

Lighting Fixtures, Lamps, and Ballasts for New Construction and Remodel – Increased Energy Efficiency, Reduced Mercury Usage, and Cost Savings

Environmental and Human Health Impact: Reduced greenhouse gas emissions from energy generation for lighting and ecological exposure to mercury.
Business Impact: 13.4 percent savings in first-cost for fixtures, lamps, and ballasts and an increased portfolio of design choices.

Challenge

Lighting can make a room feel inviting and comfortable, or cold and gloomy. Lamps and fixtures facilitate accurate patient care by enabling clinicians to see their patients in the truest light possible. However, lighting significant impacts a facility’s greenhouse gas emissions due to energy demand and contributions to indoor heat gain. The higher the wattage, the more energy they draw. In addition, lights contain mercury which, if released into the environment, cause neurological and developmental damage in humans.

Aim/Goal

- Update the Kaiser Permanente lighting standard and guidelines to promote a “Total Health Environment”, and transition from prescriptive lighting specifications toward a flexible, performance-based, model that delivers the optimum lumens for the task or environment.
- Identify a supplier that would enable Kaiser Permanente to purchase the most energy efficient, longest-lasting lamps and ballasts that contain the least amount of mercury; reducing the negative environmental and human health impacts from lighting.

Team

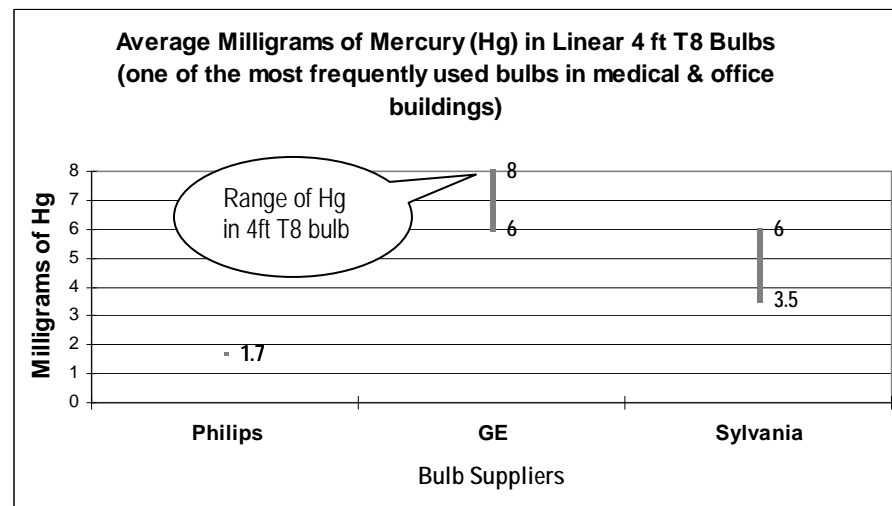
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Actions Taken

- ✓ Reexamined lighting concepts to identify a strategy that would enable Kaiser Permanente facilities to create a health-promoting atmosphere.
- ✓ Identified Philips as supplier with the most comprehensive lighting portfolio of top-tier energy efficient and long-lasting products, the least amount of mercury, and lowest wattage requirements for high usage bulb models.

- ✓ Negotiated improved pricing with Philips and their subsidiaries to realize cost savings for entire fixture and lamp portfolio, giving Kaiser Permanente lighting designers improved design options.
- ✓ Deselected incumbent suppliers, and signed contract with Philips in fourth quarter 2008.

Results



Lessons Learned

- ✓ Deselecting incumbent suppliers can be cost effective and result in the increased availability of environmentally superior products.

Next Steps

- ✓ Convert new construction and remodel standards to new lighting guidelines.
- ✓ Align contract for relamping (bulb replacement) of existing building with new construction to amplify impact and create consistency.
- ✓ Ensure responsible recycling language is incorporated into relamping contract to address end-of-life responsibility for the product.