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## **Phasing-out Inefficient Lighting to Combat Climate Change**

### **South Africa Announces National Phase-Out Plan**

### **UNEP and GEF Announce Global Phase-out Target for 2016**

**Durban, 7 December 2011** -- The South African government, host of the United Nations Climate Change Conference in Durban (COP17), has formally announced a comprehensive phase-out policy for inefficient lighting.

The plan is linked to a global initiative by the UN Environment Programme (UNEP) with the support of the Global Environment Facility (GEF), aimed at assisting to combat climate change through the transition to energy efficient lighting.

South Africa's announcement makes it the first African nation to undertake a comprehensive national phase-out transition from inefficient lighting.

The phase-out of inefficient lighting is one of the quickest, easiest and most effective ways to save energy and combat climate change. Electricity for lighting accounts for close to 20 per cent of total global electricity production and six per cent of worldwide greenhouse gas (GHG) emissions, according to the International Energy Agency. The en.lighten initiative aims to halve these emissions.

“If a global temperature rise is to be kept under 2 degrees C, we need to act on multiple fronts, including voluntary and legally binding actions. Fast tracking more energy-efficient lighting is without doubt one of the low hanging fruit offering not only emissions saving but cost savings to a company or a household's budget,” said Achim Steiner, UN Under-Secretary General and UNEP Executive Director.

“This UNEP/GEF Global Partnership is switching off old bulbs and switching on a path to a more low-carbon, resource-efficient Green Economy. The aim of achieving a global phase-out by 2016 is not only possible but infinitely do-able,” he added.

The UNEP/GEF en.lighten initiative was launched in September 2009 as a globally coordinated effort to accelerate the transition to efficient lighting and mitigate climate change. It is a partnership between UNEP, GEF, and private sector partners Osram AG, Philips Lighting and the National Lighting Test Centre of China (NLTC).

"The GEF is a champion of market efforts to expand efficient lighting to developing countries throughout the world," said Monique Barbut, CEO and Chairperson of the Global Environment Facility. "en.lighten is the latest initiative funded by the GEF in partnership with UNEP to accelerate market transformation of efficient lighting technologies on a global scale. Through this initiative, we are building a brighter future today and for the next generations to come."

"As a lead partner of the en.lighten initiative, we at Philips are very happy that South Africa, together with a fast growing number of developing countries, are committing to make the switch to energy-efficient lighting. This switch saves money and reduces carbon emissions, while at the same time, provides solutions that improve the quality of people's lives around the world," said Harry Verhaar, Senior Director Energy & Climate Change, Philips Lighting.

"By joining the en.lighten initiative, OSRAM has given a clear signal that the lighting industry has no time to wait for political blockades to be lifted. The industry is ready now, and new lighting technologies are available. Energy saving fluorescent lamps and LED solutions guarantee huge savings in carbon emissions with attractive financial benefits for users. Consequently, OSRAM welcomes the decision of the South African government to phase-out inefficient incandescent lamps by 2014," said Wolfgang Gregor, Chief Sustainability Officer, Osram AG.

UNEP has set an ambitious target date to phase-out inefficient incandescent lamps globally by 2016. This is the first step in the transition to more efficient lighting and a low-carbon, resource-efficient Green Economy. The phase-out of inefficient lighting is one of the most important and easy short-term initiatives that countries can implement to combat climate change and conserve financial resources in a time of global crisis.

At COP16 last year, en.lighten unveiled Country Lighting Assessments detailing country savings from the shift away from inefficient incandescent lamps to efficient compact fluorescent lamps (CFLs). The total global savings from phasing out incandescent lamps amounts to the same emissions as over half of the annual international aviation sector, or the electricity consumed yearly by the United Kingdom and Denmark combined.

South Africa will be able to electrify over four million homes with the electricity saved from phasing-out incandescent lamps.

South Africa will become the first African country to phase-out incandescent lamps following an integrated approach, including the development of collection and recycling systems. Beginning in January 2012, the country fully supports the 2016 global deadline for the phase-out of inefficient lamps and will complete the phase-out by 2016.

“South Africa is working with UNEP and its Global Partnership to share these lessons learned with other African countries willing to phase-out and reap the benefits that a transition would bring,” said H.E. Ms. Duipo Peters, South Africa’s Minister of Energy.

“We encourage all countries that have not yet phased-out inefficient lighting to join the UNEP Global Partnership and work with us to move towards an efficient lighting world to mitigate climate change,” she said

“South Africa faces important power shortages which will be greatly mitigated by the phase-out of incandescent lamps. The electricity saved by the phase-out will be directed to more pressing social needs. South Africa is committed to mitigating climate change. This measure is a key action to reduce CO<sub>2</sub> emissions,” added Ms. Peters

Over 25 developing countries from four continents have joined the Global Efficient Lighting Partnership Program which has been established to support countries to design and implement national inefficient lighting phase-out strategies adapted to specific country conditions and requirements.

Uruguay was the first country to join the UNEP/GEF Global Partnership in August 2011. Activities will begin in early 2012. The country has begun measures to waive taxes for efficient lighting technologies and to develop pilot projects to promote the collection of spent lamps.

A principle and readily available technology is the CFL. Unlike older incandescent light bulbs which produce 95 per cent heat and just five per cent light, CFLs produce an equivalent amount of light using 75 per cent less energy. They also last up to ten times longer than incandescent bulbs.

There has been criticism of the health hazardous of the mercury used in CFLs, which is as an issue that raises questions about the technology’s environmental credentials.

Mercury is also emitted from coal-fired power stations. Studies indicate that mercury emissions from power stations linked with conventional incandescent bulbs are far higher than those linked with the disposal of efficient bulbs.

In Uruguay, a proposal has been developed to implement national regulations for restricting the importation of lamps based on mercury content. As no recycling plan could succeed in recovering 100 per cent of spent lamps from domestic waste, restricting and discouraging lamps with high mercury content will significantly reduce the presence of mercury in a country.

Meanwhile, other mercury-free technologies are also being promoted including Light Emitting Diodes (LEDs). They also contain electronic components needing collection and recycling.

The establishment of collection and recycling schemes is a key issue and the UNEP/GEF en.lighten Global Partnership will support countries to establish sustainable end-of-life norms and approaches for spent lamps.

UNEP has brought together top international experts, to provide guidance and technical support to countries that partner with the en.lighten initiative to develop national efficient lighting strategies and plans. They have developed recommendations for countries to follow an “integrated approach” to phase-out incandescent lamps.

The integrated approach includes: the use of globally harmonized minimum energy performance standards; establishing quality control mechanisms; and, establishing sound lamp disposal and recycling schemes. UNEP will support countries in launching their own national lighting transition strategies on the basis of global best practice.

Residential incandescent lamps are the most common lamp type and the easiest to address to mitigate climate change. More savings can be achieved through a transition to efficient lighting in other sectors, such as commercial and industrial lighting. This will be UNEP’s next priority by unveiling plans for the transition for all lighting sectors at the UN Sustainable Conference on Sustainable Development (Rio+20).

#### **KEY FACTS:**

- Using current economic and energy-efficiency trends, it is projected that global demand for artificial light will be 60 per cent higher by 2030 if no switch to efficient lighting occurs;
- The International Energy Agency (IEA) estimated in 2007 the total electricity consumption due to lighting at 2650 terawatt-hour (TWh). This represents almost 19 per cent of global electricity use (15-17 per cent greater than nuclear or hydro power);
- The total global GHG emissions accrued to lighting electricity consumption was estimated in 2005 by the IEA at 1,900 MtCO<sub>2</sub> of which grid-based lighting systems contribute to 1,528 MtCO<sub>2</sub>. This is equivalent to approximately eight per cent of world emissions, or 70 per cent of the world passenger vehicle emissions;
- Incandescent lamps have already been phased-out, or are scheduled to be phased-out in most OECD countries, Argentina, Brazil, Malaysia, Mexico, Vietnam and other developing countries. However, over 130 countries still market inefficient incandescent lamps;
- Lack of awareness about the energy saving and financial benefits of efficient lamps is a key deterrent for their market penetration in developing countries;
- Manufacturers say 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 types;

- Up to 95 per cent of the energy emitted by incandescent lamps is heat, and their efficiency is inherently low. In comparison, incandescent bulbs last around 1,000 hours which is significantly shorter than energy saving lamps which can last up to 12,000 hours. CFLs can now also be dimmed;
- Like all fluorescent lamps, CFLs contain mercury, which complicates their disposal. en.lighten will support countries in setting up legislation and sustainable end-of-life approaches for spent lamps;
- The average mercury content in a CFL bulb is about three milligram (mg) – roughly the amount it would take to cover the tip of a ball-point pen. By comparison, older thermometers contain 500 mg of mercury – the equivalent of more than 100 CFLs;
- Studies indicate that the level of emissions from power stations linked with lighting the world's old bulbs are far higher than those linked with the disposal of energy efficient bulbs;
- Light Emitting Diodes (LEDs) are becoming more prevalent in the market. They do not contain mercury and have other advantages such as long life, warm light colour similar to incandescent lamps and low heat generation.

**For more information, please contact:**

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