



## Green Technology in Your Office Today – an Investment in the Future

Encelium's customized office lighting control solutions will reduce your carbon footprint while providing extraordinary energy savings, an immediate return on investment and optimized lighting and workplace ergonomics.

Lighting Control  
for the Intelligent  
Office Building



**ENCELIUM**

LIGHTING CONTROL FOR THE SMART BUILDING



In Today's Complex Business  
Climate, Sustainable Fiscal and  
Environmental Management  
has Never Been More Challenging

For more information: [www.encelium.com](http://www.encelium.com)



## Encelium ECS is Unlike Any Other System

In the design of any office facility, Encelium's advanced lighting control systems pay off like no other energy investment. Unlike most other lighting control offerings, Encelium's ECS was designed from the ground up as an integrated lighting control and energy management system that delivers the shortest possible payback from energy savings while improving lighting quality and personal lighting comfort. The system is ideal for both retrofit and new construction applications and works with your existing lighting system.

### Office Spaces Offer the Greatest Opportunity for Energy Savings from Lighting Control

- With generous windows and huge amounts of natural, ambient light, the commercial office presents tremendous lighting energy saving opportunities through the use of addressable dimming control.
- Likewise, many office areas are occupied intermittently allowing the lights to be switched off completely when not in use through the use of occupancy sensors.
- Work days begin and end at different times, depending on area and season and these variances offer large potential savings that may be captured through smart time scheduling.
- As different tasks require different light levels, opportunities exist to adjust lighting to an appropriate level for the task performed in each sector. Individuals generally prefer much less light than legacy lighting systems typically provide in office space.

### A Customized Solution

- Individuals can customize illumination levels in their workspace through PCS – Encelium's PC based personal control software resulting in

improved personal comfort and workspace satisfaction.

- HVAC can now be integrated with the lighting control system to ensure temperature control is based on real time occupancy status rather than speculative time schedules.
- Luminaires are individually controlled by software. Control zones can easily be modified where space repurposing occurs or tenants move – no wiring or hardware changes are required.

### Controls Bring Dramatic Energy Reduction vs. Conventional Office Lighting Designs

- Office space lighting design in both existing buildings and new construction often dictates power levels of 1.0 – 2.0 watts/sq. ft. which constitutes a chronic problem as most office spaces are vastly over lit for worker comfort.
- The Encelium ECS control system reduces the effective power density of lighting to 0.4 -0.5 watts/sq. ft. providing for both significant energy savings and worker satisfaction.
- Energy savings of 50% to 75% can be realized as compared to conventional lighting systems.
- Addressable dimming controls can contribute towards 12 – 18 LEED points including specific points for personal lighting control.



## Six Strategies to Reduce Energy Consumption, Save 50% to 75% and Reduce Your Carbon Footprint

Offices are the densest consumers of lighting energy in commercial space and Encelium's six energy management strategies are ideal for deployment in the office environment, resulting in a potential energy savings of 50 - 75%:

**Smart Time Scheduling** In areas of a building where occupancy control is not appropriate, time scheduled switching or dimming of lights can be employed for zones as small as a room or even an individual light fixture. In an office, people often arrive and leave at staggered times – smart time scheduling captures the savings.

**Daylight Harvesting** Through the use of photo sensors, light levels are automatically adjusted to take account of natural light coming through the windows – fixtures adjacent to the windows are dimmed down and a comfortable working light level for the occupants is maintained.

**Task Tuning** Setting maximum default light levels to suit the particular tasks or uses of a workspace in order to eliminate excessive lighting.

**Occupancy Control** Through the use of occupancy sensors, lights are automatically turned off or dimmed based on occupancy detection. This strategy deploys well in utility rooms, washrooms, storage areas, meeting and conference areas, kitchens and mechanical areas.

**Personal Control** Through the personal control software on their PC linked to the Encelium system by the LAN/WAN network, individuals can control the light levels in their workspace to suit their personal preferences enhancing both their comfort and productivity.

**Variable Load Shedding** Overlaying the above five strategies, the Encelium load shedding utility automatically reduces the electrical demand in a building by shedding lighting loads dynamically (through dimming or switching), either to shave peak demand or reduce energy consumption. Because of the granularity of the system – power is shed by dimming fixtures where it matters least and is generally imperceptible to the occupants.



## A Sound Investment Today and for the Future

Encelium customers demonstrate to the community at large their corporate commitment to sustainability and the environment. Put simply, regulate consumption and the implications of greenhouse gases are reduced. And savings of 50% - 75% speak for themselves. In almost every installation Encelium delivers these impressive results – ROI that no other competitor can match all while improving the workplace environment.

### Corporate Commitment

Encelium was founded in 2001 as a software and systems company with one specific mission – to design the world’s leading lighting energy management system – a system focused on minimizing energy consumption while improving lighting quality and workplace ergonomics. With its software roots, Encelium is uniquely built around this mission. Most competitors in this sector are hardware focused and have merely adapted existing architectural light control systems in an attempt to manage light consumption.

The differences are clear in both cost effectiveness and delivered energy savings. No other system available today delivers savings approaching 75% while providing realistic ROI’s acceptable to building owners and their financial managers. This is made possible by a system architecture that permits the use of standard lower cost lighting components coupled with centralized software that is both granular in control and strategy integrative. The software also provides robust gateways to other building systems further promoting the concept of “smart” or intelligent buildings and LEED certification.

European and North American markets have responded with an outstanding endorsement of the Encelium approach and we now have over 250 projects completed and thirty million square feet controlled – more than all competitors combined.

Headquartered in New Jersey U.S.A., Encelium also has sales and technical offices in Canada and Europe that provide a level of support to our customers unequalled in the industry. It is our continuing mission to constantly enhance Encelium’s reputation for outstanding customer service and quality.



# ENCELIUM

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