



United Nations Environment Programme

en.lighten initiative



PHILIPS



nLTC National Lighting Test Centre
China

WEBINAR AGENDA

Part I. Introduction to en.lighten

- **Transitioning to efficient lighting**
- **Introducing the en.lighten initiative**
- **Integrated policy approach**
- **Resources**

Presenter: Gustau Mañez Gomis

Part II. Achieving the Global Transition to Energy Efficient Lighting Toolkit

- **The Efficient Lighting Toolkit**

Presenter: Kathryn M. Conway



Efficient Lighting to Meet the Global Climate & Energy Crisis

- Lighting accounts 19% of global electricity consumption and 6% GHG emissions
- Electricity generated from fossil fuels leads to GHGs, accelerating climate change
- Decrease in electrical demand = fewer power plants required
 - Releases funds for investment in other priorities: infrastructure, health, education
 - Increases countries' economic competitiveness
- Electrical supply in many countries cannot reliably meet demand
 - Power outages lower productivity and wreak havoc on economies
- Many countries already have aggressive strategies to increase the efficiency of their lighting base
 - Achieved through appliance efficiency programs



Phase-out Regulation for Inefficient Incandescent Lamps (2012)



The en.lighten initiative

- Established to accelerate the global transition to environmentally sustainable lighting
- Expert guidance, technical support and tools to assist countries
- Functions as a global center of excellence – expert taskforces
- Public-private partnership funded by the Global Environment Facility (GEF)
- Partners: Philips Lighting, Osram AG & National Lighting Test Center (China)



Taskforce experts

Government & public institutions

- Bureau of Energy Efficiency India
- Department of Climate Change and Energy Efficiency, Australia
- Department of Energy, USA
- US Environmental Protection Agency
- Department of Energy, Philippines
- Environmental Management Bureau, Philippines
- Ministry of Environment and Forests, India
- Ministry of Environment, Brazil
- Ministry of Environment, Japan
- Ministry of Environmental Protection of China
- Phasing-out of Incandescent Lamps & Energy Saving Lamps Promotion Project, PILESLAMP, China
- National Lighting Test Centre of China
- Ministry of Basic Industry, Cuba
- National Energy Efficiency Agency, South Africa
- German Technical Cooperation

Private sector

- OSRAM
- Philips Lighting
- China Association of Lighting Industries
- Electric Lamp and Component Manufacturers Association of India

International organizations

- European Commission
- International Finance Corporation
- United Nations Development Program
- World Bank
- International Electro Technical Commission

Civil society

- Clinton Climate Initiative
- National Resources Defence Council
- Eco Asia
- European Environmental Citizens Organisation for Standardisation
- TERI
- Zero Mercury Campaign

Academia

- University of Toulouse, France

Global Target

- By 2016* all countries have:
 - Phased-out inefficient incandescent lamps
 - Have strategies/MEPS in place, to phase-out within an identified timeframe



* 31 December



Global Partnership Programme

- Voluntary initiative open to all countries
 - Provision of technical advice and targeted research
 - Support for coordination of regional activities
- 46 Country Partners (December 2012)
- Pilot activities being held in 14 countries
- Outcome – National/Regional Efficient Lighting Strategies to accelerate use of efficient lighting and phase-out inefficient incandescent lamps
- Using an integrated policy approach to increase the success of the transition



Country Partners

	Latin America & Caribbean	Middle East/ North Africa; Eastern Europe & CIS	Asia
Efficient Lighting Strategies 2012-13	Chile, Central American region (Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama & Dominican Rep.), Uruguay	Jordan, Morocco, Tunisia	Philippines
Custom support via “en.lightened Learning”	Bolivia, Paraguay	Algeria, ECOWAS (Benin, Burkina Faso, Cabo Verde, Cote d’Ivoire, Gambia, Ghana, Guinee, Guinee Bisau, Mali, Niger, Nigeria, Senegal, Sierra Leone, Sudan, Togolese Rep.), Egypt, Iraq, Kuwait, Lebanon, Liberia, Palestine, Russian Federation, United Arab Emirates, Yemen	Indonesia, Pakistan, Thailand, Tonga



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UNEP



From *ad hoc* action to an integrated policy approach



en.lighten Tools and Resources

- Network of experts in policy, energy, lighting and technology
- Country Lighting Assessments
- Global Efficient Lighting Centre (GELC)
- Global Policy Map
- “en.lightened learning” remote support
- Efficient Lighting Toolkit

en.lighten Resources (continued)

- MEPS Scenario Modeling tool
 - Now available
- “en.lightened learning” online portal
 - Online support centre linking countries and regions
- Global Efficient Lighting Policy Dialogue
 - To be convened in mid-2013 to address policy issues and emergence of LEDs
- Global Lighting Status Report
 - Released at Global Dialogue for review and input



Country Lighting Assessments

- 130 countries: residential, commercial/industrial and outdoor lighting, including controls
- ~5% of global electricity consumption could be avoided by transitioning to efficient lighting
- Annual worldwide savings: ~USD 110 billion
- 490 Mt of CO₂ savings per year: ~emissions of more than 122 million mid-size cars
- Closing over 250 large coal-fired power plants: ~USD 210 billion in avoided investments

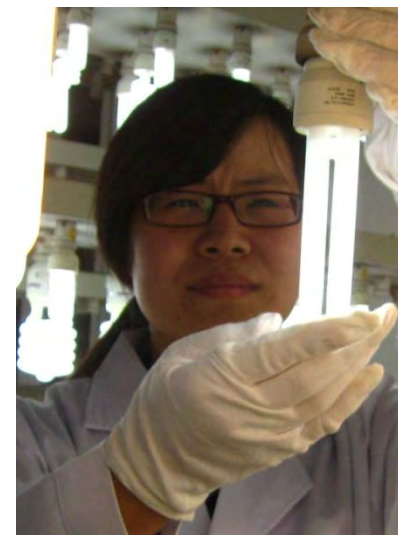


- Provides lighting testing training, advice, quality control and capacity building
- Helps strengthen national and regional lighting laboratories
- Enhances quality control capabilities for lighting monitoring and verification
- Develops quality control tests
- Conducts inter-laboratory calibration activities



Global
Efficient
Lighting
Centre

UNEP Collaborating Centre for Energy Efficient Lighting





Country Lighting Assessment

Chile



The transition to energy efficient lighting in the residential, commercial, industrial and outdoor sectors for all major lamp types would result in the following benefits:

Financial Benefits

486.4 million USD annual savings



3 months payback period

Energy Saving Benefits

Potential Savings:

2.8 TWh in annual electricity consumption



Equivalent to:

Power output of 4 medium (100MW) power plants

4.8% of total national electricity consumption



240.7 kilotonnes of crude oil

34.4% of electricity consumption for lighting

Climate Change Mitigation Benefits

1.2 million tonnes annual reduction of carbon dioxide emissions



Equivalent to 0.3 million mid-size cars off the road

Other Environmental Benefits



77.0 kilograms of mercury emissions avoided
2.5 kilotonnes of sulphur dioxide emissions avoided
4.6 kilotonnes of nitrous oxide emissions avoided

Country Lighting Assessment: Chile

US\$486.4 million in annual savings

3 months payback

4.8% of national annual electricity consumption;
34.4% of national annual lighting electricity consumption

1.2 million tons annual CO₂ emissions reduction

77 kg Hg emissions reduction

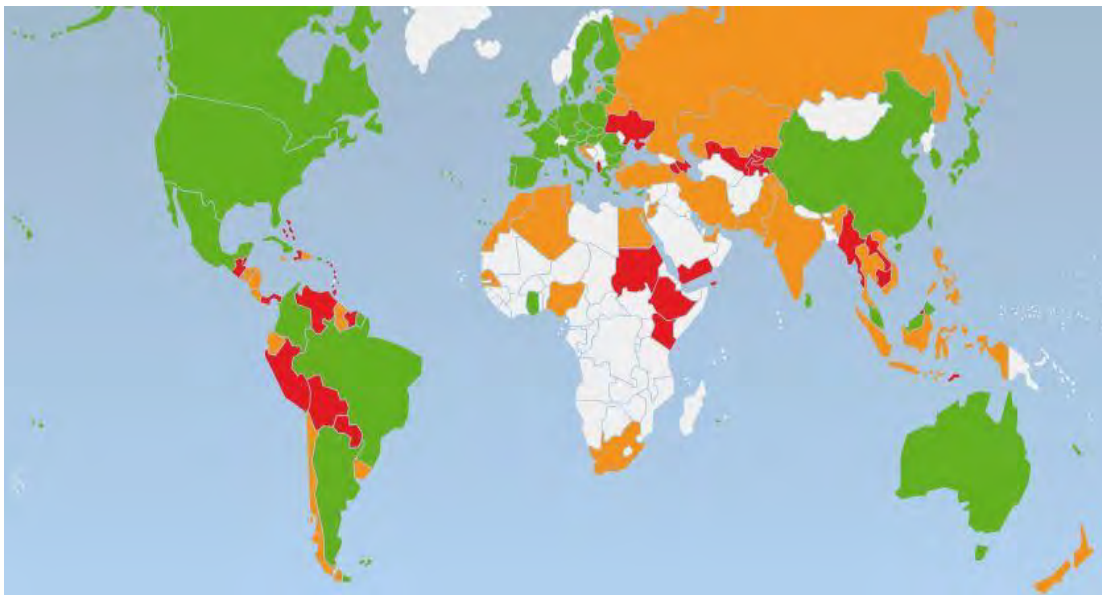


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Interactive Global Policy Map

- Overview of energy efficient lighting readiness in countries
- Ranked according to policy development
- Allows tracking progress & benchmarking
- Ratings updated quarterly



Tunisia Country Status 2011 2012 2013 2014 2015

*To view the references please click on the footnote number

REGULATORY MECHANISMS Status

- Prohibiting local production of incandescent lamps with two local manufacturers already having ceased production of incandescent lamps in 2010¹
- Gradual phase-out of incandescent lamps from the local market²
 - In 2011: incandescent lamps with power greater or equal to 100 W
 - In 2012: incandescent lamps with power of 75 W and 80 W
 - In 2013: incandescent lamps with power of 40 W and 25 W.
- Planned implementation of energy consumption label for lamps as required by the Act 2004-72 related to energy conservation, Article 8³
- Planned introduction of MEPS for lamps⁴

SUPPORTING POLICIES Status

- Gradual introduction of a consumption tax on the sales of incandescent lamps to reach 50 % in 2011. The revenues are used for subsidizing compact fluorescent lamps (CFLs)⁵
- Tax exemption on CFLs and LEDs⁶
- The regulation of the thermal performance of buildings partially by improved lighting systems⁷
- Distribution of 1 million CFL to low-income households by STEG in 2010⁸
- Bulk procurement of 2 million CFL in 2008⁹

MONITORING, VERIFICATION AND ENFORCEMENT Status

- CETIME, Technical Center of Mechanical and Electrical Industries, is in charge for establishing testing laboratories for electrical equipment¹⁰
- Developing CE Marking for lamps which will be compliant with the EU legislation¹¹

ENVIRONMENTALLY SOUND MANAGEMENT Status



en.lightened learning: Remote Support

- Interactive, online resource center for countries to work remotely with en.lighten, its partners, Taskforces and experts
- Contains country data, forecasting and calculation tools, other valuable resources
- Online learning for stakeholders including training materials
- Webinars based on the Efficient Lighting Toolkit and other topics as requested
- “Ask an Expert” feature for online technical assistance





Questions?

www.enlighten-initiative.org

