

Legrand North America Energy Policy

Legrand North America Energy Policy

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1.0 PURPOSE

The purpose of this policy is to define the guidelines for the consumption of energy throughout the Legrand North America sites with the goal of improved energy intensity. The policy is designed to support the Legrand BBBP goal of 25% energy reduction over 10 years. This policy will include standards for equipment that consume energy. It will also outline the purchasing considerations for equipment that consume energy. Manufacturing specific equipment is not specifically covered but guidance is provided through using the purchasing guidelines.

1.1 **Definitions**

1.1.1 **Energy Intensity** - Actual energy consumed / output measure

The output measure depends on the site use and is determined by the site energy manager who evaluates the most appropriate option for the site. Generally, offices use square footage as an output measure, while manufacturing may use sales dollars or hours of operation.

2.0 **SCOPE**

This policy applies to all Legrand North America facilities. Legrand North America associates should use this policy to guide behavior with regards to energy consumption and purchasing items that consume energy. The policy focuses on broad areas that are applicable to most Legrand sites. These key areas include facilities management, sub-metering, IT, transportation and purchasing.

3.0 **POLICY**

The energy policy defines the opportunities throughout Legrand North America to reduce the current energy consumed. The policy is designed to support the sustainability and operational excellence initiatives of the company. The policy documents best practices for energy consumption and methods to reduce the impact to the environment through the reduction in energy intensity.

3.1 Policy Communication: The policy will be communicated to all newly hired employees as part of their new hire orientation. The policy will also be available on the Company intranet site and employee self service portal. The policy will be made known to all employees on an annual basis through standard electronic and non-electronic employee communication processes. Suggestions for methods to communicate the policy effectively throughout the workforce can be found in **Appendix A**.

3.2 Policy Input: Legrand associates may give input or suggestions to the policy by giving all comments to the Legrand Corporate Energy Manager.

3.3 Policy Review Period: Policy should be reviewed annually.

3.4 Product Applicability: Included in this policy are several recommendations on products that should be installed to save energy. Legrand energy saving products will be installed, where applicable, in all facilities.

4.0 **RESPONSIBILITY**

- 4.1 The Corporate Energy Manager has ultimate responsibility for this policy.
- 4.2 The Vice President of Energy Efficiency, Sustainability and Public Policy is the executive sponsor of this policy.
- 4.3 The Plant Manager or the Senior Leader for each LEGRAND NORTH AMERICA facility has responsibility for adoption of this policy.
- 4.4 Site Human Resources representatives have responsibility for disseminating this policy at their site.
- 4.5 The Environmental Management site representative has the responsibility for training local managers and supervisors on the policy.
- 4.6 All local managers and supervisors have the responsibility for training associates and adopting the policy.

PROCEDURES

5.0 **FACILITIES**

5.1 **Scope of Facilities**

Facilities are the owned and rented physical infrastructure of a building, both permanent and removable.

5.2 **Definitions**

- 5.2.1 **Energy Star**- a U.S. government program created in 1992 by the US Environmental Protection Agency in an attempt to reduce energy consumption and greenhouse gas emissions by power plants. Originally a voluntary labeling program, it has grown in to one of the largest efforts worldwide to promote energy efficiency through the labeling of energy efficient consumer products.
- 5.2.2 **KWh**- an abbreviation for kilowatt hour; a unit of energy expended for one hour.
- 5.2.3 **HVAC** – an abbreviation for heating ventilating and air conditioning equipment.
- 5.2.4 **Roof Top Unit** – an HVAC unit that is mounted on top of a roof. These units are tied into ductwork and are used to heat and cool an area. The ductwork can either be inside the building, directly underneath the unit, or outside on top of the roof.
- 5.2.5 **Energy Control System**- also known as “ECS” is a computer which controls all the HVAC systems in a facility. The ECS monitors all the temperatures inside and outside, and controls all the individual HVAC systems to maintain the desired temperatures. The ECS is also used to program setback temperatures and holiday schedules. The ECS is the brain of a facility’s complete HVAC system.

- 5.2.6 **Economizers** – part of an HVAC system that allows cooler outside air to be ducted into a building for free cooling. The economizer is controlled by an energy management system or a local controller which monitors the outside air temperature and only allows the economizer to open when the outside temperature is below a specific temperature and the HVAC system is calling for cooling.
- 5.2.7 **CO2 Sensors** – monitor the carbon dioxide levels in an area and adjusts the amount of outside make-up air, via the economizer, accordingly to be within proper levels. Without the use of CO2 sensors, systems in a commercial space are required to take in a minimum of 10% outside air.
- 5.2.8 **Isole Sensors** – a motion sensing power strip made by WattStopper®. This device will monitor occupancy in an area and leave specific outlets powered while the space is occupied.
- 5.2.9 **Lighting Sensors** – a motion sensing device that is used to turn lights on, off, or both when occupancy is detected in an area. These devices are available in different styles for many different applications.
- 5.2.10 **Weather Stripping** – A narrow strip of material to cover the joint of a door or window to exclude rain, snow or cold/hot air.
- 5.2.11 **Dock Seal** – A flexible pad installed around the door of a loading dock to form a tight seal between the receiving doors and the opening of a truck that is backed into the dock.
- 5.2.12 **Dock Leveler** – Devices used to bridge the gap between the dock and the trailer during loading and unloading.

5.3 **Facilities Policy:**

5.3.1 **Appliances**

- 5.3.1.1 All small appliances should carry an Energy Star logo, as applicable. Examples include coffee pots, refrigerators, microwaves, fans, and space heaters. Any new appliances must have the Energy Star rating, as applicable.
- 5.3.1.2 All personal appliances require approval by the facilities manager.
- 5.3.1.3 Appliances should be placed in common areas to avoid unnecessary appliance energy use within buildings. Regular energy inspections will determine the unnecessary usage of small appliances.
- 5.3.1.4 Appliance energy usage should be evaluated. It may be cost effective to replace older appliances with energy efficient units.
- 5.3.1.5 Appliance Disposal- Old, unwanted appliances must be disposed of according to applicable state and federal laws. Appliances containing Freon and other hydro chlorofluorocarbons (HCFC's) must be properly evacuated prior to disposal. Electronic

appliances must be recycled via a certified electronics recycler to ensure that all materials are properly recycled and do not end up in a landfill. Personal appliances should be disposed of by the associate outside of the Legrand facility according to applicable state and federal laws.

5.3.1.6 All appliances must be properly rated for the area they are to be used in. This is most applicable for appliances used in a factory. All appliances used in a factory area must have a ground plug and be properly rated for use in that area per OSHA guidelines. (I.E.: Wiremold Plugmold Strips are not rated for industrial use and can only be used for computer equipment if used in a factory area.) Facilities managers should advise which product(s) to use.

5.3.2 **Air Conditioning/Heating Controls**

5.3.2.1 Appliances, especially space heaters, must not be placed directly underneath any thermostats or HVAC temperature sensors in order to maintain employee comfort. Appliances generate heat and this heat can give a false reading to the thermostat or temperature sensor causing the air conditioning to run prematurely and overcool an area. In the winter time, a false reading can also prevent the heating system from properly warming an area.

5.3.3 **Space Heaters**

5.3.3.1 All space heaters must be approved by the facilities manager.

5.3.3.2 Employees are responsible for informing facility managers of their discomfort. Facility managers will work with the appropriate site group resolve the issue. Space heaters should only be used after any measures taken by the facilities manager to properly control an area's temperature have failed. It is much more energy efficient to use a building's HVAC system for heating than it is to use a space heater. Space heaters will only be a last resort.

5.3.3.3 Space heaters must never be used in an operations setting (ie. Mfg floor or DC)

5.3.3.4 Space heaters should only be used as a temporary measure until a building's HVAC system is repaired or modified.

5.3.3.5 Space heaters must meet the manufacturer's minimum clearance requirements during use.

5.3.3.6 Space heaters must be properly rated for the area in which they are being used. (I.E.: never use a space heater near flammable materials)

5.3.3.7 Space heaters must never be plugged into an extension cord.

5.3.3.8 Space heaters should never be within 3 feet of a temperature sensor or thermostat.

5.3.3.9 Space heaters must have an auto-off or some other form of safety device.

5.3.3.10 Space heaters with open coils are prohibited in all Legrand facilities. Open coils on a heater create a fire safety hazard.

5.3.4 **Temperature Settings**

5.3.4.1 Recommended temperature settings for Legrand facilities are 68°F or less in the winter and 74°F or higher in the summer. Every 1°F increase in heating set point uses approximately 6% more energy. Every 1°F decrease in cooling set point uses approximately 8% more energy. (Source: EPA. Chart attached in Appendix B.)

5.3.4.2 Specific facilities may request to adjust winter temperatures lower or summer temperatures higher based on the requirements of the work area.

5.3.5 **Temperature Setbacks**

5.3.5.1 During un-occupied hours (weekends, nights and holidays) facilities temperatures should be set back to 55°F in the winter. In the summer, air conditioners should be shut off or set to 85 deg. Minimum if humidity or other issues prevent the AC from being shut off. This does not apply to computer server rooms or labs that may require cooler temperatures to maintain integrity of testing or equipment.

5.3.6 **Economizers**

5.3.6.1 Economizers should be used on all HVAC units in order to maximize energy savings.

5.3.6.2 CO₂ Sensors should be utilized in conjunction with economizers whenever possible to further reduce energy usage. CO₂ sensors will monitor the CO₂ levels in an area and adjust the amount of outside make-up air accordingly. This can result in significant energy savings on very warm days in the summer and very cold days in the winter.

5.3.7 **Isole Sensors**

5.3.7.1 Isole Sensors will be installed and used in office areas that use multiple items like personal fans, task lighting, printers, radios and similar devices that only need to be "On" when an associate is present.

5.3.8 Weatherizing

5.3.8.1 Weather Stripping

5.3.8.1.1 Weather stripping shall be used and maintained on all exterior doors, dock doors, and dock levelers where possible.

5.3.8.1.2 All exterior doors should be kept closed when not in active use. In addition dock doors should be kept closed when trailers are pulled up and not in active use. Dock doors may be open when neither heat nor air conditioning are in use as appropriate by facility.

5.3.8.2 **Dock Seals** - Dock Seals shall be used and maintained on all loading dock openings where possible.

5.3.9 Lighting

5.3.9.1 Lighting Sensors will be used in all areas of multi-occupancy: conference rooms, hallways, break rooms, loading areas, warehouse storage, restrooms, lobby areas, etc.

5.3.9.1.1 Best practice for sensors is to continue to have the ability to turn the lights off as daylight may be sufficient lighting for the room.

5.3.9.2 Lighting technology is continually changing and becoming more efficient. Lighting upgrades should be considered and evaluated at least every 3 years.

5.3.9.3 A lumen table has been added as Appendix C. Reference chart to use as a guide in evaluating lighting in all areas. Lighting reductions can be accomplished through reducing bulb wattage, adding dimmer switches or removing one or more bulbs from the lighting fixture. Lighting reduction decisions should be made based on both energy savings and cost of the change. Removing a bulb may not reduce the energy savings as well as other options since the ballast is still energized when bulb is removed.

5.3.10 Energy Audits

5.3.10.1 External Audits can be performed as designated by the facilities manager. Local resources can be identified to review facilities for energy compliance or savings opportunities. See Appendix D for a list of projects performed at Legrand facilities.

5.3.10.2 Internal Audits: Each site should have a person or team to do energy audits. This could be an additional function of the safety team or other applicable team. An internal audit should be performed to review the facility to ensure compliance to this

policy. Audits should be performed annually at a minimum, as designated by the facilities manager.

5.3.10.2.1 Completion of the annual audit will be monitored by the Corporate Energy Manager

5.3.10.2.2 Audits should document compliance to this policy by referencing the policy section.

5.3.11 **Energy Generation**

5.3.11.1 All sites should determine feasibility of on-site clean energy generation. Sites with a clean energy generation unit can reduce demand on the utility energy grid and possibly reduce greenhouse gas emissions. Examples: solar panels, fuel cells, renewable energy credits.

5.3.11.2 Sites should investigate local utility programs to evaluate participation in energy efficiency programs, demand response, and renewable energy credit availability and applicability.

5.4 **Facilities Energy Measurements**

5.4.1 Specific energy measurements will be defined by the Corporate Energy Manager.

5.4.2 Energy Measurements will be collected on the BBBP Sharepoint site. An example of energy measurement can be seen in Appendix E.

5.4.2.1 The BBBP Sharepoint site can be found at the following address:
<http://internal.legrand.us/Initiatives/Sustainability/Environment/Operations/SEN/default.aspx>

5.4.2.1.1 For site assistance, please contact the Legrand North America Sustainability Analyst.

6.0 **SUBMETERING**

6.1 **Scope of Submetering**

This section is applicable to all locations that have submeters installed. Site selection is based on the site's capability to isolate their energy usage data. Sites that are co-inhabited with other businesses and where Legrand specific energy data cannot be isolated (e.g. energy is included in the lease terms) are not selected.

6.2 **Definitions**

Meters are used to monitor electricity usage. They can also monitor other utilities with additional infrastructure. Once installed, submeters provide site energy managers with real time utility usage information, making it easier to track where, when, and how resources are being used throughout the facility.

6.3 Submetering Guidelines

The Legrand goal is to have all site or facility managers trained on how to read and interpret the meter data. The Corporate Energy Manager is responsible for development and coordination of the sub-meter training module.

6.4 Submetering Measurements

Specific sub-meter measurements have not yet been developed. Meter data should be used to change behaviors, identify equipment issues and facilitate conservation projects. Meter data should be reconciled with utility data as necessary to ensure billing accuracy.

7.0 IT

7.1 Scope of IT

IT guidelines cover common computer equipment that consumes energy within the facility. As a general guideline, computers and other IT equipment should be turned off when not in use.

7.2 Definitions

CRT's—Abbreviation of *cathode-ray tube*, the technology used in most televisions and computer display screens. A CRT works by moving an electron beam back and forth across the back of the screen. Each time the beam makes a pass across the screen, it lights up phosphor dots on the inside of the glass tube. By drawing many such lines from the top to the bottom of the screen, it creates an entire image.

7.3 IT Guidelines

7.3.1 PC/Workstation

Turn off computers when not in use for long periods or at end of day.

Use flat panel monitors, not CRTs. Ensure power settings are configured for energy savings on both PC and monitor. Individual users should organize and improve data storage to lessen impact of server room equipment and energy consumption.

7.3.2 Printers/Fax Machines

Printers and fax machines should be shared by many associates when possible.

Utilize multi-function printers where possible.

Enable power save sleep feature for non-business hours.

Personal printer should be set to sleep after a period of inactivity.

Printer usage should be reviewed regularly to ensure best practices are in use.

7.3.3 Projectors/Conference Room Equipment

Power off when not in use.

Conference room equipment must be set up with the auto shut down features enabled.

7.3.4 Computer/Server Rooms

- 7.3.4.1 Decommission un-used servers; 15% to 30% of the equipment running in the computer room consumes electricity without doing any computing.
- 7.3.4.2 Virtualize servers. Consolidate multiple, independent servers to a single physical server for better efficiency to reduce energy costs by 10% to 40%.
- 7.3.4.3 Consolidate under-used servers. A typical server's utilization is about 5% to 15%, yet it normally draws full power.
- 7.3.4.4 Organize and improve stored data. Storage utilization averages around 30%. It is common for organizations to have many copies of the same data, wasting storage space.
- 7.3.4.5 Invest in technologies that use energy more efficiently. ENERGY STAR qualified servers use 30% less energy.
- 7.3.4.6 Use a "Hot Aisle/Cold Aisle" layout in new server room design. Improve existing server rooms where possible. Arrange cabinets so that the fronts of the server racks face each other and, therefore, the backs of the server racks face each other. This arrangement reduces mixing of hot and cold air to improve efficiency.
- 7.3.4.7 Contain or enclose the server cabinet, to further reduce mixing the cold supply air with the hot exhaust air (e.g., using flexible strip curtains or rigid enclosures).
- 7.3.4.8 Improve air flow. Install blanking panels to decrease server inlet air temperatures and increase the temperature of air returning to the AC, both of which improve operational efficiency. Use structured cabling to avoid restricting air flow to the servers. Less leakage helps direct more cold air to the equipment that needs cooling.
- 7.3.4.9 Adjust the temperature and humidity in the data center. Legrand's required temperature range is 67°F to 75°F. The required humidity range is 40 to 55%. The IT Data Center Policy and Procedure supersedes the Energy Policy.
- 7.3.4.10 Retrofit the air conditioning with variable speed fan drives. Retrofit kits for ACs have a two year payback by being able to adjust fan speed to accommodate changing cooling loads in the data center.
- 7.3.4.11 Install an air-side economizer when possible which brings outside cooling air into a building. Because data centers must be cooled 24/7, 365 days per year, air-side economizers may even make sense in hot climates, where they can take advantage of

cooler evenings and winter air temperatures to save 60% on cooling.

7.3.4.12 Use of a water-side economizer should be evaluated. Use the evaporative cooling capacity of a cooling tower to produce chilled water during the winter months. During water-side economizer operation, costs of a chilled water plant are reduced by up to 70%.

7.4 IT Energy Measurements

7.4.1 Currently there are no measurements specific to IT Energy Consumption.

8.0 PURCHASING

8.1 Scope of Purchasing

All LEGRAND NORTH AMERICA associates who purchase items or equipment that consumes energy are responsible to consider the impact of energy consumption and when possible procure Energy Star rated goods.

8.2 Definitions

8.2.1 **GHG emissions:** GHG is an abbreviation for greenhouse gases. These gasses trap heat in the atmosphere. Greenhouse gas emissions have been linked to global warming. They commonly include carbon dioxide, methane, nitrous oxides and fluoridated gases.

8.3 Purchasing Guidelines

8.3.1 Refurbished Equipment Analysis: Analyze the energy usage and efficiency of new vs. refurbished equipment to include impact of energy efficiency.

8.3.2 Rebate Programs: Often funding opportunities such as rebates, tax incentives or utility partnership opportunities are available through local, state, and federal programs to address any cost premiums associated with energy-efficiency. See BBBP Sharepoint site for listing of Legrand's utility vendors. These funding opportunities should be investigated prior to making an equipment purchase.

8.3.3 Project Evaluation Tool: This excel based tool can incorporate the impact of energy reduction along with standard financial analysis to provide recommendations on the full purchasing impact. The form uses financial details along with a series of questions to rate the project's potential impact. This analysis should be completed to analyze the capital investment and return on investment for all energy projects. It should be included along with a department's current approval documents.

8.3.3.1 The tool can be found on the Legrand North America Energy Policy SharePoint page (see reference section for web address). A copy is shown in Appendix F.

9.0 TRANSPORTATION

9.1 Scope of Transportation - All LEGRAND NORTH AMERICA associates who transport raw materials, finished goods or parcel packages that are responsible to consider the impact of energy consumption and choose transportation methods that reduce both cost and fuel and lessen our impact on the environment.

9.2 Transportation Guidelines

- 9.2.1 Whenever possible, the use of an EPA SmartWay transportation carrier should be used. <http://www.epa.gov/smartway/index.htm>
- 9.2.2 The use of Rail (intermodal) should be evaluated for moves over 1,000 miles. Rail typically has the lower cost, and the least environmental impact.
- 9.2.3 Truckload shipments should be loaded in a manner that maximizes the trailer space while allowing for the safe transport of the goods and adheres to applicable laws.
- 9.2.4 Parcel shipments: Ground service should always be considered first before selecting air/express. There are many ground lanes that have 1 and 2 day service.

9.3 Travel and Vehicle Guidelines

- 9.3.1 Travel Considerations: When travel is necessary, our rental car agreement with National/Enterprise carries the largest number of hybrid and electric cars in the industry that are available to Legrand associates (availability varies by location. Contact your local National/Enterprise office).
- 9.3.2 Staff should consider using Airport or Hotel shuttles or public transportation when safe and feasible. Some cities have strong subway or rail transportation options which can lower personal GHG emissions. If you're unfamiliar with a city, there are multiple public transit applications for download on your smartphone that will better equip employees to navigate a new city.
- 9.3.3 Hotel suggestions: Turn off lights and the television when not in the room. Close window shades during the day to reduce direct sunlight, which causes the A/C to work harder and longer. Often hotels have a program to reuse towels and sheets. This practice will reduce both water and energy consumption.
- 9.3.4 Legrand Leased Vehicles: Under our current Ford agreement, employees can request the option to choose a 4 cylinder vehicle which can increase fuel efficiency, instead of the standard 6 cylinder vehicle. The annual fuel savings between a four and six cylinder car is 169 gallons. (Based on Ford Fusion using 20,000 miles per year per the fueleconomy.gov site)

The Legrand fleet policy should consider fuel efficiency when fleet vehicle options are reviewed.

- 9.3.5 Vehicle Charging: Currently two sites, West Hartford, CT and Syracuse, NY have installed electric car charging stations. As the need increases other sites will be considered and reviewed. The West Hartford site will provide parking and access to charging station to allow any employee with an electric vehicle to charge their vehicle during the workday. This is limited to Legrand charging products only.

10.0 REFERENCES

10.1 Energy Star, NEMA, LEED and other reference documents can be found in the Sharepoint Sustainability site.

10.2 LEGRAND NORTH AMERICA Energy Policy SharePoint page:
<http://internal.legrand.us/Ininitiatives/Sustainability/Environment/Operations/EnergyPolicy/default.aspx>

Appendix A:

FOR REFERENCE ONLY

Energy Policy Communications Suggestions

Suggestions to communicate new policies and guidelines:

- Provide manager talking points for department / staff / all hands meetings & Quarterly Webcast
 - Ask managers to provide feedback from these discussion
- Publish on legrand.us, sustainability site, dialog, Service Center Sustainability site, intranet with HR policies
- Display on TV monitors
- Include in new hire orientation package / meetings

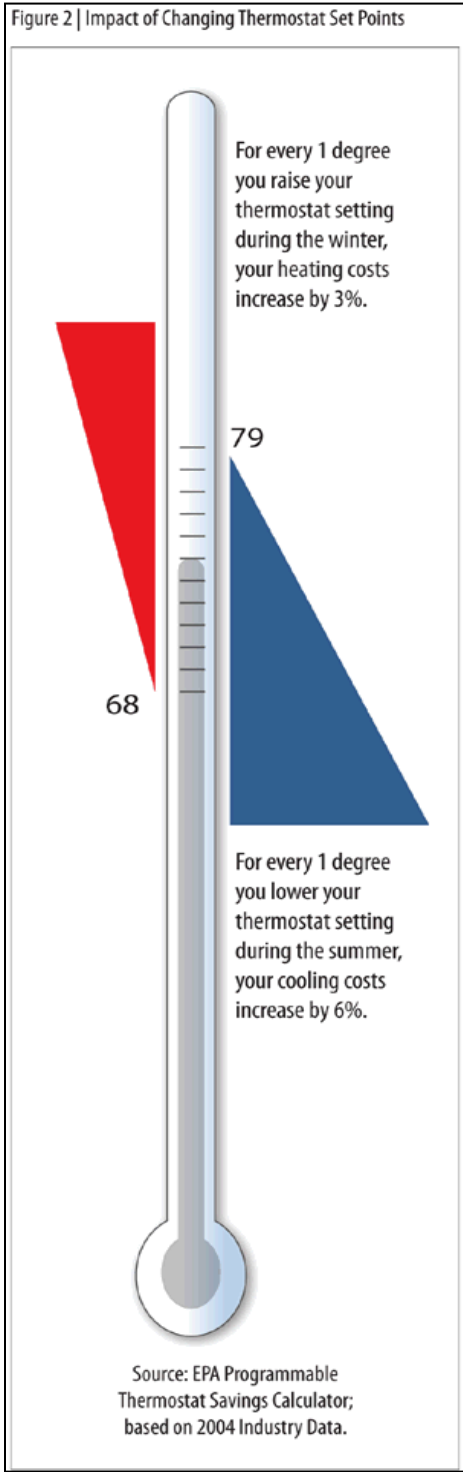
To reinforce behaviors:

- Provide “point of use” reminders
 - Sticker on monitors – “Turn off monitor when not using for 2 minutes or more”
 - Plaque on wall near light switches – “Turn off lights when leaving room”
- Insert Check box on purchase orders – “Does this purchase comply with energy efficiency guidelines?”
- Quarterly or Semi-annual TV or email reminders about different sections of the policy and where to find it

Appendix B:

FOR REFERENCE ONLY

EPA Thermostat Set Point Chart



Appendix C:

Common and Recommended Light Levels, Indoor

The outdoor light level is approximately *10,000 lux* on a clear day. In the building, in the area closest to windows, the light level may be reduced to approximately *1,000 lux*. In the middle area it may be as low as *25 - 50 lux*. Additional lighting equipment is often necessary to compensate the low levels.

In older lighting, it is common to find light levels in the range *100 - 300 lux* for normal activities. Today the light level is more commonly in the range *500 - 1000 lux* - depending on activity. For precision and detailed works, the light level may even approach *1500 - 2000 lux*.

The table below is guidance for recommended light level in different work spaces:

Activity	Illumination (lux, lumen/m ²)
Public areas with dark surroundings	20 - 50
Simple orientation for short visits	50 - 100
Working areas where visual tasks are only occasionally performed	100 - 150
Warehouses, Homes, Theaters, Archives	150
Easy Office Work, Classes	250
Normal Office Work, PC Work, Study Library, Groceries, Show Rooms, Laboratories	500
Supermarkets, Mechanical Workshops, Office Landscapes	750
Normal Drawing Work, Detailed Mechanical Workshops, Operation Theatres	1,000
Detailed Drawing Work, Very Detailed Mechanical Works	1500 - 2000
Performance of visual tasks of low contrast and very small size for prolonged periods of time	2000 – 5000
Performance of very prolonged and exacting visual tasks	5000 – 10000
Performance of very special visual tasks of extremely low contrast and small size	10000 – 20000

Measuring Units Light Level - Illuminance

Illuminance is measured in foot candles (*ftcd, fc, fcd*) (or *lux* in the metric SI system). A *foot candle* is *one lumen of light density per square foot, one lux is one lumen per square meter.*

$$1 \text{ lux} = 1 \text{ lumen} / \text{sq meter} = 0.0001 \text{ phot} = 0.0929 \text{ foot candle (ftcd, fcd)}$$

$$1 \text{ phot} = 1 \text{ lumen} / \text{sq centimeter} = 10000 \text{ lumens} / \text{sq meter} = 10000 \text{ lux}$$

$$1 \text{ foot candle (ftcd, fcd)} = 1 \text{ lumen} / \text{sq ft} = 10.752 \text{ lux}$$

SOURCE: http://www.engineeringtoolbox.com/light-level-rooms-d_708.html

Appendix D:

This appendix is for internal reference only. Please do not publish or share this table outside of Legrand.

FOR REFERENCE ONLY

LEGRAND NORTH AMERICA Energy Resources Utilized					
Company	Type	Services Rendered	Legrand Site	Company Website	Comment
U.S. State & Federal	Government	Incentives, Rebates and other Resources Database:	Multiple	http://www1.eere.energy.gov/manufacturing/states/state_activities/incentive_search.aspx	Check regularly for updated incentives and rebates
Dept. of Energy's Industrial Assessment Center	Gov-University Research	Identify energy efficiency projects for industrial sites	Multiple	http://www1.eere.energy.gov/manufacturing/tech_deployment/ia_cs.html	
X-tra Light Mfg.	Lighting	Lighting retrofit	Concord	www.xtralight.com	
Mechanical Contractors Inc.	HVAC	Direct Digital Controls	Concord	www.mcihvac.com	
Phillips Lighting	Lighting	High Efficiency CMH Bulbs	Concord	-	larry.wilson@philips.com
Jet Air Technologies, LLC	ESCO	Industrial Blowers	Concord	www.jetairtech.com/	
JB Systems	ESCO	Industrial Blowers	Concord	http://www.jbii.com/	
IMS	ESCO	Injection Molding Machine Barrel Blankets	Concord	http://www.imscompany.com	
Emcor Services	ESCO	HVAC DDC Proposal	Concord	http://www.emcorgroup.com	
Wattstopper	ESCO	Occupancy Sensors, Hi/Lo dimming of Ceramic Metal Halide Parking Lot Bulbs, Building Automation Components.	Concord	http://www.wattstopper.com/	

NC State University Industrial Extension Service	University	Audits / Energy Assessments	Concord	http://www.ies.ncsu.edu	gene_benedue@ncsu.edu
Activelogix	ESCO	Distech Controls, Vendor Expertise	Concord	www.activelogix.com/	rsellers@activelogix.com
Aelux	ESCO	Lighting retrofit	Fort Mill	www.aelux.com	
Warm Springs Electric Co	ESCO	Lighting retrofit	Livermore	www.warmspringselectric.com	Contractor was engaged to retrofit a test area for a new daylighting controls product, marketed to big box stores starting 4Q 2012.
Murphy Company	ESCO	Lighting retrofit	Mascoutah	www.murphynet.com	
Energize	ESCO	Lighting retrofit	Middletown		
Green Energy USA	ESCO	Energy Saving Device Projects, energy audits	Middletown	www.greenenergy-usa.com	
Sebesta-Blomberg	Eng Services Provider	Building Retro-Commissioning	West Hartford	www.sebesta.com	
Connecticut Light & Power (CL&P)	Utility	Rebates on energy efficiency projects including parts and labor	West Hartford	www.cl-p.com	

my.legrand > Organizations > LNA Services > LNA Initiatives > Product Initiatives >

Libraries

- Shared Documents
- Example Energy Policies
- Final Documents
- Energy Audit 2014/2015

my.legrand > LNA Initiatives > Legrand Sustainability > Environment > Operations > LNA Energy Policy > Energy Audit 2014/2015 > All Documents

<input type="checkbox"/>	Type	Name	Modi
		INDIVIDUAL SITE SUSTAINABILITY POLICY AUDIT FORM NEW	11/10

Appendix E:

FOR REFERENCE ONLY

BBBP Facility Energy Measurement Display

ENERGY INTENSITY TRACKING -- Site: CONCORD, NC														
	Product/Area	DEC/JAN												
		Energy KWH	Energy MMBtu	Output	Unit	Energy Intensity	Energy Therms	Energy MMBtu	Energy Intensity	Combined MMBtu	Energy Intensity	Intensity Change	Energy Difference MMBtu	Er
		Electricity					Natural Gas			E&N				
2009 Year 0	1	MFG	1,370,396	14,027	975,844	lbs	0.0144	2,461	246	0.0003	14,273	0.0146		
	2	Fixed*	396,764	4,061	365,000	sqft	0.0111	12,833	1,283	0.0035	5,345	0.0146		
	3													
	4													
	Total	Concord, NC	1,767,160	18,089	975,844	lbs	0.0185	15,294	1,529	0.0016	19,618	0.0201	Baseline	19,618.05
2010 Year 1	1	MFG	1,621,490	16,598	1,143,011	lbs	0.0145	2,245	225	0.0002	16,822	0.0147		
	2	Fixed*	396,764	4,061	365,000	sqft	0.0111	14,014	1,401	0.0038	5,463	0.0150		
	3													
	4													
	Total	Concord, NC	2,018,254	20,659	1,143,011	lbs	0.0181	16,259	1,626	0.0014	22,285	0.0195	-3.02%	2,666.70
2011 Year 2	1	MFG	1,315,003	13,460	1,190,731	lbs	0.0113	2,198	220	0.0002	13,680	0.0115		
	2	Fixed*	257,492	2,636	365,000	sqft	0.0072	14,949	1,495	0.0041	4,131	0.0113		
	3													
	4													
	Total	Concord, NC	1,572,495	16,096	1,190,731	lbs	0.0135	17,147	1,715	0.0014	17,811	0.0150	-25.60%	(1,807.29)
2012 Year 3	1	MFG	1,075,296	11,007	1,220,191	lbs	0.0090	2,154	215.40	0.0002	11,222	0.0092		
	2	Fixed*	257,492	2,636	365,000	sqft	0.0072	9,402	940.21	0.0026	3,576	0.0098		
	3													
	4													
	Total	Concord, NC	1,332,788	13,642	1,220,191	lbs	0.0112	11,556	1,156	0.0009	14,798	0.0121	-39.67%	(4,820.03)
2013 Year 4	1				lbs									
	2				sqft									
	3													
	4													
	Total	Concord, NC	-	-	-	lbs	-	-	-	-	-	-	0.00%	-
2014	1				lbs									
	2				sqft									

Appendix F:

FOR REFERENCE ONLY

Finance Evaluation Form

Enter \$ amounts in thousands

Input fields denoted by blue shade

Enter cost reductions as a positive number, incremental cost as a negative number

Please enter a brief description of the project:

Purchase of a 400 kW UTC PureCell 400 Fuel Cell.

Prepared by:

Phone # for :

Date of Implementation

TBD

Upfront / Implementation Costs

	Investment period	
Capital Expenditures	(3,048)	- purchase of \$2,866K, + 6.35% sales tax
Purchase / Installation (external) Costs - Non-Capitalized	-	
Fixed Asset Disposal	-	
Disposal of Current Asset	-	
Internal Labor - Installation / Disposal	-	
Tax Credits / Deductions	914	- Federal tax credit of 30% against the total acquisition cost
Utility Rebates	-	
Other One-Time (Expenses) / Benefits	-	
Total Upfront (Expenses) / Benefits	(2,134)	

Annual Impact

	Years covered by				
	1	2	3	4	5
Reduction in Electricity Usage (whole kWh)	3,371,031	3,371,031	3,371,031	3,371,031	3,371,031
Current Energy Costs (Rate per kWh)	0.11	0.11	0.12	0.12	0.12
Reduction in Natural Gas Usage (whole CCF)	(255,833)	(257,176)	(261,010)	(264,363)	(268,098)
Current Energy Costs (Rate per CCF)	1.20	1.20	1.20	1.20	1.20
Overall Reduction in Source Energy Usage (MMBTU)	8,411	8,274	7,883	7,541	7,160
Overall Change in Carbon Intensity (metric tons CO2)	352	345	324	306	285
Energy Cost Savings	259	254	259	265	270
Productivity Impact	-	-	-	-	-
Utility (RE) credits	298	298	298	298	298
Other Annual (Expenses) / Benefits	(126)	(123)	(117)	(111)	(106)
Total Annual: Savings / (Expense)	431	429	440	451	463

Financial Analysis

Net Present Value	\$ 1,240.5
Discounted Payback (Years)	6.1
Internal Rate of Return	13%

REV.	ECO NO.	DESCRIPTION OF CHANGE	DATE EFFECTIVE
A		INITIAL RELEASE	11/20/14