



**Asia-Pacific
Economic Cooperation**

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Viewpoint from Japan As a Case of IEC62623

Submitted by: Hitachi



**Aligning Energy Efficiency Regulations for
ICT Products: Developing a Strategic
Approach
Seoul, Korea
18 July 2012**

**Aligning Energy Efficiency Regulations
for ICT Products: Developing a Strategic
Approach**

18 July, 2012 – Seoul, South Korea



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Viewpoint from Japan as a Case of IEC62623

Regarding Measurement of PC Energy Consumption Efficiency

- ◆ So far, there have been no International Standards
 - Each economy develop its own measuring methods

- ◆ Scheduled for issue of IEC62623 (2012)
 - It would be adopted many economies in the world
 - Attainment of International Harmonization

- ◆ Two Approaches for Development of International Standards
 - 1 : Approach for Internationally unified absolute value of measurement condition
 - 2 : Approach which reflects regional climate and favor of users and so on

Viewpoint from Japan as a Case of IEC62623

□Viewpoints of Japan

- i) Agree with International Harmonization which adopts International Standards
- ii) International Standards (especially, products of B2C) should specify measurement condition which is close to actual usage of users and provide data for selection of criteria to users when they purchase the products.


For example,

- 1) it should be demonstrated to users whether measurement condition to compare with many products in the same conditions is, or whether measurement condition which is close to actual usage of users is,
- 2) Regarding measurement for TEC, Typical Electricity Consumption, Duty Cycle, (Although it is informative in IEC62623) actual usage should be investigated further.


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Comparing Practices by Differences of TEC Brightness

Notebook

	power consumption 250nits*	IEC62623 Duty	power consumption 90nits	IEC62623 Duty
Short Idle	About 12.5W	30%	About 10.0W	30%
Long Idle	About 6.0W	10%	About 6.0W	10%
Sleep	About 1.5W	35%	About 1.5W	35%
Off	About 0.3W	25%	About 0.3W	25%
TEC		43.362kWh		36.792kWh
(* 250nits : as shipped brightness)		100%		85%

Integrated
Desktop

	power consumption 250nits*	IEC62623 Duty	power consumption 150nits	IEC62623 Duty
Short Idle	About 37.0W	35%	About 29.5W	35%
Long Idle	About 11.0W	15%	About 11.0W	15%
Sleep	About 1.6W	5%	About 1.6W	5%
Off	About 0.5W	45%	About 1.5W	45%
TEC		130.57kWh		107.57kWh
(*250nits : as shipped brightness)		100%		82.3%

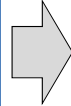
Source : JEITA (Japan Electronics and Information Technology Industries Association)

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Duty Cycle Verification

In case of usage of TEC IEC62623 Duty Cycle

IEC62623 Duty (Note Book)	
Short Idle	30%
Long Idle	10%
Sleep	35%
Off	25%



- Short Idle + Long Idle
= In case of "time of using PC"
- Everyday, one year (365days)
estimating to use PC 9.6 hours



It is divergence of
actual usage time in Japan

Source: JEITA(Japan Electronics and Information Technology Industries Association)

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Duty Cycle Verification

Simulation of TEC Duty Cycle in Japan (Pattern 0)

- Working Hours: 240 days/year(1920h)
- 8-hour business hours/day (1hour lunch time)
- Power is off on holidays
- Holidays : 125days / year
- Power is off when go home

Time	mode	
8:00 Start Working	Short idle 90% (3.6h) / Long Idle 10% (0.4h)	
12:00 Lunch time	Sleep mode (1h)	
13:00 Start working in the afternoon	Short idle 90% (3.6h) / Long Idle 10% (0.4h)	
17:00 Finish working	Off mode	



	Workday	Holiday	Total	Duty
T _{side}	7.2h	0h	1728h	20%
T _{idle}	0.8h	0h	192h	2%
T _{sleep}	1h	0h	240h	3%
T _{off}	15h	24h	6600h	75%

Source: JEITA(Japan Electronics and Information Technology Industries Association)

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Duty Cycle Verification

Simulation of TEC Duty Cycle in Japan (Pattern1)

- Working Hours: 240 days/year(2400h)
- 10-hour business hours/day (1hour lunch time)
- Power is off on holidays
- Holidays : 125days / year
- Power is off when go home

Time	mode	
8:00	Start Working	Short idle 90% (3.6h) / Long Idle 10% (0.4h)
12:00	Lunch time	Sleep mode (1h)
13:00	Start working in the afternoon	Short idle 90% (5.4h) / Long Idle 10% (0.6h)
19:00	Finish working	

	Workday	Holiday	Total	Duty
T _{side}	9h	0h	2160h	24%
T _{idle}	1h	0h	240h	3%
T _{sleep}	1h	0h	240h	3%
T _{off}	13h	24h	6120h	70%

Source: JEITA(Japan Electronics and Information Technology Industries Association)

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Duty Cycle Verification

Comparing TEC Duty Cycle (Notebook)

	Power Consumption	IEC62623 Duty	Pattern 0	Pattern 1
Short Idle	About 12.5W	30%	20%	24%
Long Idle	About 6.0W	10%	2%	3%
Sleep	About 1.5W	35%	3%	3%
Off	About 0.3W	25%	75%	70%
TEC		43.362kWh	25.316kWh	30.091kWh
		100%	58.4%	69.4%

- In case of 8 working-hour / day simulation, electric energy is about 60% of IEC62623 TEC value.
- In case of 10 working-hour / day simulation, electric energy is about 70% of IEC62623 TEC value.

Source: JEITA(Japan Electronics and Information Technology Industries Association)

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END

Aligning Energy Efficiency Regulations
for ICT Products
Session 1: A Common Standard for Test
Methods and Product Categorization

APEC/CTI/SCSC

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