities or common stock offered by any prospectus supplement and/or other offering material and may be attached to or separate from any such offered securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a bank or trust company, as warrant agent, all as will be set forth in the prospectus supplement and/or other offering material relating to the particular issue of warrants. The warrant agent will act solely as our agent in connection with the warrants and will not assume any obligation or relationship of agency or trust for or with any holders of warrants or beneficial owners of warrants.

The following summary of certain provisions of the warrants we may issue in the future does not purport to be complete and is subject to, and is qualified in its entirety by reference to, all provisions of the warrant agreements.

Reference is made to the prospectus supplement and/or other offering material relating to the particular issue of warrants offered pursuant to such prospectus supplement and/or other offering material for the terms of and information relating to such warrants, including, where applicable:

the designation, aggregate principal amount, currencies, denominations and terms of the series of debt securities purchasable upon exercise of warrants to purchase debt securities and the price at which such debt securities may be purchased upon such exercise;

the number of shares of common stock purchasable upon the exercise of warrants to purchase common stock and the price at which such number of shares of common stock may be purchased upon such exercise;

the designation and number of units of other securities purchasable upon the exercise of warrants to purchase other securities and the price at which such number of units of such other securities may be purchased upon such exercise;

the date on which the right to exercise such warrants shall commence and the date on which such right shall expire;

U.S. federal income tax consequences applicable to such warrants;

the amount of warrants outstanding as of the most recent practicable date; and

any other terms of such warrants.

Warrants will be issued in registered form only. The exercise price for warrants will be subject to adjustment in accordance with the applicable prospectus supplement and/or other offering material.

Each warrant will entitle the holder thereof to purchase such principal amount of debt securities or such number of shares of common stock or other securities at such exercise price as shall in each case be set forth in, or calculable from, the prospectus supplement and/or other offering material relating to the warrants, which exercise price may be subject to adjustment upon the occurrence of certain events as set forth in such prospectus supplement and/or other offering material. After the close of business on the expiration date, or such later date to which such expiration date may be extended by us, unexercised warrants will become void. The place or places where, and the manner in which, warrants may be exercised shall be specified in the prospectus supplement and/or other offering material relating to such warrants.

Table of Contents

Prior to the exercise of any warrants to purchase debt securities, common stock or other securities, holders of such warrants will not have any of the rights of holders of debt securities, common stock or other securities, as the case may be, purchasable upon such exercise, including the right to receive payments of principal of, premium, if any, or interest, if any, on the debt securities purchasable upon such exercise or to enforce covenants in the applicable indenture, or to receive payments of dividends, if any, on the common stock purchasable upon such exercise, or to exercise any applicable right to vote.

Table of Contents

DESCRIPTION OF STOCK PURCHASE CONTRACTS AND STOCK PURCHASE UNITS

We may issue stock purchase contracts, including contracts obligating holders to purchase from us, and obligating us to sell to the holders, a specified number of shares of common stock or other securities at a future date or dates, which we refer to in this prospectus as stock purchase contracts. The price per share of the securities and the number of shares of the securities may be fixed at the time the stock purchase contracts are issued or may be determined by reference to a specific formula set forth in the stock purchase contracts. The stock purchase contracts may be issued separately or as part of units consisting of a stock purchase contract and debt securities, warrants, other securities or debt obligations of third parties, including U.S. treasury securities, securing the holders' obligations to purchase the securities under the stock purchase contracts, which we refer to herein as stock purchase units. The stock purchase contracts may require holders to secure their obligations under the stock purchase contracts in a specified manner. The stock purchase contracts also may require us to make periodic payments to the holders of the stock purchase units or vice versa, and those payments may be unsecured or refunded on some basis.

The stock purchase contracts, and, if applicable, collateral or depositary arrangements, relating to the stock purchase contracts or stock purchase units, will be filed with the SEC in connection with the offering of stock purchase contracts or stock purchase units. The prospectus supplement and/or other offering material relating to a particular issue of stock purchase contracts or stock purchase units will describe the terms of those stock purchase contracts or stock purchase units, including the following:

if applicable, a discussion of material U.S. federal income tax considerations; and

any other information we think is important about the stock purchase contracts or the stock purchase units.

Table of Contents

WHERE YOU CAN FIND MORE INFORMATION

We file annual, quarterly and current reports, proxy statements and other information with the SEC. We also filed a registration statement on Form S-3, including exhibits, under the Securities Act of 1933, as amended, or the Securities Act, with respect to the securities offered by this prospectus. This prospectus is a part of the registration statement, but does not contain all of the information included in the registration statement or the exhibits. You may read and copy the registration statement and any other document that we file at the SEC's public reference room at 100 F Street, N.E., Washington D.C. 20549. You can call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference room. You can also find our public filings with the SEC on the internet at a web site maintained by the SEC located at <http://www.sec.gov>.

We are incorporating by reference specified documents that we file with the SEC, which means:

incorporated documents are considered part of this prospectus;

we are disclosing important information to you by referring you to those documents; and

information we file with the SEC will automatically update and supersede information contained in this prospectus.

We incorporate by reference the documents listed below and any future filings we make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act (i) after the date of the registration statement on Form S-3 filed under the Securities Act with respect to securities offered by this prospectus and prior to the effectiveness of such registration statement and (ii) after the date of this prospectus and before the end of the offering of the securities pursuant to this prospectus:

our Annual Report on Form 10-K for the year ended March 31, 2013;

our Definitive Proxy Statement on Schedule 14A filed June 24, 2013;

our Quarterly Reports on Form 10-Q for the quarters ended June 30, 2013 and September 30, 2013;

our Current Reports on Form 8-K filed May 15, 2013, May 22, 2013 (excluding items 2.02 and 7.01 included therein), July 2, 2013 (excluding item 7.01 included therein), August 9, 2013, September 4, 2013, January 6, 2014 and January 13, 2014 and Form 8-K/A filed on September 13, 2013; and

the description of our common stock contained in or incorporated into our Registration Statement on Form 8-A, filed March 31, 2010, and any amendment or report updating that description.

Information in this prospectus supersedes related information in the documents listed above, and information in subsequently filed documents supersedes related information in both this prospectus and the incorporated documents.

We will promptly provide, without charge to you, upon written or oral request, a copy of any or all of the documents incorporated by reference in this prospectus, other than exhibits to those documents, unless the exhibits are specifically incorporated by reference in those documents. Requests should be directed to:

Investor Relations

Orion Energy Systems

2210 Woodland Drive

Manitowoc, WI 54220

(800) 660-9340

You can also find these filings on our website at www.oesx.com. We are not incorporating the information on our website other than these filings into this prospectus.

Table of Contents

SELLING SHAREHOLDERS

This prospectus also relates to the possible resale of up to 839,855 shares of our common stock that were issued and outstanding prior to the original date of filing of the registration statement of which this prospectus forms a part, consisting of shares acquired by our officers and directors through open market transactions, shares issued in lieu of director fees, or upon exercise or vesting of stock option or restricted stock grants made pursuant to our stock plans.

Information about selling shareholders, if any, including their identities and the number of shares of common stock to be registered on their behalf, will be set forth in a prospectus supplement, in a post-effective amendment or in filings we make with the Securities and Exchange Commission under the Securities Exchange Act of 1934, as amended, that are incorporated by reference into this prospectus. Selling shareholders shall not sell any shares of our common stock pursuant to this prospectus until we have identified such selling shareholders and the shares being offering for resale by such selling shareholders in a subsequent prospectus supplement. However, the selling shareholders may sell or transfer all or a portion of their shares of our common stock pursuant to any available exemption from the registration requirements of the Securities Act of 1933, as amended.

PLAN OF DISTRIBUTION

We and/or the selling shareholders may sell securities in any one or more of the following ways from time to time: (i) through agents; (ii) to or through underwriters; (iii) through brokers or dealers; (iv) directly by us or the selling shareholders to purchasers, including through a specific bidding, auction or other process; or (v) through a combination of any of these methods of sale. The applicable prospectus supplement and/or other offering material will contain the terms of the transaction, name or names of any underwriters, dealers, agents and the respective amounts of securities underwritten or purchased by them, the initial public offering price of the securities, and the applicable agent's commission, dealer's purchase price or underwriter's discount. Any dealers and agents participating in the distribution of the securities may be deemed to be underwriters, and compensation received by them on resale of the securities may be deemed to be underwriting discounts.

Any initial offering price, dealer purchase price, discount or commission may be changed from time to time.

The securities may be distributed from time to time in one or more transactions, at negotiated prices, at a fixed price or fixed prices (that may be subject to change), at market prices prevailing at the time of sale, at various prices determined at the time of sale or at prices related to prevailing market prices.

Offers to purchase securities may be solicited directly by us or the selling shareholders or by agents designated by us or the selling shareholders from time to time. Any such agent may be deemed to be an underwriter, as that term is defined in the Securities Act of 1933, of the securities so offered and sold.

If underwriters are utilized in the sale of any securities in respect of which this prospectus is being delivered, such securities will be acquired by the underwriters for their own account and may be resold from time to time in one or more transactions, including negotiated transactions, at fixed public offering prices or at varying prices determined by the underwriters at the time of sale. Securities may be offered to the public either through underwriting syndicates represented by managing underwriters or directly by one or more underwriters. If any underwriter or underwriters are utilized in the sale of securities, unless otherwise indicated in the applicable prospectus supplement and/or other offering material, the obligations of the underwriters are subject to certain conditions precedent, and that the underwriters will be obligated to purchase all such securities if any are purchased.

If a dealer is utilized in the sale of the securities in respect of which this prospectus is delivered, we or the selling shareholders will sell such securities to the dealer, as principal. The dealer may then resell such securities to the public at varying prices to be determined by such dealer at the time of resale. Transactions through brokers

- 20 -

Table of Contents

or dealers may include block trades in which brokers or dealers will attempt to sell shares as agent but may position and resell as principal to facilitate the transaction or in crosses, in which the same broker or dealer acts as agent on both sides of the trade. Any such dealer may be deemed to be an underwriter, as such term is defined in the Securities Act of 1933, of the securities so offered and sold.

Offers to purchase securities may be solicited directly by us or the selling shareholders and the sale thereof may be made directly to institutional investors or others, who may be deemed to be underwriters within the meaning of the Securities Act of 1933 with respect to any resale thereof.

If so indicated in the applicable prospectus supplement and/or other offering material, we or the selling shareholders may authorize agents and underwriters to solicit offers by certain institutions to purchase securities at the public offering price set forth in the applicable prospectus supplement and/or other offering material pursuant to delayed delivery contracts providing for payment and delivery on the date or dates stated in the applicable prospectus supplement and/or other offering material. Such delayed delivery contracts will be subject only to those conditions set forth in the applicable prospectus supplement and/or other offering material.

Agents, underwriters and dealers may be entitled under relevant agreements to indemnification against certain liabilities, including liabilities under the Securities Act of 1933, or to contribution with respect to payments which such agents, underwriters and dealers may be required to make in respect thereof. The terms and conditions of any indemnification or contribution will be described in the applicable prospectus supplement and/or other offering material.

We may also sell shares of our common stock through various arrangements involving mandatorily or optionally exchangeable securities, and this prospectus may be delivered in connection with those sales.

We may enter into derivative, sale or forward sale transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement and/or other offering material indicates, in connection with those transactions, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement and/or other offering material, including in short sale transactions and by issuing securities not covered by this prospectus but convertible into, or exchangeable for or representing beneficial interests in such securities covered by this prospectus, or the return of which is derived in whole or in part from the value of such securities. The third parties may use securities received under derivative, sale or forward sale transactions, or securities pledged by us or borrowed from us or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from us in settlement of those transactions to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and will be identified in the applicable prospectus supplement (or a post-effective amendment) and/or other offering material.

Underwriters, broker-dealers or agents may receive compensation in the form of commissions, discounts or concessions from us or the selling shareholders. Underwriters, broker-dealers or agents may also receive compensation from the purchasers of shares for whom they act as agents or to whom they sell as principals, or both. Compensation as to a particular underwriter, broker-dealer or agent might be in excess of customary commissions and will be in amounts to be negotiated in connection with transactions involving shares. In effecting sales, broker-dealers may arrange for other broker-dealers to participate in the resales.

Each series of securities will be a new issue and, other than the common stock, which is listed on the New York Stock Exchange MKT, will have no established trading market. We may elect to list any series of securities on an exchange, and in the case of the common stock, on any additional exchange, but, unless otherwise specified in the applicable

prospectus supplement and/or other offering material, we shall not be obligated to do so. No assurance can be given as to the liquidity of the trading market for any of the securities.

Agents, underwriters and dealers may engage in transactions with, or perform services for us and our respective subsidiaries in the ordinary course of business.

Table of Contents

Any underwriter may engage in overallotment, stabilizing transactions, short covering transactions and penalty bids in accordance with Regulation M under the Securities Exchange Act of 1934. Overallotment involves sales in excess of the offering size, which create a short position. Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specified maximum. Short covering transactions involve purchases of the securities in the open market after the distribution is completed to cover short positions. Penalty bids permit the underwriters to reclaim a selling concession from a dealer when the securities originally sold by the dealer are purchased in a covering transaction to cover short positions. Those activities may cause the price of the securities to be higher than it would otherwise be. If commenced, the underwriters may discontinue any of the activities at any time. An underwriter may carry out these transactions on the New York Stock Exchange MKT, in the over-the-counter market or otherwise.

The place and time of delivery for securities will be set forth in the accompanying prospectus supplement and/or other offering material for such securities.

Selling shareholders may also sell the shares in accordance with Rule 144 under the Securities Act of 1933 rather than pursuant to this prospectus, regardless of whether the shares are covered by this prospectus.

Table of Contents

LEGAL MATTERS

The validity of the securities offered by this prospectus will be passed upon for us by Foley & Lardner LLP. The validity of the securities offered by this prospectus will be passed upon for any underwriters or agents by counsel named in the applicable prospectus supplement. The opinions of Foley & Lardner LLP and counsel for any underwriters or agents may be conditioned upon and may be subject to assumptions regarding future action required to be taken by us and any underwriters, dealers or agents in connection with the issuance of any securities. The opinions of Foley & Lardner LLP and counsel for any underwriters or agents may be subject to other conditions and assumptions, as indicated in the prospectus supplement.

EXPERTS

The financial statements and schedule of Orion Energy Systems, Inc. as of March 31, 2013 and 2012 and for each of the three years in the period ended March 31, 2013 and the combined financial statements of Harris Manufacturing, Inc. and Harris LED, LLC as of and for the year ended December 31, 2012, incorporated by reference in this Prospectus have been so incorporated in reliance on the reports of BDO USA, LLP, an independent registered public accounting firm, incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting.

Table of Contents

\$15,000,000

Orion Energy Systems, Inc.

\$ per share

PROSPECTUS SUPPLEMENT

Craig-Hallum Capital Group

The date of this prospectus supplement is , 2015