



## **CFLs' Energy Efficiency Standard Development Processes and Status in China**



Zhao Yuejin



# 1. Chinese energy efficiency standard Current situation



## Chinese energy efficiency standard development process

### Process



# 1. Chinese energy efficiency standard Current situation



## Current energy efficiency standards for lighting products

Standard No.		MEPS	Recommended Value	Target Value
GB 17896- 1999	Limited values of energy efficiency and evaluating values of energy conservation of ballasts for tubular fluorescent lamps	✓	✓	✓
GB 19043-2003	Limited values of energy efficiency and rating criteria of double-capped fluorescent lamps for general lighting service	✓	✓	✓
GB 19044-2003	Limited values of energy efficiency and rating criteria of self-ballasted fluorescent lamps for general lighting service	✓	✓	✓
GB 19415-2003	Limited values of energy efficiency and rating criteria of Single-capped fluorescent lamps	✓	✓	✓
GB 19573-2004	Limited values of energy efficiency and rating criteria for high-pressure sodium lamps	✓	✓	✓
GB 19574-2004	Limited values of energy efficiency and evaluating values of energy conservation of ballast for high-pressure sodium lamp	✓	✓	✓
GB 20054-2006	Limited values of energy efficiency and rating criteria for metal-halide lamps	✓	✓	✓
GB 20053-2006	Limited values of energy efficiency and rating criteria for ballast of metal-halide lamps	✓	✓	✓



## 1. Chinese energy efficiency standard Current situation



### 1. GB 19044-2003 Energy efficiency grades of self-ballasted fluorescent lamps

Range of rated wattage W	Initial luminous efficacy lm/W					
	Energy efficiency grades (Color temperature: RR,RZ) a)			Energy efficiency grades (Color temperature: RL,RB,RN,RD) a)		
	1	2	3	1	2	3
5~8	54	46	36	58	50	40
9~14	62	54	44	66	58	48
15~24	69	61	51	73	65	55
25~60	75	67	57	78	70	60

a) The color temperature in the table 3 shall be in compliance with the requirements of the chroma coordinate in GB/T 17263. Enterprises may manufacture lamps of non-standard colors according to the requirements of their customers, but shall offer the target values of the chroma coordinate of the non-standard colors at the same time, with its tolerable deviation within 5SDCM. For lamps of non-standard colors, their luminous efficacy shall be evaluated according to the values of their neighbouring lamps of standard colors with a higher energy efficiency grade

This standard is mandatory



## 2. Product list of energy efficiency label



**The first batch**

**Refrigerators, room ACs**

**The second batch**

**Washing machine, unitary ACs**

**The third batch**

**Motors, self-ballasted fluorescent lamps, high pressure sodium lamps, gas water heaters , water chillers**

**The fourth batch**

**Copier, computer monitor, household induction cookers, electrical storage water heater, multi-connected air-condition (heat pump) unit, variable speed room air conditioner.**



### 3. Energy efficiency label for CFL



## Basic label pattern

Specification and type

low energy consumption

high energy consumption

Rated power (W)

Current version of EES



The utmost side holding the responsibility, or the owner of the brand

This product' energy efficiency grade

This product' initial luminous efficiency

Color temperature





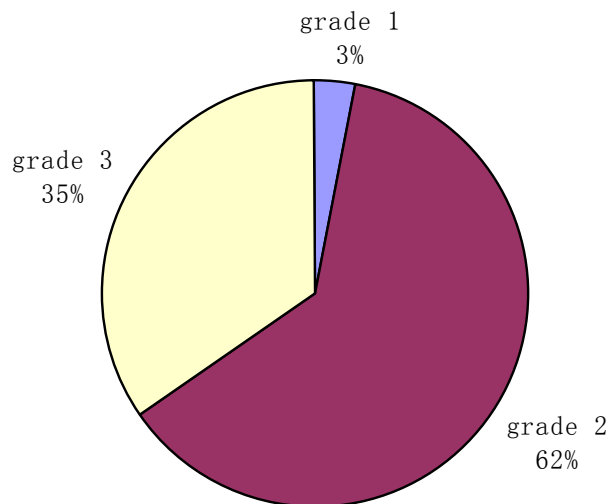
### 3. Energy efficiency label for CFL



## Implementation program of energy efficiency label for CFL

Since the energy efficiency label was put into force on June 1, 2008

255 CFL producers have registered as CFL energy efficiency labels,



Total registered CFL models reach 6028 so far.



## 4. development plan of Energy efficiency standard for CFLs



- We will start the revised energy efficiency standard for CFLs in 2010.
- CFLs' energy efficiency values will be improved.
- The proposed change is that the efficacy might not be different by different color temperature.





## 5. Our opinions



- Energy efficiency standards are the technical basis to policy, they are often should be revised. We believe the values of energy efficiency should not be written in product performance standards.
- In China, product performance standard is voluntary , but energy efficiency standards is mandatory. If the values of energy efficiency are written in product standards, it will cause trouble for manufacturers.
- We suggest that a new TC is established by IEC, and energy efficiency standards are developed by this new TC.





# Thank You !

**Zhao yuejin**      ***China National Institute of Standardization***

**Fax: 010 58811714      Email: [zhaoyj@cnis.gov.cn](mailto:zhaoyj@cnis.gov.cn)**