

North American Green Lighting Controls Market, 2008 Emerging Company of the Year Award

Award Recipient – Encelium Technologies, North America

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The 2008 Frost & Sullivan Emerging Company of the Year Award in the Green Lighting Controls Market in North America is presented to Encelium Technologies. The Award recognizes Encelium's intensive efforts to propagate a well differentiated energy management solution to the lighting controls industry that is smart, cost effective and yields measurable returns. In a considerably short period of time the company has made commendable in-roads in the lighting controls market with its proprietary Energy control System (ECS) solution for addressable dimming. In an area that is strongly characterized by premium products from rival manufacturers that are based on Digital Addressable Lighting Interface (DALI) protocol, Encelium has managed to secure a niche position with its ECS solution that comprehensively addresses critical energy management strategies while being cost effective at the same time.

Company Overview

Encelium Technologies specializes in developing integrated lighting control systems for commercial buildings. The company is a fairly recent entrant into the lighting controls market, with operations spanning the United States, Canada and a recent foray into Europe. The company's flagship product – ECS uses combined addressable networking technology with advanced controls to provide building owners maximum energy savings and returns on investment. Owing to its distinct product profile and niche positioning in the industry, Encelium has retained impressive year-on-year growth in the North American lighting controls market. The company currently features among the top two players within the addressable dimming market segment that together account for 60 percent of revenues in this particular market segment. As a relatively new entrant, Encelium is keen on expanding its market presence by capitalizing on its competitive product positioning and the quantifiable energy savings it generates for end users.

Commendable Accomplishments through Perceptive Positioning

Encelium's ECS has a very responsive delivery platform that combines the niche requirements of the market, presents competitive cost advantage and most importantly documents highest energy savings for both new and retrofit applications.

Personal comfort, occupancy sensing and addressable dimming capabilities are key issues currently driving the lighting controls market. Among system integrators, consulting engineers as well as operations managers there is a common understanding that lighting is one of the topmost areas for saving energy in buildings. And deployment of sensors provides a cost effective and simpler route to achieve that. The ECS encompassing these elements as well as superior integration capabilities with a building's control network infrastructure has tremendous relevance and applicability in the industry.

Going beyond the basic premise that a lighting control system switches light on and off on a time circuit, the ECS' addressable dimming feature and embedded software and hardware enables it to control each fixture in a building and assign it with a unique IP address. By taking advantage of low-cost standard components such as 0-10 volts analog dimming ballasts, as opposed to proprietary digital ballasts, and connecting an input/output device to make it digital and addressable, the ECS provides the same functionality and value add to the end user, inspite of the architectural difference. The Energy Control Unit (ECU), an embedded processor, automatically addresses each input/output module in the network of ballasts and sensors using proprietary communication technology called GreenBus™.

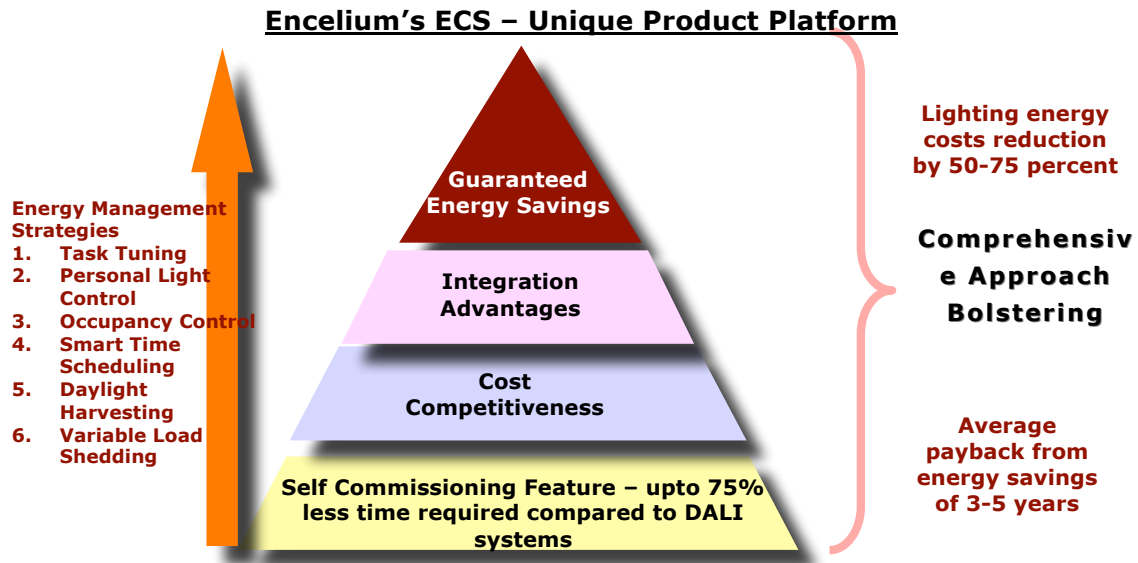
In a very limited timeframe, Encelium has managed to secure the number two position in the fast growing addressable dimming market in North America, with an impressive 25-30 percent market share. With such rapid and sustained growth, Encelium will be a company to watch out for in the energy efficient lighting controls market over the next five year period.

ECS – Ensuring Energy Savings on a Competitive Budget

Dimming the lights at times of peak energy demand works favorably towards flattening out the load profile of a building. The ECS carries out variable load shedding, while reducing peak demand and saving energy by 15-20%. The system has the ability to independently address each fluorescent light fixture, improving light quality, functional flexibilities and above all energy savings. By integrating six key energy management strategies - task tuning; personal light control; occupancy control; smart time scheduling; daylight harvesting and variable load shedding, the ECS delivers lighting energy costs reduction of 50-75 percent and average payback from energy savings of 3-5 years. Use of analog ballasts that provide the same functionality as digital ballasts, the ECS can be far more competitive in pricing when compared to its DALI counterparts and thereby offer the cost conscious market an effective and comprehensive solution to achieve addressable dimming.

The ability to integrate control modules into systems based on an open protocol framework is considered essential for the success of this market. However, most manufacturers have traditionally adopted a component-based approach (ballasts, switches, and controls) rather than systems. As a result, lighting control components often do not work well together when specified as systems, especially for dimming applications. Specifiers and end-users often cite difficulties in terms of

commissioning systems in the field. A prominent feature of the ECS is its ability to encapsulate emerging market requirements and respond adequately to trends that are increasingly defining the future of lighting controls and their overwhelming importance in making buildings more efficient and green. Self-commissioning technology of the ECS helps to reduce time taken in the commissioning process by nearly 75 percent as compared to DALI-based systems.



Unique Integration Capability

A major feature of ECS is its ability to integrate with and share data with other building systems such as HVAC, fire, security and card access systems. Encelium's BACnet® IP interface enables the system to share lighting and control status with the building automation system (BAS) in a building. ECS™ operates autonomously to control lighting but also shares lighting status, lighting levels and energy usage via BACnet® for use by other building systems. As part of its continued innovation, Encelium has recently launched a driver that is compatible with Tridium middleware, thus providing interoperability in coherent distributed architectures within a Niagara AX framework.

Conclusion

A targeted product solution that capitalizes on cost effectiveness while at the same time offering a comprehensively tailored package of unique features makes the Encelium's ECS a unique proposition in the lighting controls industry. The company has found its niche in the fast emerging energy management solutions market by offering a product that augurs well with the industry's requirements while having to its credit the profile of being the only player in the market to successfully do so. Frost & Sullivan is pleased to recognize Encelium Technologies, as the worthy

recipient of the 2008 Frost & Sullivan Emerging Company of the Year Award in the Green Lighting Controls Market in North America.

Award Description

The Frost & Sullivan Award for Emerging Company of the Year is presented each year to the company that has emerged as a significant participant within its industry. This company is perceived to have exhibited outstanding management, superior market growth, exceptional customer service and the ability to combine technology and successful strategic initiatives. This company has the exceptional know-how to take advantage of market changes through the execution of innovative strategies within the existing competitive landscape.

Research Methodology

In order to select the Award recipient, analysts quantify several market factors for each market participant according to predetermined criteria, paying close attention to their combined operations efforts. This process includes interviews with market participants, customers, and suppliers, along with extensive secondary and technology research. The companies' efforts are then analyzed based on the number of new customers, new segments, and commitment to business expansion coupled with market growth.

Measurement Criteria

In addition to the methodology described above, there are specific criteria used to determine final competitor rankings in this industry. The recipient of this Award has excelled based on one or more of the following criteria:

- Proof of success executing a restructuring strategy
- New market penetration (geographic, product, etc.)
- Marketing, promotion, and visibility of the company
- Degree of strategy innovation
- Technological innovation and leadership
- Increased name recognition
- Revenue and market share growth