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Lighting-Up the Climate Change Challenge

Global Phase-Out of Old Bulbs Announced by UN, GEF, and Industry

Seal the Deal in Copenhagen

Washington DC/Nairobi, 25 September 2009 – A new global initiative to accelerate the uptake of low energy light bulbs and efficient lighting systems was launched today by the Global Environment Facility (GEF) and the United Nations Environment Programme (UNEP).

The close to \$20 million initiative, the Global Market Transformation for Efficient Lighting Platform that will be implemented in collaboration with the private sector companies OSRAM and Philips, is aimed at reducing the bills of electricity consumers in developing economies while delivering cuts in emissions of greenhouse gases.

It is also aimed at replacing fuel-based lighting systems, such as kerosene, that is linked with health-hazardous indoor air pollution.

Globally, 70% of total lighting market sales are still made up of inefficient incandescent lamps. A market shift, from incandescent lamps to energy-efficient alternatives, would cut the world's electricity demand for lighting by an estimated 18%.

A recent report by US Global Industry Analysts Inc indicates that by 2010, the industrial, commercial, residential, and public lighting market will exceed 94 USD billion with a large part of the growth in developing economies.

Achim Steiner, UN Under-secretary General and UNEP Executive Director, said: "In many ways the way we light our homes and buildings is akin to still driving around in steam-powered cars or communicating by telegram".

"This new project aims to accelerate growing national initiatives to replace old bulbs into a global one by overcoming market barriers in developing economies and by setting international energy and performance standards in order to build consumer confidence. In terms of climate change, this is among the lowest of low hanging fruit. Eight per cent of global greenhouse gas emissions are linked with lighting—this project can by 2014 make a big dent in these while saving people money too," he added.

"This is the time to move forward with a concerted and synergetic approach that truly transforms this market in both the developed and developing world. That's why we are launching this global initiative to bring the major global players together to phase-out

inefficient lighting once and for all," said Monique Barbut, CEO and Chairperson, the Global Environment Facility.

Using current economic and energy efficiency trends, it is projected that global demand for artificial light will be 80% higher by 2030 with a great deal of that linked to the construction and operation of new buildings in developing economies including China.

If lighting technologies and efficiencies do not improve, global lighting electricity demand will reach almost twice the output of all modern nuclear power plants amounting to 4,250 terawatt-hours (TWh), according to the GEF.

Energy saving lights, known as compact fluorescent lamps (CFLs), are designed to replace incandescent lamps. Some 25% of the energy consumed by CFLs is converted to visible light, compared to only 5% for an incandescent lamp.

Up to 95% of the energy emitted by incandescent lamps is heat, and their efficiency is inherently low. Comparing the two types of lighting, incandescent bulbs last around 1,000 hours, which is significantly shorter than energy saving lamps, with life spans of 6,000 to 12,000 hours.

"There is growing momentum now, and a very aggressive timeline to address the emerging issues of climate change. We have learned a lot in Europe and the United States over the past few years, and need to apply that in the emerging marketplaces of developing countries," said Kaj den Daas, CEO, Philips Lighting North America. "We have also made great innovative strides in addressing solutions where there is no access to the energy grid. With more than 1.6 billion people living without electricity today in developing areas, there is a growing need to deploy new products, and a growing desire amongst people to experience the benefits of being able to cook, eat, socialize, and for children to do their homework at night safely and conveniently, for the very first time."

OSRAM representative Martin Goetzeler, CEO said: "Developing and promoting more efficient lighting products has always been part of OSRAM's DNA. We not only encourage developing countries to partake in the economic benefits of efficient lighting, but we also feel responsible in supporting the implementation of a holistic approach to make light as environmentally friendly as possible and available to all social strata."

He added: "The lever is enormous. Over 1/3 of the electricity used worldwide for lighting today could be saved. That corresponds to half the electricity consumption of China."

In 2003, the provision of artificial light was estimated to require the equivalent of approximately 650 million tons of oil equivalent (Mtoe), which was equivalent to 8.9% of total global primary energy consumption. Globally, lighting-related CO² emissions are estimated at 1,900 million tons (Mt) of CO₂, equivalent to approximately 8% of world emissions.

Several countries are now phasing-out incandescent light bulbs with Ireland, Australia, Argentina, and the Philippines set to achieve this goal in early 2010.

Recent legislation in the United States will phase out the least efficient lamps by 2014, starting with the phase out of the standard 100-Watt incandescent by 2012. The European Union is starting the process in 2009.

The new global project, which will include a centre of excellence of lighting, will build on and support further commercialization and market penetration among several developing countries that have already made efforts to promote the adoption of CFLs and to phase-out incandescent lamps—some with GEF support and the involvement of the United Nations Development Programme (UNDP).

These include Cuba and Venezuela, which have begun installing energy efficient lighting and others such as China, Vietnam, Morocco, Bhutan, Mauritania, Cote d'Ivoire, and Jordan. At present China and Vietnam are already executing projects that were approved by the GEF; proposals for projects in other countries are under preparation and/or have been submitted to the GEF for approval. The platform will also coordinate and liaise with energy efficient lighting projects in other countries that are supported by other organizations.

Historically, the main barrier hampering the deployment of energy efficient lighting products was their high initial cost.

When first launched in the early 1980s, CFLs were 20 to 30 times more expensive to produce than their incandescent equivalents. However, CFL costs have steadily declined through use and increased competition. They now retail for about four times the price of an incandescent lamp.

Consumers have traditionally been slow to come on board and according to some reports, were initially unimpressed by early models, disliking the look and functionality of these models.

Manufacturers are of the view that consumers need to understand how using energy saving bulbs will allow for long term cost savings, as well as be assured of the quality and reliability of new models, as well as the growing number of energy saving options that are and will become available.

One promising innovation is the development of solid state lighting (SSL).

This technology is expected to achieve efficiencies at least ten times higher than incandescent lamps, and up to twice as high as fluorescent lamps.

Light Emitting Diode (LED) lamps, aside from not containing mercury have other advantages such as a long life, a warm light color similar to incandescent lamps, low heat generation, and the ability to work with dimming switches in certain lamps.

Notes to Editors

Some additional facts and figures

- The International Energy Agency (IEA) estimated that in 2007 total electricity consumption for lighting was 2,650 TWh. This represents almost 19% of global electricity use.
- Globally, electricity consumption for lighting is equivalent to the electricity produced by all 1,265 gas-fired power plants in the world.
- The total global GHG emissions accrued to lighting electricity consumption was estimated in 2005 by the IEA at 1,889 MtCO₂ of which grid based lighting systems contributed 1,528 MtCO₂. This is equivalent to 70% of global emissions from passenger vehicles.

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About the Global Environment Facility (GEF)

GEF unites 178 countries in partnership with international institutions, non-governmental organizations (NGOs), and the private sector to address global environmental issues while supporting national sustainable development initiatives. Today the GEF is the largest funder of projects to improve the global environment. An independent financial organization, the GEF provides grants for projects related to biodiversity, climate change, international waters, land degradation, the ozone layer, and persistent organic pollutants. Since 1991, GEF has achieved a strong track record with developing countries and countries with economies in transition, providing \$8.6 billion in grants and leveraging \$36.1 billion in co-financing for more than 2,400 projects in over 165 countries.