

Who is Legrand? / Wiremold?



“The Wiremold Company” Started in Wisconsin in 1900 by D. Hayes Murphy

Mfg. in West Hartford since 1929

Family owned by sons John & Robert

Manufacturer of electrical raceways and electrical wiring products

Acquired by Legrand in 2001.

Legrand delivers access to power, light & data to millions of spaces around the world.





West Hartford Facility

Size and Information

- 5 buildings (built in 1920s, 30s, 40s, 60s & 70s)
- 166k ft2 of manufacturing space/ 95k ft2 of office
- 325 people in manufacturing, 600 total at site
- 2 shifts, 5 day operation in manufacturing
- Legrand North/Central American headquarters
- ISO 9001 & ISO14001 & LEED Certified



Core Manufacturing Competencies

- Roll Forming – 12 mills
- Metal Stamping – 50 stamping presses
- Metal Fabrication – 3 CNC punch presses, 1 laser, 12 brake presses, 7 welders, 6 aluminum saws
- Painting – Electrocoat, electrostatic spray, powder coat
- Electrical Assembly and Test





SUSTAINABILITY

SUSTAINABILITY BUILT IN

to support our associates, customers, and the environment

At Legrand, North & Central America, we're committed to leading by example within our own operations, to developing high quality solutions for our customers' High Performance Buildings, and to transforming how people live and work – more safely, more comfortably, more efficiently.

Legrand's sustainability story comes in three chapters:

Better Operations

A commitment to a leadership role in operational excellence through environmental management, optimizing the way we manage energy, water and waste.

Better Lives

A dedication to enhancing employee and community welfare through programs that help people enjoy healthier, more productive and more rewarding lives.

Better Performance

A core principle of designing for sustainability drives us to innovate products and systems that enable buildings to reach exceptional levels of performance, bringing about industry-leading ideas, inventions and initiatives.

Legrand is the global specialist in electrical and digital building infrastructures and is recognized internationally for its commitment to sustainability.

Better Operations

A commitment to a leadership role in operational excellence through environmental management, optimizing the way we manage energy, water and waste.

THIS LEED® CERTIFIED BUILDING IS USING ARC TO MEASURE ITS PERFORMANCE

The 0-100 score shows how this space is performing compared to projects around the world. A higher score means better performance across five categories.



PERFORMANCE KEY

- Energy
- Water
- Waste
- Transportation
- Human Experience



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Environmental Goals:

- Reduce energy intensity by 2.5% compared to 2017
- Reduce Water intensity by 2.5% compared to 2017
- Maintain a 99.5% Waste Diversion rate



PROUD TO BE A
BETTER PLANTS CHALLENGE PARTNER
SINCE 2011

WE HAVE IMPROVED OUR ENERGY
EFFICIENCY BY 48.5% AND PLEDGED TO
IMPROVE IT BY AN ADDITIONAL 13%



LEARN MORE AT [ENERGY.GOV/BETTERPLANTS](https://www.energy.gov/betterplants)

What we've done to reduce our Energy Intensity



Industrial Assessment

An in-depth assessment of a plant site; its facilities, services and manufacturing operations for potential energy savings from:

- Energy efficiency improvements
- Waste minimization
- Pollution prevention
- Productivity improvement



1. Compressed air leak control program.	\$28,000 (year 1)
2. Turn off compressors when not in use.	\$14,000
3. Insulate paint line ovens.	\$ 4,000
4. Reduce compressor pressure	\$ 4,500
5. VFD's on new washer	\$ 3,000
6. Insulate condensate return tanks	\$ 1,500
Estimated savings=	\$55,000*



Assessments are performed by local teams of engineering faculty and students



U.S. DEPARTMENT OF
ENERGY

In-Plant Training from DOE

- Air System Training in West Hartford by an expert
- Found \$22K in savings opportunities
- Air Leaks
 - End use efficiency
 - vortex nozzles for blowoff
 - mechanical equipment instead of pneumatic
 - Improve system efficiency (use 200hp fulltime)

Recommissioning of HVAC systems

• Improvements.

4 RCx measures completed



1. Install Demand Control Ventilation (18,364kwh/3933 ccf).
2. Make-up Air in Bldg. 4B (30,279 kwh/4454 ccf)
3. Standardize Space Temps (10,404 kwh/323 ccf)
4. Optimize Scheduling (10,394 kwh/1340 ccf)

Total savings/year = 69,441 kwh & 10,050 ccf

What we've done to reduce our Energy Intensity



- Small Refrigerator Reduction
 - Eliminated over 30 mini-fridges
 - Procured 6 large Energy efficient fridges
- Occupancy Sensors installed on work tables
- Installed efficient small air compressor for machines that run overnight
- Air Leak detection and repair program
 - Use Ultraprobe to find and quantify air leaks
 - Over \$20K in air leaks repaired
- Turn-It-Off Now Program
 - Reduce off-hour energy waste
 - Perform bi-weekly off-hour energy audits



Turn It Off Now



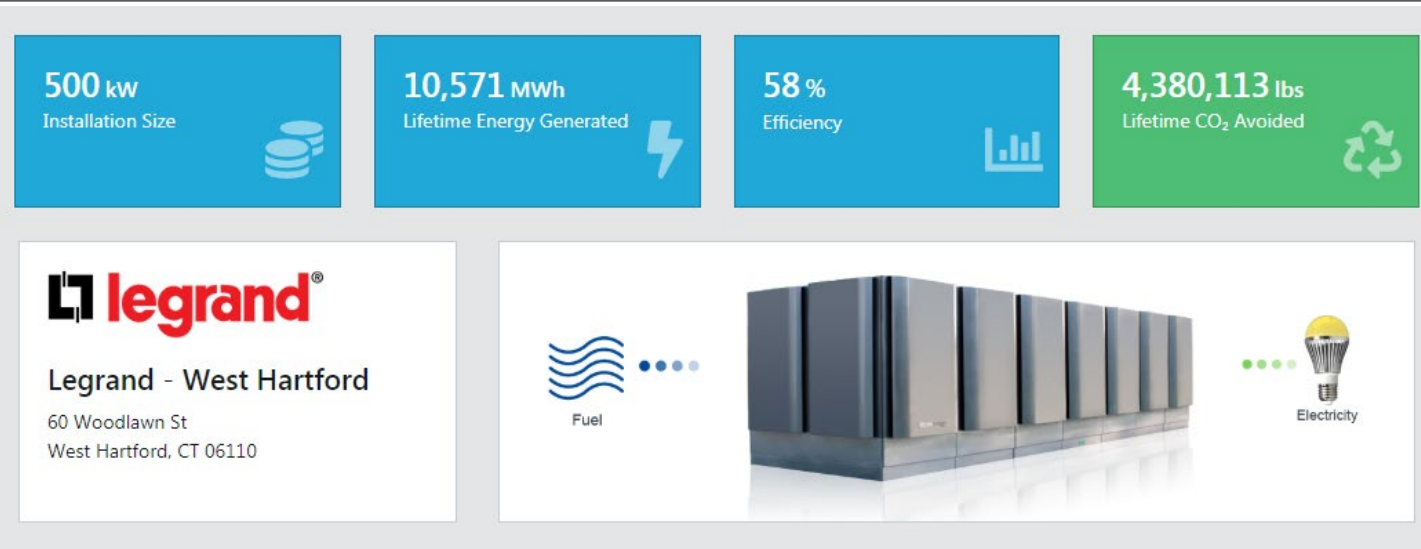
Energy Usage Assessment – incentives received

1. LED lamps for factory
 - 242,414 kwh annual savings
2. Paint Line Optimization (Reduce pump energy with VFDs)
 - \$20k/year savings
3. Variable Frequency Drives for 2 air handlers in office areas
 - \$6k/year savings

With support from:

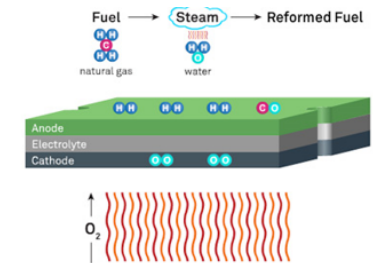


What we've done to reduce our Energy Intensity



Fuel Cell Installation

In 2016 we installed a 500kW fuel cell system at our headquarters in West Hartford, CT, to improve our building's energy efficiency and reduce the footprint of our manufactured products.



- converts natural gas into electricity using a direct electrochemical reaction without combustion.
 - very low CO₂ emissions
 - virtually no smog
 - no water used during operation
 - 2 fuel cells produce 500 kW 24/7/365
- 60% efficient (nat .gas fired plant is 30% - 5% line loss)
- Generates **85%** of Legrand West Hartford's electricity
- **We only use grid power from 5am till 1 pm Mon-Fri**



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