

mht
**GUIDE OF
GREEN
PRODUCTS
AND LEED
CERTIFICATION**

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About Us

MHT is a New York based software development and lighting services company.

For more than 10 years, MHT has been a leading provider of world-class line voltage products to our valuable clients throughout North and Central America. Since 2015, MHT has been supplying fixtures for numerous PoE projects in the United States.

In 2018 we introduced our PoE platform, Inspextor, which features AI advanced learning capabilities, an intuitive GUI (graphic user interface) and offers the highest encryption security available.



MHT has been granted three (3) U.S. Patents on our Inspextor PoE lighting and smart building solution, which sets it apart in the PoE industry.

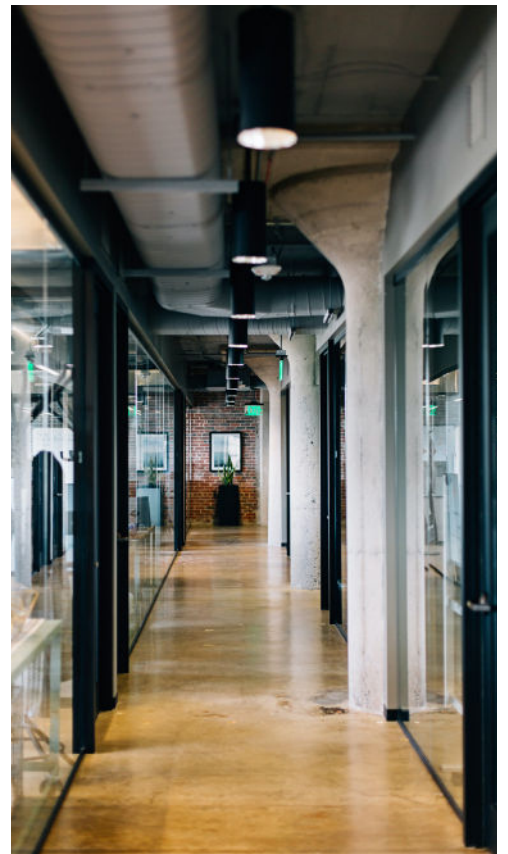
MHT's 55,000 sq/ft facility, located in New York, has received ETL, UL and ISO 9001:2015 listings and certifications.

Our staff of engineers, software developers and lighting designers provide MHT's clients with the experience necessary to take their lighting project from the drawing board to implementation.



What is PoE?

Using power from a Power Source Equipment (PSE), PoE can provide up to 90 watts of power to devices. Some examples of equipment that uses the PoE technology are LED lighting fixtures, lighting controls, IP phones and cameras.



Features and Benefits of a PoE Lighting System

Clients that choose a PoE lighting system will recognize significant benefits over a standard line voltage installation. Those benefits include:



Reduced Installation Costs

In most cases, new construction builders will see a 25-30% reduction in installation costs. The majority of these savings come from the lower cost and quicker installation of low voltage category cable when compared to traditional copper wiring.



Safer and Easier to Install

PoE systems use low voltage category cable, significantly reducing the chance of injury due to electric shock. The installation is also far less physically taxing on the installers given the ease of running category cable versus non-metallic shield or conduit.



Data-Gathering

PoE systems that have strong software platforms can provide substantial information to business owners regarding their facilities. This includes better understanding space utilization and the measurement and verification of energy consumption in their building.



Increased Comfort and Productivity

Whether you are a building owner, residential property developer, school system, improving the quality of life of your occupants is generally a priority. A PoE system offers many features such as personalized lighting settings, automatic shade controls as well as sensors with people counting capabilities and keycard access control.



Integration

A major advantage to using a PoE system is the ability to connect and communicate with other building systems. For example, shades in an office or apartment can open and close based on specific policies, combined with daylight harvesting sensors, improve the wellbeing of the occupant. In addition, camera and security systems can also be connected to a PoE system, allowing for increased responsiveness from other building systems.



Security

PoE systems reside on an intranet wired infrastructure. This allows for building managers to ensure the highest security for their PoE building management systems.

A Revolutionary Power over Ethernet (PoE) System.

Our Inspextor's Power over Ethernet (PoE) System is an advanced platform that is used to enhance Smart Building operations and efficiency.

Our software can power or control virtually any LED lighting fixture on the Market and provides Building Owners and Facility Managers detailed reporting and capabilities to customize their environment.

In addition to the energy savings and advanced functionality, Inspextor is far less expensive to install and maintain compared to traditional line voltage lighting and controls.

Using Inspextor you can expect a reliable and secure system that will allow you to communicate with other BMS Systems and future proof your building.



Smart Sensor

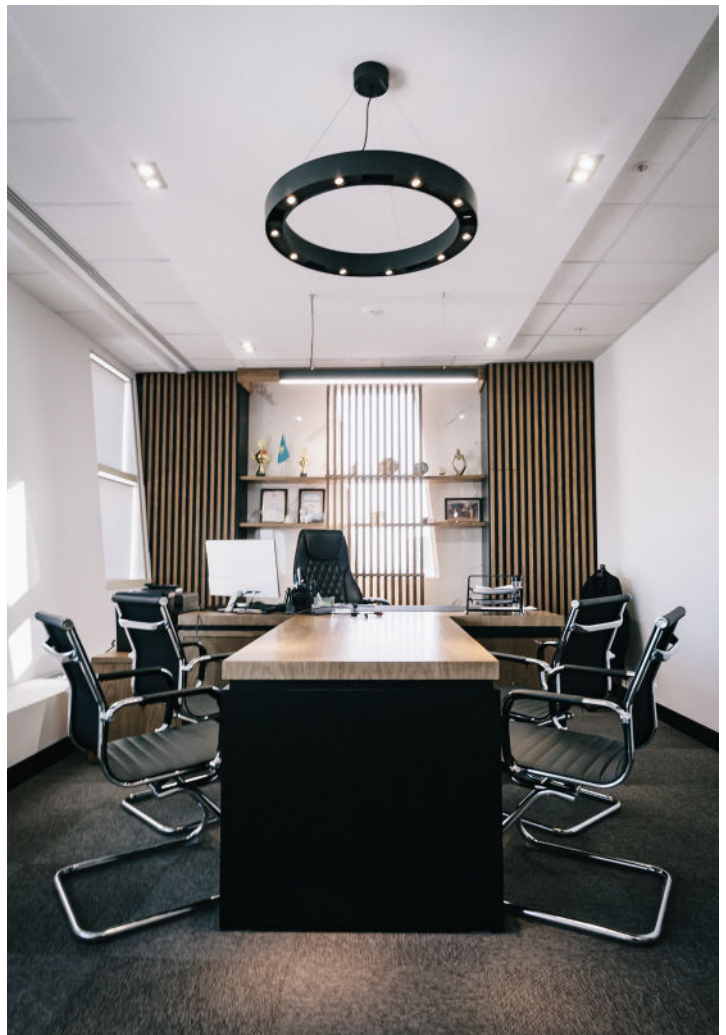
- Detects Occupancy
- Daylight Harvesting
- Auto Dimming Control
- Monitors Energy Consumption

Real-Time Monitoring and AI Capabilities

- View all metrics in one easy to read dashboard in real-time
- Advanced AI automates the platform based on environmental patterns

Maximize Energy Savings

- Detects Occupancy
- Daylight Harvesting
- Auto Dimming Control
- Monitors Energy Consumption



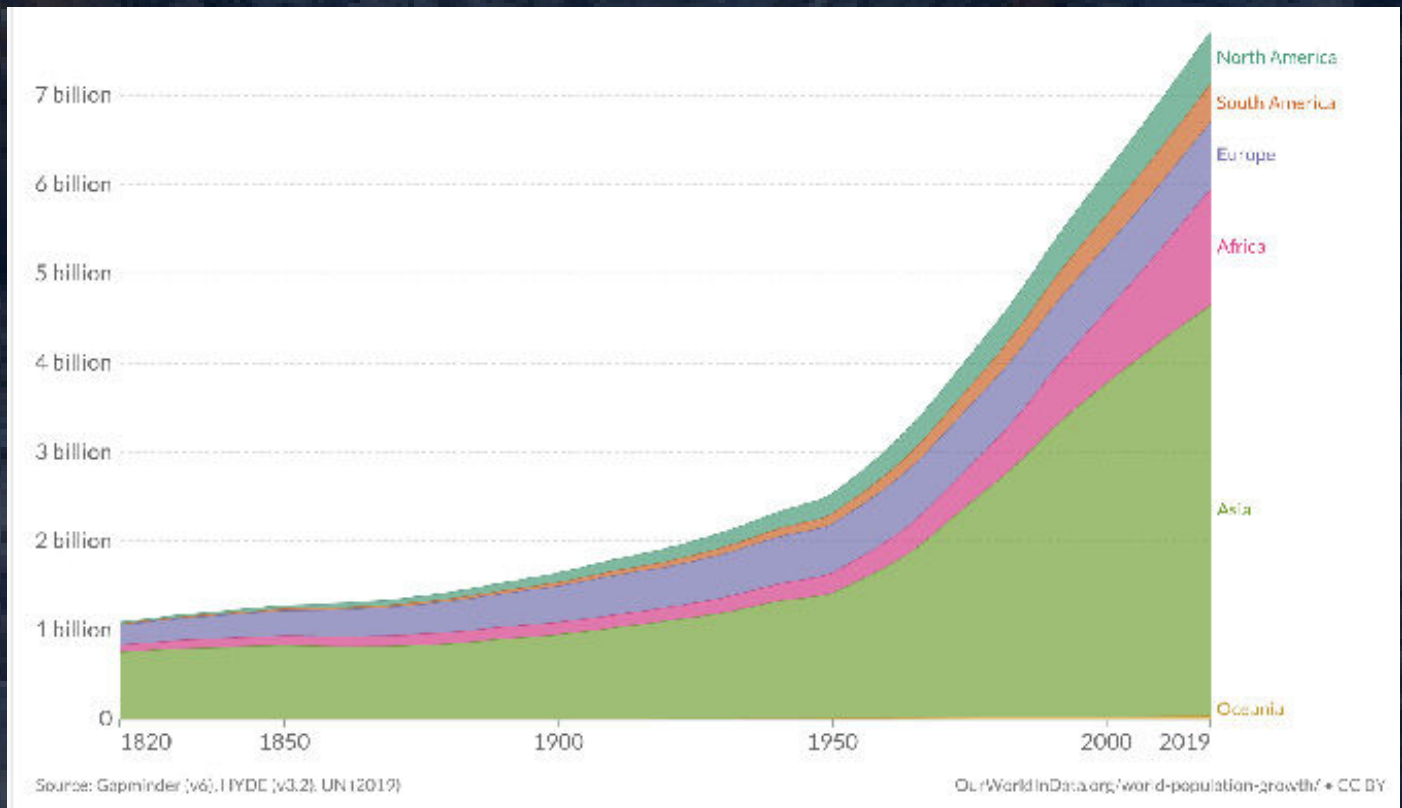
Secure, Reliable and Flexible

- A Software Defined Network (SDN) created on a wired infrastructure provides far greater security than wireless.
- Realtime security alerts that tie into your security systems
- Patented Low Voltage Battery back-up for Emergency Situations
- Cloud Based management allows for remote monitoring and control

The innovation of MHT Lighting

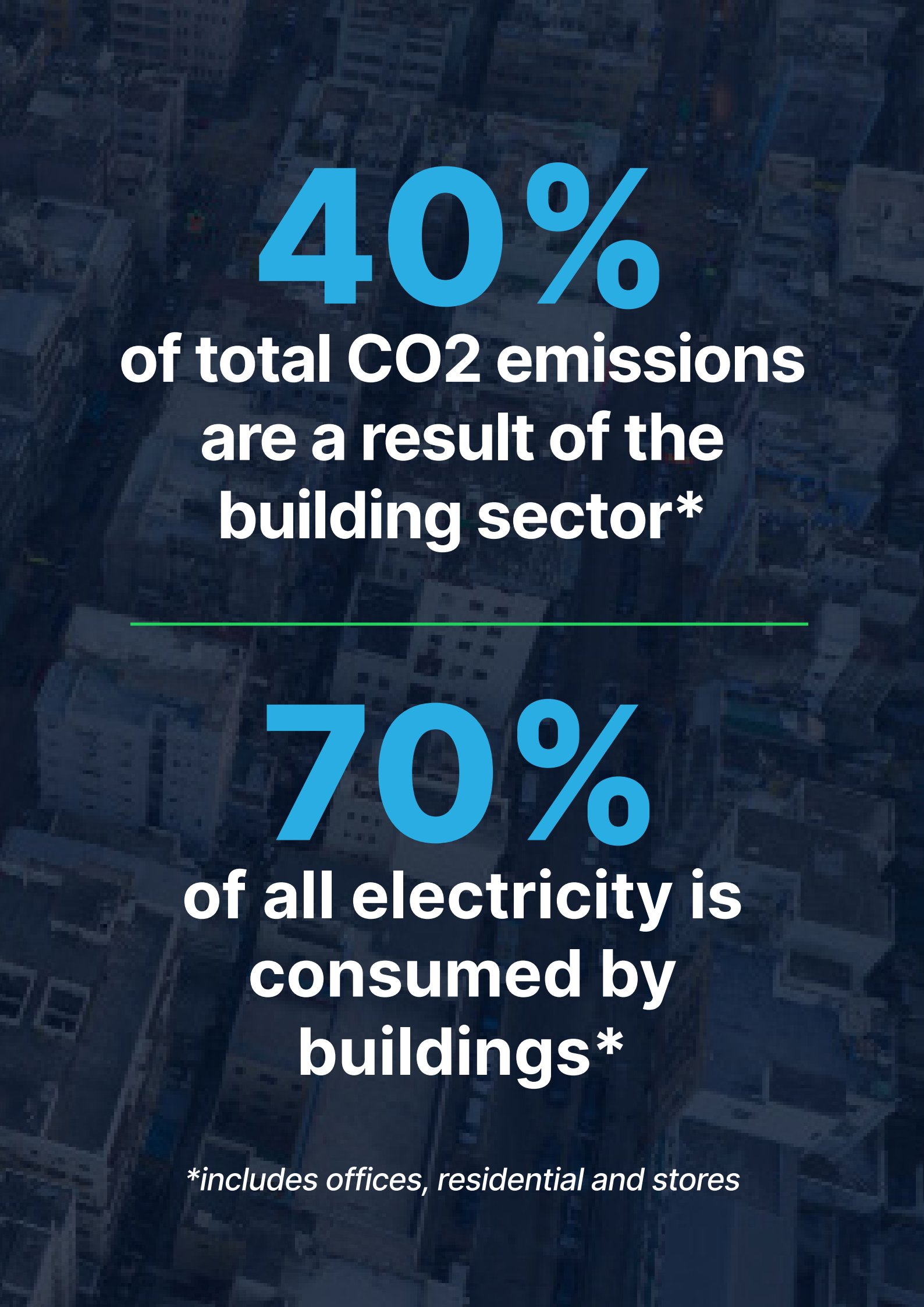
- Leading manufacturer of energy efficient products in the USA for over 10 years. ISO 9001:2015 Certified lighting manufacturer
- Creator of innovative patented energy efficient technology.
- A world-class team of professionals, products, processes, and partners.

The World Population by Region



Human population has increased exponentially in the past 60 years, from about 2.5 billion in 1950 to more than 7 billion today. This rise has increased the demand for limited natural energy resources and has led to environmental problems such as global warming, biodiversity destruction, water scarcity, reduced water quantity and quality, deforestation, air pollution caused by automobiles and health problems caused by air pollution from sources like automobiles.

As buildings are responsible for about 40% of total greenhouse gas emissions, they play a crucial role in the sustainable development with construction and business processes. For this reason, the construction of green buildings for the building sector is emerging as a necessity, not an alternative today.



40%

**of total CO2 emissions
are a result of the
building sector***

70%

**of all electricity is
consumed by
buildings***

**includes offices, residential and stores*

What is Green Building?

Building owners that take an integrative approach to their process, generally design, build and operate more efficient and cost-effective Green Buildings. This process focuses on the site selection, the types of materials used indoor environmental quality and efficiencies in water and energy consumption.

Nowadays, green building projects are defined according to the green building certification systems based on the voluntary principle. Some of these systems in the world are the BREEAM (Building Research Establishment Environmental Assessment Method) developed in the UK in 1990 and the LEED (Leadership in Energy and Environmental Design) developed in the United States in 2000. These systems are based on a point system framework and buildings are certified in different levels according to the points obtained.

LEED is one of the most preferred green building rating system in the world, developed by the US Green Building Council (USGBC). In the **LEED certification** system, buildings are evaluated over 100 points and certified as LEED, LEED Silver, LEED GOLD and LEED Platinum levels.



Integrated Process	1/100
Location and Transportation	16/100
Sustainable Sites	10/100
Water Efficiency	11/100
Energy and Atmosphere	33/100
Materials and Resources	13/100
Indoor Environmental	16/100
Quality Innovation	6/100
Regional Priority	4/100

MHT's PoE Contribution to LEED Certification



LEED v4 for BD+C: New Construction and Major Renovation

Integrative Process

Available Points : 1 Point

MHT's contribution : 1 Point

To support high-performance, cost-effective project outcomes through an early analysis of the interrelationships among systems.

Energy consumption and initial cost can be reduced by using MHT Lighting's products including PoE Inspextor, LED products and BMS solutions. Additionally, occupant comfort and control requirements can be satisfied.

Sustainable Sites

Available Points : 10 Points

Controllability of Systems: Lighting

MHT's contribution : 1 Point

To achieve this point, the system must allow individual lighting controls for 90% of the buildings occupants to allow them to adjust and set to individual preferences. MHT's Inspextor system provides role-based user control via in room tablets or an App on a smartphone for individuals to make any adjustments to their lighting. In addition, advanced keycard readers and policies will further enable customization based on the particular occupant in a building or room.

Energy and Atmosphere

Available Points : 33 Points

Fundamental commissioning and verification

MHT's contribution: Prerequisite

To support the design, construction, and eventual operation of a project that meets the owner's project requirements for energy, water, indoor environmental quality, and durability.

MHT Lighting's experienced team helps the Commissioning Authority (CxA) to manage commissioning activities including verification of installation and performance of PoE using the controls features of the Inspextor system.

Minimum Energy Performance

MHT's contribution : Prerequisite

To reduce the environmental and economic harms of excessive energy use by achieving a minimum level of energy efficiency for the building and its systems.

MHT Lighting's LED products are an energy efficient choice for high efficacy, long life, and high quality color rendering. Additionally, energy-saving can be achieved by using MHT Lighting's PoE Inspextor system with the functionality of its occupant and daylight sensors.

MHT Lighting's contribution to the mandatory requirements of ASHRAE Standard 90.1-2010:

- Automatic shut-off: Occupancy sensors
- Space control: Dimming, swithing
- Exterior ligting control: Astronomical timeclocks
- Automatic daylight control: Daylight sensors
- Energy monitoring: PoE inpeXtor system

Building-Level Energy Metering

MHT's contribution : Prerequisite

To support energy management and identify opportunities for additional energy savings by tracking building-level energy use.

Building energy consumption can be measured by using MHT Lighting's building automation system. The Inspextor's dashboard will give you a snapshot of energy usage across your facility.

Enhanced Commissioning – Option 2

MHT's contribution : 1 Points

MHT's PoE system provides enhanced system monitoring and control. Through the commissioning process, MHT will be able to integrate with other building systems and provide a single dashboard to monitor consumption and energy savings.

Optimize Energy Performance

MHT's contribution : 18 Points

To achieve increasing levels of energy performance beyond the prerequisite standard to reduce environmental and economic harms associated with excessive energy use.

Using MHT Lighting products and controls can not only help reduce lighting consumption, but also HVAC consumption related to lighting loads.

Advanced Energy Metering

MHT's contribution : 1 Point

To support energy management and identify opportunities for additional energy savings by tracking building level and system level energy use.

MHT Lighting's building automation system can monitor, record and report lighting and the other building energy-related systems.

Demand Response

MHT's contribution : 2 Points

To increase participation in demand response technologies and programs that make energy generation and distribution systems more efficient, increase grid reliability, and reduce greenhouse gas emissions.

MHT Lighting's PoE Inspextor system can automatically shed lighting loads during a demand response event and automatically return after the demand response event.

Indoor Environmental Quality

Available Points : 16 Points

Interior Lighting

MHT's contribution : 2 Points

To promote occupants' productivity, comfort, and well-being by providing high-quality lighting.

All MHT Lighting products including LED products, occupancy/daylight sensors, and PoE Inspextor system contribute to the lighting control option.

MHT's LED products have CRI of 80 or higher, 24,000 hours rated life, and less than 2,500 cd/sqm between 45 and 90 degrees from nadir which meet light quality requirements of LEED.

Daylight

MHT's contribution : 3 Points

To connect building occupants with the outdoors, reinforce circadian rhythms, and reduce the use of electrical lighting by introducing daylight into the space.

MHT Lighting offers a number of options to achieve this objective. Our selection of circadian lighting products, advanced daylights harvesting controls an integration with shade controllers, provide maximum user comfort.

Innovation

Available Points : 6 Points

MHT's contribution : 2 Points

To encourage projects to achieve exceptional or innovative performance. Using the PoE Inspector in conjunction with building tours helps achieve an innovation point for green education. MHT Lighting's LED products satisfy the mercury per lumen-hour requirement.

LEED Accredited Professional

MHT's contribution : 1 Point

To encourage the team integration required by a LEED project and to streamline the application and certification process.

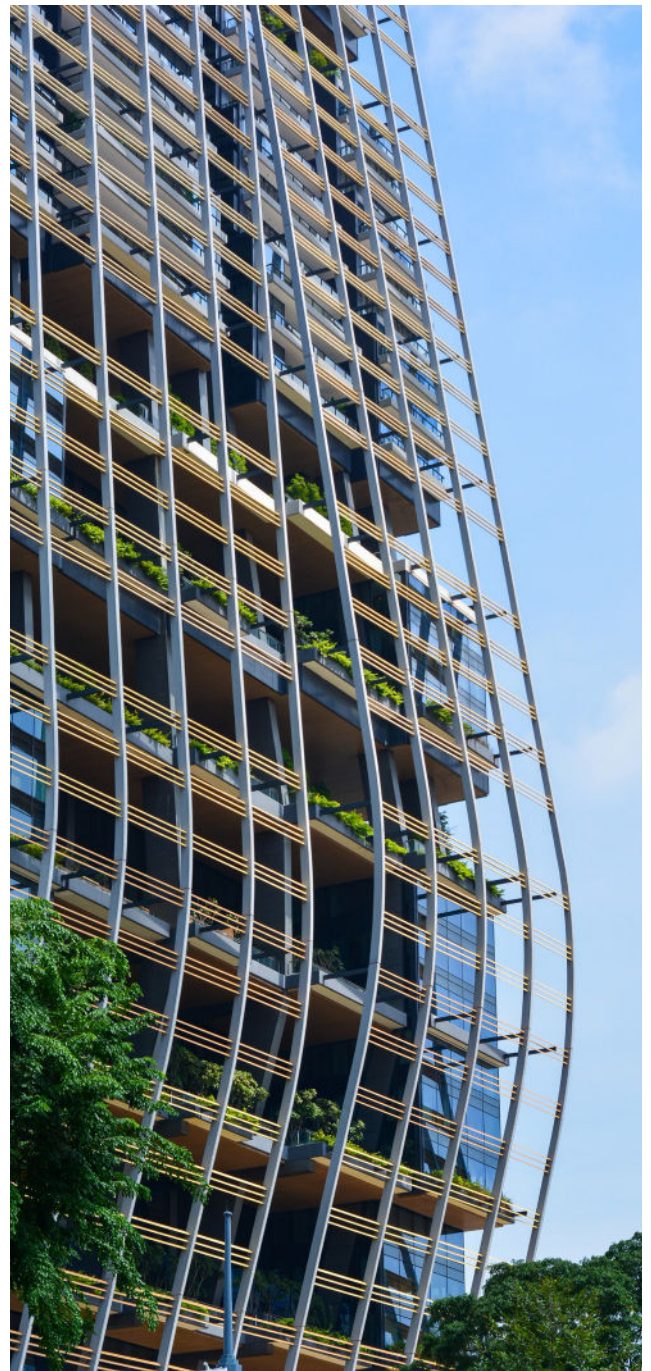
Regional Priority: Specific Credit

Available Points : 4 Points

MHT's contribution : 2 Points

To provide an incentive for the achievement of credits that address geographically specific environmental, social equity, and public health priorities.

MHT's lighting and controls can contribute to regional credits. Note these are location specific and will vary depending on the location.



MHT's Contribution Summary

Integrative Process

Integrative Process	1 Point	1 Point
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Sustainable Sites

Controllability of Systems – Lighting	1 point	1 Point
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Energy and Atmosphere

Fundamental Commissioning and Verification	Prerequisite	23 Points
Minimum Energy Performance	Prerequisite	
Building-level energy metering	Prerequisite	
Enhanced Commissioning Option 2	2 points	
Optimize energy performance	18 points	
Advanced energy metering	1 point	
Demand response	2 points	

Indoor Environmental Quality

Interior Lighting	2 Points	5 Points
Daylight	3 Points	

Innovation

Innovation	2 points	3 Points
LEED Accredited Professional	1 point	

Regional Priority

Regional Priority	2 points	2 Points
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*MHT's PoE Lighting System contributes 39 points of totally 100 points of LEED Credits.

MHT Lighting's PoE Inspextor system may contribute **up to 35 total points towards LEED Certification.**

The total credits to be standard LEED Certified is 40, meaning implementing MHT's system can assist you to **87% of the required credits for LEED certification!**

Grant Money and Rebates

- Federal Rebates of up to \$1.80 per square foot*
- State incentives - Depending on the state, building owners could enjoy up to 10 years of property tax exclusion*

*Disclaimer: The tax credit and rebate information contained within this document is provided for informational purposes only and is not intended to substitute for expert advice from a professional tax/financial planner or the Internal Revenue Service (IRS).



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