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QUALITY LIGHTING FOR A GREENER ASIA



Quality Standards- An effort by Asia Lighting Compact

ECO-Asia Clean Development and Climate Program
Asia Lighting Compact Secretariat

National Conclave on Energy Efficient Light Emitting Diodes
May 3-5, 2010
New Delhi, India



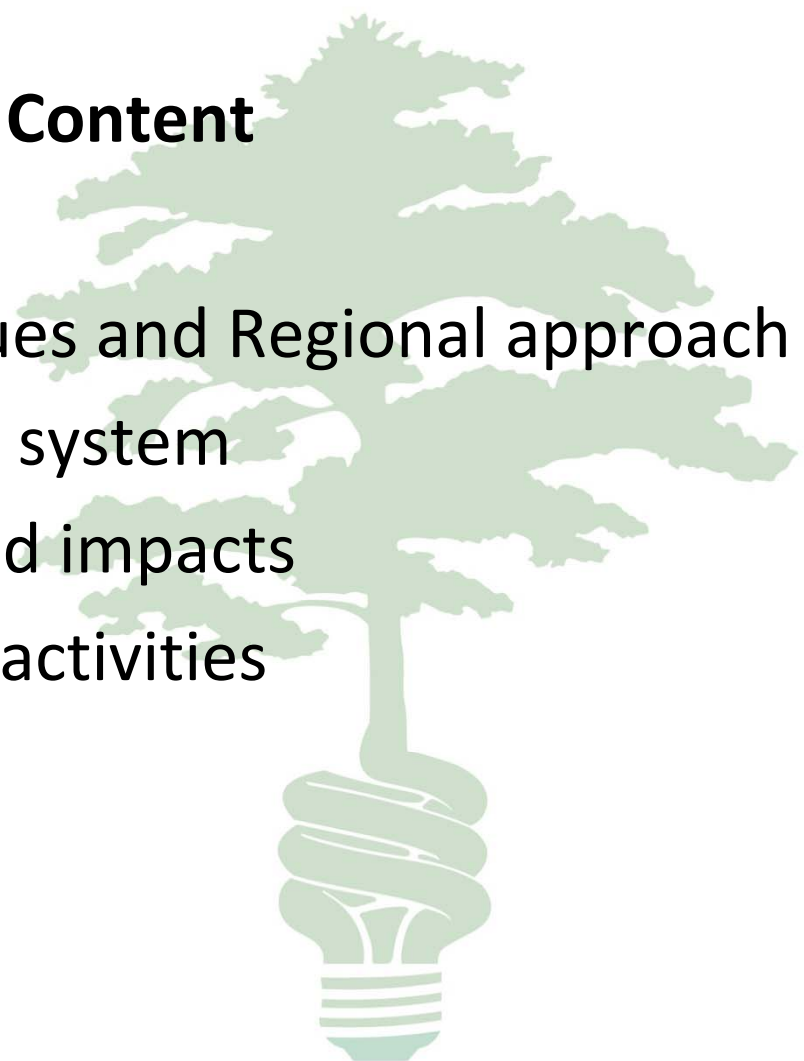
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Presentation Content

- Overview
- Quality issues and Regional approach
- ALC quality system
- Benefits and impacts
- Status and activities





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Background

- National and local efforts in promotion of energy efficiency
- Focus on CFL-a major source of energy efficiency
- Phasing out of incandescent lamps
- Challenges in adoption- Concern in quality, uniform standards, lack of awareness



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Regional approach

- Need to address the product quality for different countries
- Manila Compact- An agreement amongst a coalition of national lighting associations and the largest lighting companies of the world
- Commitment to develop common performance levels
- Led to the formation of Asia Lighting Compact



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Asia Lighting Compact

- An independent non-profit organization
- Dedicated to improving the quality of lighting products and to encourage adopting energy efficient lighting
- An impartial, not tied to commercial organization





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- Open membership to all stakeholders
 - Government and standards setting agencies,
 - Testing labs
 - Manufacturers,
 - Research institutions,
 - Professional societies,
 - Bulk purchasers





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ALC Quality system

- No recreation of lighting standards
- Regional quality guidelines
 - Efficient
 - Affordable
 - Reliable
 - Approximate the incandescent lamp in fit, function and light
 - Applicable to mass produced, internationally sourced product





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- A three-tier quality system in accordance with other quality standard initiatives
 - Tier 1 **Good** *Initial entry level performance standard*
 - Tier 2 **Better** *Efficient Lighting initiative standard*
 - Tier 3 **Best** *UK Energy Savings Trust 6 standard*
- Advantage of 3 tiers to accommodate different categories of consumers
- Voluntary, transparent, publicly reviewed, IEC consistent





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2.3.1 Criteria with levels that vary by tier

Criteria	Asia CFL Quality Charter Guidelines Criteria Requirements					
	Tier 1		Tier 2		Tier 3	
Wattage bins/CCT	≤ 4500K	> 4500K	≤ 4500K	> 4500K	≤ 4500K	> 4500K
< 5W	40	36	45	42	Comply with the Requirements of Energy Savings Trust Lamp Specification Version 6 – 2007 for Compact Fluorescent Lamps for applicable Lamp Class	
5W to < 9W	44	40	50	46		
9W to < 16W	48	44	55	52		
16W to < 25W	55	51	60	57		
≥ 25W	60	57	65	62		
Lifetime	6,000 hours		8,000 hours			
Lumen maintenance	80% of measured 100-hour lumen level after 2,000 hrs		80% of measured 100-hour lumen level after 2,000 hrs			
Colour (x,y)	Within 7 color steps (SDCM) per the IEC standard		Within 5 color steps (SDCM) per the IEC standard			





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2.3.2 Criteria with minimum threshold levels

Criteria	Asia CFL Quality Charter Guidelines Criteria Requirements		
	Tier 1	Tier 2	Tier 3
Start-up time	1.5 seconds maximum		Comply with the Requirements of Energy Savings Trust Lamp Specification Version 6 – 2007 for Compact Fluorescent Lamps for applicable Lamp Class
Premature failure	Not more than 10% failure within 1,000 hours		
Run-up time	Up to 3 minutes to reach 80% of light output (should be aligned with changes in IEC standard)		
Color rendering index (CRI)	≥ 80		
Power factor	≥ 0.5		
Mercury	≤ 5 mg		
Switch withstand test	At least 3,000 cycles based on cycle of 270 seconds off and 30 seconds on*		
Safety	Products should meet safety regulations per IEC 60968		
EMC and harmonics	Products should meet safety regulations per CISPR 15, IEC 61547, IEC 61000-3-2		





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Benefits of joining ALC

Government agencies, institutions and bulk purchasers

- Assurance on product conformations from an impartial third party
- Protection of market from poor quality products
- Useful source of information for procurement programs
- Support for national standards bodies through informations for establishing performance standards



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Benefits to suppliers

- Low cost marketing opportunity for quality products
- Products registered in ALC quality registry will be accessible to ALC members, Government agencies, bulk consumers
- Promotion of harmonization and recognition of test results help in reduction of production and qualification costs
- Recognition of international standards due to ALC Labeling by suppliers



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Benefits to national trade bodies and associations

- A forum for exchange of valuable ideas and practices for standards harmonization
- Access for members to informations in regional and international standards development
- Extend the reach of national associations





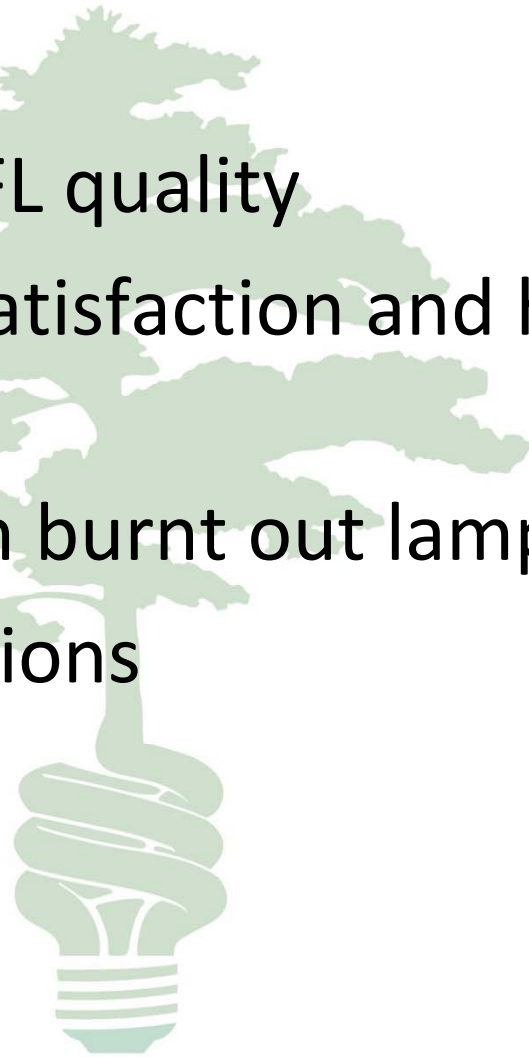
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Impact of ALC

- Improvement in CFL quality
- Ensure customer satisfaction and hence adoption of CFL's
- Reduce waste from burnt out lamps
- Reduce GHG emissions



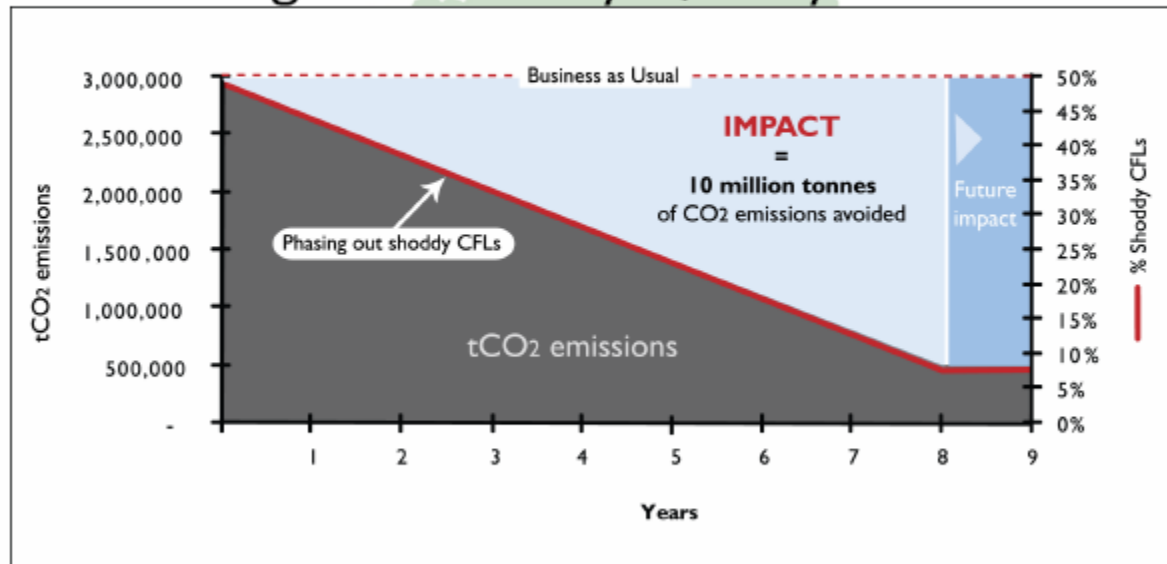


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Carbon Dioxide Emissions Reduction Through Phasing Out Shoddy Quality CFLs:





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Quality registry

- Suppliers/Manufacturers qualify the product through registering product related information
 - Submission of results from accredited labs (ISO/IEC 17025)
 - Third party certification (ELI/EST)
 - Submit certification by third party labs
 - Other informations on mercury, safety, EMC



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- Marking of the qualifying levels in the product
- Listing in ALC quality registry





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[Help on Search](#) | [Search for a different product type](#)

Compact Fluorescent Lamps - make your selection then click search

Type	ALC Tier	Colour Temp	Lamp output (lm)	Brand
<input type="button" value="All"/> <input type="button" value="Bare"/>	<input type="button" value="All"/> <input type="button" value="2"/>	<input type="button" value="All"/> <input type="button" value="Warm (2700-3200)"/> <input type="button" value="Cool (3200-4700)"/> <input type="button" value="Daylight (>4700)"/>	<input type="button" value="All"/> <input type="button" value="0-500"/> <input type="button" value="500-1000"/> <input type="button" value="1000-1500"/> <input type="button" value="1500+"/>	<input type="button" value="All"/> <input type="button" value="Danson"/> <input type="button" value="GE"/> <input type="button" value="Philips"/>

Model Name/Number - type in all or part of the model number if known (optional)

The search will return your selected options.

[Click Here to Download data in Excel, csv or Access formats.](#)



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Current status and activities

- 5 Participating suppliers
- 200 qualifying CFL models
- Current activities include administration and promotion of a quality system
- Operation and maintenance of the quality registry-
online reporting and tracking of quality
- Mutual recognition of test results and build up testing capacity in the region



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Thank you!

www.asialighting.org

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