Policy for the Sustainable Design and Construction of Johnson & Johnson Facilities

September 17, 2012

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Policy for the Sustainable Design and Construction of Johnson & Johnson Facilities

We are responsible to the communities in which we live and work and to the world community as well…. We must maintain in good order the property we are privileged to use, protecting the environment and natural resources.

--OUR CREDO

Policy for Sustainable Design and Construction

Driven by Our Credo values, Johnson & Johnson has always strived to utilize the best environmental practices in all we do. Our Policy on Sustainable Design and Construction builds upon those principles by providing comprehensive guidelines for incorporating sustainability into the design and construction of all new facilities and major renovations. The Policy expands our strategic goals to construct buildings that:

- Minimize our impact on communities and the environment;
- Create comfortable and safe workplaces for employees, and
- Enable significant cost savings over the lifecycle of a building with minimal added up-front capital investment.

Scope

The Policy establishes an enterprise-wide ranking mechanism, or **Sustainability Baseline,** that requires the efficient utilization of energy, water, and materials to reduce a building's lifecycle operating cost, minimize environmental impact, and improve the indoor environmental quality for occupant health.

The Policy complements all other Johnson & Johnson environmental and engineering guidelines and the local laws and regulations in force at our locations around the world. It applies to all new construction and renovations totaling $5 million USD and all stand alone new buildings of lesser value. The policy covers all new facilities owned and leased by Johnson & Johnson companies worldwide, including office, research & development, manufacturing and warehouse buildings. All engineers, project managers, facility managers and consulting firms who specify, design, construct, or operate new or renovated Johnson & Johnson facilities are responsible for ensuring the Sustainability Baseline is met.

While projects within the scope of the Policy must meet this baseline, Johnson & Johnson companies are encouraged to set even higher sustainability objectives to further minimize their impact on the environment, provide comfortable and effective work spaces for their employees, and reduce their long-term operating costs. In fact, many project teams are constructing sustainable buildings with little or no added cost. The long-term benefits usually far surpass the incremental up-front capital investment.

Sustainability Baseline

The Policy's Sustainability Baseline uses the Leadership in Energy and Environmental Design (LEED) Green Building Rating System™. This is the U.S. Green Buildings Council's (USGBC) certification program for the design, construction and operation of high performance buildings.

All new construction and major renovations within the Johnson & Johnson Family of Companies must meet the requirements of "LEED© Certified or Equivalent" and implement all energy design elements with a 10 year or better simple payback per the J&J New Facility Design Criteria; listed in Appendix I. A total cost of ownership approach is needed when investing in a new asset with a depreciation life of over 20 years. While it is often desirable to decrease the first cost of a new building, it is critically important to design and build a highly efficient structure upfront to decrease future operations and maintenance costs. If the building is not planned and built to a high efficiency standard within the new construction process, it is much more costly to retrofit at a future time. LEED© Certified is the basic certification level of the USGBC that serves as our Sustainability Baseline. Each project should receive formal certification by the rating authority. Since the Policy applies to both owned and leased facilities, a relevant version of the rating system (e.g. LEED© New Construction, LEED© Commercial Interiors, etc.) should be used. This Policy does not extend to existing facilities and it is recognized that it may not be practical to pursue certification for some special purpose buildings.

Beside LEED©, several other rating systems are used throughout the world and the Policy acknowledges regional experience as an important consideration in selecting a building rating system. Any other rating system chosen by the project team must be equivalent or better then the LEED© standard. The Global Energy Committee must approve use of any other rating system chosen.

Procedures

The Project Delivery Process (PDP) developed by Worldwide Engineering provides a step-by-step roadmap to help all Johnson & Johnson affiliates identify, plan and implement sustainability solutions that best meet their business needs. The PDP spans an entire project, from business planning through operational support. In the scoping phase of the project, the Project Sponsor, with assistance from the Project Director and Engineering Lead, determines a green building rating system and rating level. The combination of the rating system and the rating level sets the specific performance objectives of the project. The choice of sustainability rating system and level must be communicated through the Worldwide Engineering Project Portfolio Reporting Tool.

Full details of the procedure are available on the Worldwide Energy website.
http://ehs.jnj.com/energy/co2_reduction/greenbuildings/Pages/default.aspx

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Note: This Policy replaced the Johnson & Johnson Sustainable Design Guideline.

LEED® (Leadership in Energy and Environmental Design) was developed and piloted in the U.S. in 1998. The development of LEED® has been through the U.S. Green Building Council member committees. The rating system addresses specific environmental building related impacts using a whole building environmental performance approach. In addition to LEED-NC (for new construction and major renovations), there are versions for existing buildings, commercial interiors, core and shell, homes, and neighborhood development. There are also application guides that can be used to increase the applicability and flexibility of LEED® (e.g., multiple buildings and campuses, schools, health care, laboratories, lodging, and retail (pilot).

More information on LEED can be found at *http://www.usgbc.org/leed/*

Johnson & Johnson New Facilities Design Criteria
For New Construction > $5MM and all stand alone new buildings
September 17, 2012

		Guideline	References
1		All new construction or large renovation projects over $5MM USD must be LEED certified or equivalent.	See item a.
2		All energy related design elements identified with a simple payback of less than 10-years must be included within the project scope. New buildings must target a 50% energy savings when compared with the minimum code requirement of ANSI/ASHRAE/IESNA 90.1-2007	See items b, c, d, e, f and g.
	a	Consider all energy utilities and government incentives when analyzing the feasibility of Energy Conservation Measures (ECM's).	See item h.
	b	A "Climate and Place Analysis" shall be conducted early during the BOD phase. The purpose of this analysis is to gather the wet bulb temp, dry bulb temp, ground temp, humidity, wind speed, solar radiation, cloud cover, etc. at the project location. This data should then be used to develop an appropriate set of strategies related to building orientation, day lighting, natural ventilation, insulation, etc.	See item i.
	c	Whole Building Simulation must be conducted during multiple phases of the design process. The first simulation must be completed during early stages of the BOD to analyze various ECM's.	See item d, pg 10 for Key Design Activities.
	d	Comply with following principals of High Performance Buildings: - High R-value for building envelope - Eliminate thermal bridges - Seal building envelope (leakage rate of less than 0.25cfm/ft^2@3" wg or 76.2(L/min)/m^3 at 75 Pa) - Passive solar & shading - Heat transfer of exhaust and supply air - Automated controls on all building energy devices - Radiant heating and cooling where applicable	See item j, presentation slides from DOE.

References:

a. Policy for Sustainable Design and Construction of Johnson & Johnson Facilities dated March 2009.
b. United States Green Building Council (USGBC)
Leadership in Energy and Environmental Design (LEED 2009); Energy and Atmosphere Section
c. ANSI/ASHRAE/IESNA 90.1-2007.
d. American Society of Heating, Refrigeration and Air Conditioning (ASHRAE) Design Guide: Advanced Energy Design Guide for Small to Medium Office Buildings, Achieving 50% Energy Savings toward a Net Zero Energy Building, Copyright 2011 (contains prescriptive methodology on how to attain 50% savings below ASHRAE 90.1-2004).
e. National Renewable Energy Laboratory (NREL) Technical Support Document: Strategies for 50% Energy Savings in Large Office Buildings, September 2010 (contains feasibility study of attaining 50% reduction below ASHRAE 90.1-2004).
f. Labs21 Design Guide for Energy-Efficient Research Laboratories - Version 4.0.
g. New Buildings Institute, Getting to Zero 2012 status update: A First Look at the Costs and Features of Zero Energy Commercial Buildings. http://www.newbuildings.org/sites/default/files/GettingtoZeroReport_0.pdf
h. Database of US State Incentives for Renewable Energy (DSIRE); North Carolina State University, under NREL Subcontract (www.dsireusa.org).
i. Climate and Place analysis tools:
Ecotect: http://usa.autodesk.com/adsk/servlet/pc/index?id=12602821&siteID=123112
Climate Consultant Software: http://www.energy-design-tools.aud.ucla.edu/
j. Seven Principles of High Performance Buildings dated May 2011, prepared by Don Juhasz, PE, CEM, Director Energy Resource Management, Defense Logistics Agency, USDOD.