Clean Lighting Coalition

Hospital LED Retrofits

NIGERIA, BRAZIL, AND THE PHILIPPINES

The Clean Lighting Coalition (CLiC) aims to **transition global markets to safe, cost-effective, and energy-saving LED lighting** by supporting the removal of fluorescent lamp exemptions under the Minamata Convention on Mercury.

Retrofitting Hospitals with Mercury-Free LEDs

CLiC partnered with organizations in Brazil, Nigeria, and the Philippines to retrofit hospitals with energy-efficient, mercury-free LEDs. **Retrofitting is the process of removing fluorescent light bulbs and installing new, higher-efficiency LEDs** into the same wiring and fixtures. The pilots aimed to demonstrate that institutional buildings can easily and cost-effectively transition to cleaner lighting.

LED Retrofits...

- **lower hospital energy costs,**
- **provide better quality lighting, and**
- **reduce the risk of mercury exposure for both patients and staff.**

The pilots demonstrated practical steps hospitals—and other institutional buildings—can take to switch to LED lighting with minimal effort and significant economic and safety benefits.

Our partners provided data on the actual cost of purchasing and installing the lamps in three locations. They also estimated the "pay-back" period, or the time it will take to recover the initial cost of LED purchase through long-term electricity savings.

Nigeria

CLiC partnered with **SRADev**, an environmental research non-profit, to support the LED retrofit pilot at **Folarin Coker Staff Clinic** in Lagos, Nigeria. **Rising electricity costs and an unstable grid** are leading to frequent black-outs and inconsistent electricity services across Nigeria. LEDs are an energy-efficient alternative to fluorescents will help reduce strain on the overburdened grid.

Brazil

CLiC partnered with **Projeto Hospitais Saudáveis**, to support the dual hospital retrofit at **Hospital de Clínicas da Faculdade de Medicina de Botucatu** and **Hospital Estadual de Botucatu** in São Paulo State, Brazil. The LED retrofit will protect hospital staff and patients from the risk of exposure if a mercury-containing bulb breaks.

The Philippines

CLiC partnered with **Health Care Without Harm Southeast Asia,** to support a LED retrofit at **Mary Johnston Hospital** in Manila, Philippines. Mary Johnston Hospital will use the energy cost savings to support their indigent tuberculosis and HIV patients.

Results of the LED Retrofit

	Nigeria	Brazil	Philippines
Fluorescent Lamps Removed	669	2,200	242
LED Lamps Installed	452	2,200	242
Payback Period (Months)	5.8	5.8	4.9
Annual Energy Savings (kWh)	28,296	116,600	7,260
Annual Financial Savings (USD)	$4,005	$9,310	$1,287
Annual CO_2 Savings (MT CO_2)	10.74	5.85	3.51
Mercury Avoided (g Hg)	10.74	16.5	1.815
Potential Water Polluted from Hg (liters)	5,370,000	8,250,000	907,500

**MT= Metric Tons* **g Hg = grams of mercury*

In collaboration with our partners, we worked with local lighting auditors, electricians, facility managers, and infrastructural and energy management agencies to conduct the retrofits.

The retrofit process lasted 6 months:

MONTH 1
Project set-up, identify partner clinic, meet with stakeholders

MONTHS 2-3
Conduct retrofit lighting audit, lamp selection & purchase

MONTH 4
Procurement team training

MONTHS 5-6
Implementation & analysis

End Toxic Lighting Globally

For countries experiencing shortages in electricity supply and rising energy costs, switching to mercury-free LED bulbs offers a cost-effective and financially feasible solution to reduce energy.

As wealthy markets ban fluorescents, citing health risks and low-efficiency levels, un- and under-regulated countries will become targets for toxic lighting products. A global ban on fluorescents will ensure an equitable transition to mercury-free, LED lighting.

A brighter, healthier future is as simple as changing a light bulb - it's time to take action.

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