

ENERGY FOCUS, INC/DE
Form 10-K
March 31, 2009

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2008

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

For the transition period from to

Commission file number 0-24230
ENERGY FOCUS, INC.
(Exact name of registrant as specified in its charter)

DELAWARE 94-3021850
(State of incorporation) (I.R.S. Employer Identification No.)
32000 Aurora Road
Solon, Ohio 44139
(Address of principal executive officers, including zip code)

Registrant's telephone number, including area code: 440.715.1300

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

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

Title of Each Class
Common Stock, Par Value \$0.0001
Series A Participating Preferred Stock Purchase Rights

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined by Rule 405 of the Securities Act of 1933. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Exchange Act. Yes No

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

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

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Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company.

Large accelerated filer

Accelerated filer

Non-accelerated filer (Do not check if a smaller reporting company)

Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes

No

Aggregate market value (on basis of closing bid price) of voting stock held by non-affiliates as of June 30, 2008:

\$33,801,763

Number of the registrant's shares of common stock outstanding as of February 27, 2009: 14,834,920

Documents Incorporated by Reference

Portions of the proxy statement for the 2009 Annual Meeting of Shareholders to be filed with the Securities and Exchange Commission are incorporated by reference into Part III of this report.

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PART I

Item 1. Business

Energy Focus Inc. and subsidiaries (“Energy Focus”) design, develop, manufacture, market, and install lighting systems and customer specific energy efficient lighting solutions for a wide-range of use in both the general commercial market and the pool market. Energy Focus’ lighting technology offers significant energy savings, heat dissipation and maintenance cost benefits over conventional lighting for multiple applications.

Overview

During 2008, we engaged in the design, development, manufacturing, marketing, and installation of energy efficient lighting systems where we served two principal markets; commercial/industrial lighting and pool lighting. Our business strategy has evolved around providing our customer base with turnkey, comprehensive energy efficient lighting solutions focused on our patented and proprietary technology. Our solutions include fiber optic, light-emitting diode (“LED”), ceramic metal halide (“CMH”), high-intensity discharge (“HID”), and other highly energy efficient lighting technologies. Our strategy also incorporates continued investment in research into new and emerging energy sources including, but not limited to, solar energy. Typical savings of current technology averages 80% in electricity costs, while providing full-spectrum light closely simulating daylight colors.

Our proprietary, large-diameter fiber cables used in our fiber optic technology are designed to emit light either at the end of the fiber as a point of light or along the length of the fiber. This feature has been well regarded by architectural and design firms and has resulted in the winning of several design awards in 2007. The fiber cables have been fashioned into unique hanging pendant lights or purely decorative products of myriad shapes, providing an opportunity to beautify interior space in a distinctive way. These lights have no glare, voltage, or heat, and they are very aesthetically pleasing.

Our product portfolio has been broadened recently to include offerings within LED, CMH, and HID product lines. In 2008, we launched several new lighting products for application within landscape, dock lighting, and cold storage markets. In 2009, our company will continue to broaden these product lines, into landscape lighting markets for example, as well as explore new technologies and markets. These new applications include LED track lighting and LED replacement for fluorescent light tubes which we expect to launch during 2009.

Our long-term strategy is to penetrate the \$100 billion lighting market by providing turnkey, comprehensive energy-efficient lighting solutions. Our targeted market segments provide opportunities in the supermarket, commercial, industrial, and government segments. The passage of the Energy Independence and Security Act of 2007 by Congress created a natural market for our energy-efficient products. Under this Act, all incandescent light bulbs must use 25% to 30% less energy than today’s products by the years 2012 through 2014. Since many of our EFO products already are 80% more efficient than incandescent bulbs, our focus is to increase the public’s knowledge of our technology and to establish comprehensive distribution channels so that demand can be fulfilled quickly. Further, the passage of the American Recovery and Reinvestment Act of 2009 by Congress authorizes the usage of \$50 billion in government funds for advancement of energy conservation programs and \$20 billion in tax incentives for renewable energy and efficiency. Provisions of this Act which have the greatest opportunity to benefit our company include:

- \$13 billion in loans to subsidize renewable-energy projects,
- \$11 billion toward smart-grid technologies to run the power grid more efficiently,
- \$6.3 billion in state energy-efficient and clean-energy grants, and
- \$4.5 billion to make federal buildings more energy efficient.

We will continue to focus on market niches where the benefits of our lighting solutions offerings, combined with our technology, are most compelling. These market niches include government facilities, retailers, supermarkets, marine applications, and museums.

We will also continue to focus on development of our solar technology through our continuing leadership role in the United States government's Very High Efficiency Solar Cell ("VHESC") Consortium sponsored by the Defense Advanced Research Projects Agency ("DARPA"). The purpose of the VHESC project is to develop 50% or greater efficient solar cell for United States military applications which would also be available for commercial application.

Products

We produce, source, and market a wide variety of lighting technologies to serve two general markets: commercial lighting and pool lighting. Our technology falls into the following categories;

- Metal Halide and LED Fiber optic lighting systems (e.g. EFO Docklight, EFO-Ice®),
 - LED lightings systems (e.g. EFO Docklight, Cold Storage),

In addition, we also produce customized components such as underwater lenses, color-changing LED lighting fixtures, LED lighting fixtures, landscape lighting fixtures, and lighted water features, including waterfalls and laminar-flow water fountains. Further, we continue to aggressively penetrate the government and military lighting markets. In this regard, our company has many products being actively marketed to the United States federal government agencies through the General Services Administration website (<https://www.GSAAdvantage.gov>).

The key features of our products are as follows:

- Many of our products meet the lighting efficiency standards mandated for the year 2020.
- Our products qualify for federal and state tax incentives for commercial and residential consumers in certain states.
 - Our products make use of proprietary optical systems that enable high efficiencies.
- Certain utility companies continue to embrace our technology as an energy-efficient alternative and are promoting our products to their customers. In 2007, Southern California Edison confirmed that our patented product “EFO-Ice™” used only 25% of the energy of comparable fluorescent lighting systems and 33% of the energy of comparable LED systems.
- Our systems continue to be installed in United States Navy ships. As of December 31, 2008, our company’s technology was installed on a total of 3 ships.
- The heat source of the fiber optic lighting fixtures usually is physically separated from the lamps, providing a “cool” light. This unique feature has special application in grocery stores, where reduction of food spoilage and melting due to heat is an important goal.
- Our products have been featured in magazines and trade journals, including LD+A, Architectural Lighting, Architectural Record, Display and Design Ideas, Entertainment Engineering, and Visual Merchandising and Store Design.

Key Features of Our Fiber Optic Technology

Components of Fiber Optic Technology:

Illuminator. Most of our legacy commercial fiber optic illuminators deploy our specially designed metal halide HID lamps. These lamps provide long life and maximum brightness. We are currently developing and deploying LED illuminators for increased efficiency, versatility, longer life, and increased features. Our fiber optic technology can efficiently separate the light from a single metal halide lamp into multiple lower light levels appropriate for a wide variety of applications.

Fiber Cables. Our patented, large-core fiber has outstanding clarity and consistency with low attenuation for fiber optic lighting applications. By combining our compound parabolic collector, or CPC, technology with our large-core fiber, our system delivers light ranging from 35 to 70 lumens per watt, compared to approximately 8 to 15 lumens per watt for a system using traditional MR-16 halogen lamps.

Fixtures. We produce a broad assortment of aesthetic fixtures that allow the customer to easily adjust the direction and beam spread of the light for optimal light concentration.

Key Benefits of Our Fiber Optic System

Energy Efficiency. Our fiber optic system can provide our customers with accent lighting that also satisfies government and other regulatory regulations for energy-efficient lighting. Fiber optic technology enables customers to comply with ASHRAE-IESNA Standard 90.1 and Title 24, qualify for the tax incentives available under the Energy Policy Act of 2005, and meet LEED certification requirements without sacrificing intensity and light quality. The following table highlights the electrical savings of one watt fiber optic accent light compared to competing lighting

technologies:

Light Source	Number equivalent in 70-Watt Fiber Optic	Total Watts	Estimated Energy Savings %
70W fiber optic HID accent light	1	70W	—
26W compact fluorescent down light	4	104W	33%
25W ceramic metal halide accent light	5	125W	44%
50W MR-16 halogen accent light	8	400W	83%
60W incandescent down light	7	420W	83%

The fiber optic technology delivers over 80% energy savings versus halogen or other incandescent lighting systems commonly used in similar applications. For example, Cinemark Theaters (a nationwide movie theater chain) reduced its energy consumption from 5,140 watts to 1,120 watts by installing our fiber optic systems in selected facilities.

Color. Today, our fiber optic system is available in a range of color temperatures and renderings consistent with the lighting industry, which includes color temperatures of warm white (3,000k), neutral white (3,500k), cool white (4,100k), and daylight (5,500k). Our new LED illuminators can produce up to 64,000 colors using a digital multiplexing (“DMX”) controller. Both a 70+ color rendering index (“CRI”) and an 80+ CRI option are available. CRI is a measure of the degree of color shift that objects undergo when illuminated by the light source as compared with those objects when illuminated by a reference source of comparable correlated color temperature. The maximum CRI is 100. The warm white lamps have a color temperature that is suitable for interior space, while the daylight color temperature matches the color temperature of the light entering spaces through windows. Because we control the design of the lamp, reflector, and fixture, we can tune the system to deliver a balanced, full-spectrum white light.

Elimination of Virtually all Heat Radiation. Our fiber optic system is designed to prevent the infrared and ultraviolet radiation emitted by the lamp from being funneled through the fiber. As a result, the light output emits virtually no infrared or ultraviolet light, which produce heat when absorbed by the target, and the only heat generated is from light output itself, which is negligible. In contrast, halogen lamps produce approximately nine watts of heat energy for every one watt of light.

Cost Savings. Our fiber optic system is able to significantly reduce maintenance and replacement costs that normally are attributed to traditional lighting systems. Our fiber optic systems contain lamps with a long life cycle and need fewer lamps to light a given area. For example, a customer would have to replace 20-40 MR-16 halogen lamps for every one fiber optic lamp annually, based on average retail usage. In addition, because the fiber optic lamp is physically separated from the light fixture, when used in applications such as freezer cases, the quality of light and the life of the fiber optic lamp are not affected by the freezing temperature. The fiber optic lamp does not radiate heat in the freezer and the freezer does not need to be emptied to change the lamp, as is the case with fluorescent lamps.

Strategy

Our objective is to become the leading provider of turnkey, comprehensive energy-efficient lighting systems. To achieve this objective, we intend to pursue the following strategies:

- Capitalize on the growing need for high return on investment energy-efficient lighting systems. We intend to continue to devote significant resources to our product development efforts to maximize the energy efficiency and quality of our lighting systems while reducing costs and enabling our customers to meet more stringent government regulations. Further, we plan to continue to develop new proprietary technologies and integrate new and potentially more efficient lighting sources into our lighting systems such as LED.
 - Focus on increased market penetration where the benefits of our technology are most compelling. We intend to broaden the penetration of our products within commercial, retail, and supermarket channels, which all share urgent needs for highly efficient, flexible, and financially economical lighting solutions. Further, we continue to aggressively penetrate the government and military lighting markets. To reach our target markets, we are significantly increasing both the number and experience level of our direct sales employees. Additionally, we are actively restructuring our independent sales representative network to increase sales volume and accountability of results.
- Develop and expand strategic relationships. To expedite the awareness of our technologies, we continue to actively pursue strategic relationships with distributors, energy service companies (“ESCO’s”), lighting designers, and contractors who distribute, recommend, and/or install lighting systems. We continue to cultivate relationships with fixture manufacturers and other participants in the general lighting market.
- Develop a commercially-viable, cost-effective solar technology. Through our on-going leadership role in the United States government’s VHESC Consortium sponsored by DARPA, we expect to be able to commercialize a solar cell technology that will significantly surpass current solar efficiencies ranging from 6% - 20%. Our proven

optics technology has already shown the ability to achieve approximately 40% efficiency in a laboratory environment and we believe that this efficiency, or greater, can be achieved on a cost-effective, commercially-viable scale.

Sales, Marketing, and Distribution of our Offerings Portfolio

Products

Our products are sold through a combination of direct sales employees, independent sales representatives, and various distributors in different geographic markets throughout the world. Our distributors' obligation to us is not contingent upon the resale of our products and as such does not prohibit revenue recognition.

Within the commercial and pool lighting business units, we continue to focus on retailers, hotels, museums, general contractors, and specifiers. Our recent successes include the Las Vegas New York-New York Hotel, and the Miami Beach Fontainebleau Hotel. We also continue our penetration into Whole Foods and Albertson's food retailers. Our typical product sales process includes a testing phase, which starts with a demonstration of our products to key executives, followed by a prototype installation in one store and then to multiple stores. Finally, we install in selected stores within the same chain.

Solutions

Our solutions based sales are designed to enhance total value by providing turnkey, high-quality, energy-efficient lighting application alternatives that positively impact customers' profitability, the environment, and the communities we serve. These solutions are sold through our direct sales employees, and include not only our proprietary energy-efficient lighting systems, but also sourced lighting systems, energy audits, and service agreements.

Within the solutions business unit, we are focusing on multi-location food retailers, cold storage facilities, retailers, museums, and industrial/commercial real estate companies. Our recent successes include projects completed at a leading regional supplier of cold storage services as well as a building products supplier.

As of December 31, 2008, we had approximately 117 sales and independent sales representatives throughout the United States and Europe. We have been successful in hiring experienced salespeople from leading firms in the industry including our new Vice President of Sales.

Our ten largest customers accounted for 32.1% of our net sales for the twelve months ended December 31, 2008. In 2008, there was no single customer who accounted for more than 10.0% of net sales.

Manufacturing and Suppliers