

Fifth *lites.asia* workshop

Hanoi, Vietnam 28-29 June 2012



Welcome and introductions

David Boughey

Australian Department of Climate Change and Energy Efficiency



Review lites.asia objectives

- Bring regional policy makers and their support organisations together to:
 - Increasing participation of regional economies in the IEC standards development process
 - Increasing likelihood resulting test methods and performance standards are appropriate to the region;
 - Improving knowledge of standards in force and under development across the region
 - To learn from each other and not reinvent the wheel;
 - The development of national and regional capacity for compliance in standards and labelling processes
 - Help consumers realise costs savings and government benefit from reduced electricity consumption



What have we achieved so far...

□ IEC participation:

- Regular participation by a number of members
 Initiation of webinars to tell you all about them
- Upgrading of IEC TC34 status of Philippines
- □ This meeting:
 - Update you all on outcomes of recent meeting and upcoming agenda's and timings (from those that attended)
 - Regional IEC here with us again to update
 - Propose submission of performance tiers and discussion on how the group would like to handle the proposals
 - In same session also going to be discussing action from last meeting for the development of a "Tropical LED" standard and some related developments from the IEA 4E SSL Annex



What have we achieved so far...

Sharing National Standards and Labelling information and improving compliance

- Have heard about various national approaches to both standards and labels over several meetings
- Upgraded website to included "country profiles" of Indonesia, Philippines, Thailand, Vietnam (next week).
 - More following over the next few weeks

Taking this further by

- □ Today:
 - Looking at compliance regimes in general (building on APEC compliance workshop in Beijing couple of weeks ago)
 - Look at some specific examples in the region (plus outcomes of lab survey)
 - Think about what we can do together to improve national or as a region

Tomorrow also receiving updates from members on recently or updated national standards



Also on agenda

Communications

- Last meeting we talked about communications with the consumer and discussed some of the material available
 - Take this one step further to establish whether the groups needs for information satisfied or whether there are joint actions we need to be taking
- Opportunity for an update on GEF enlighten programme
- Vietnamese phase out programme



UNEP/GEP en.lighten initiative

Issues and opportunities for collaboration

Kathryn Conway

United Nations Environment Programme





Compliance

An introduction to options for compliance and the associated costs/benefits

Mark Ellis

Mark Ellis and Associates



Consumer information in APEC



APEC S&L Programs

Characteristics	
APEC Economies with S&L energy efficiency programs	18
Energy labelling programs	32
Minimum Energy Performance Standards	16
Longest running program	USA (1978)
Youngest	Vietnam/Indonesia (under development
Largest coverage	50+ (USA/China)
Smallest product coverage	≤ 3 (several)

Characteristics of APEC

- Large variation scale and experience in S&L programs across APEC region
- Evolution: Lots of programs expanding scope, starting, improving
- Region includes some of largest global suppliers of electrical appliances and equipment
- Also some major importer economies

Considerable opportunity to develop regional initiatives to transfer knowledge and experience amongst economies



2011-12 APEC ECEE&C Project

Survey of Energy Efficiency Market Compliance **Strategies**

Publish a report on the results

Conduct Workshop on Best Practi Control to the Control of Contr



Economic Cooperation

APEC Expert Group on Energy Efficiency and Conservation (EGELS der the APEC Energy Working

PROVISIONAL AGENDA FOR 14 JUNE 2012

MARKET COMPLIANCE MECHANISMS FOR ENERGY EFFICIENCY PROGRAMS & PRODUCTS 14 JUNE 2012 ** PARK PLAZA BEIJING SCIENCE PARK

SUMMARY Survey of Market Compliance Mechanisms for Energy Efficiency Programs in APEC economies MAY 2012

EXPERT GROUP ON ENERGY **EFFICIENCY & CONSERVATION**

The project aims to compile and disseminate information on

monitoring, verification and enforcement (MV&E) processes used by regulatory and enforcement agencies to ensure

compliance in S&L programs within APEC economies. Within the APEC region there are a total of 32 energy labelling

and 16 minimum energy efficiency standards programs

operated by 18 economies. These include programs that

have been running since 1978 to those that are in their

infancy: programs covering up to 50 product types to those spanning only one or two. It is also relevant to note that the region includes some of the world's largest manufacturers of appliances and equipment supplying the global market, as well as economies that have little or no local manufacturing

These factors suggest that there is considerable

opportunity to develop regional initiatives that will

improve the transfer of knowledge and experience

amongst economies with respect to energy efficiency

and reply upon the import of products.

Executive Summary

In many economies, energy efficiency initiatives represent the comerstone of national policies designed to reduce energy consumption, tackle environmental issues such as climate change and improve energy security. Standards and labeling (S&L) programs for appliances and equipment are proven to (act, programs to appendix to appendix to appendix to a program to appendix to a program to a pr compared to most other types of energy efficiency programs. The ability to maintain and increase these achievements relies on the development of effective market compliance regimes to ensure that products perform as claimed and consumers

that encourages investment and technological innovation, consumers and businesses benefit from reduced energy costs and governments achieve key environmental, energy security and economic policy objectives

This report forms part of a project undertaken by Mark Ellis The impart shrins part of a physic unaversitient by where season and Associates commissioned by the Asia-Pacific Economic. The following eight recommendations are designed to Cooperation (APEC) in June 2011 under the auptons of the address shortcomings in M/3E process in the APEC right

Participating Economies



and assist in the development of a culture of compliance

The terminology

"Compliance" is the general term we use to describe the need to ensure that the requirements Standards and Labeling (S&L) regulations are obeyed by the manufacturers and importers who place products into the market.



The 3 components of compliance regimes

"MV&E"

- M= MONITORING the collection and analysis of data to give an accurate picture of program progress and compliance
- V= VERIFICATION determining whether a product actually performs according to its claimed energy performance value
- E = ENFORCEMENT responding to non-compliance offences with a suite of timely and appropriate actions



Some of terms used in compliance program

- REGISTRATION the supply of product data e.g. manufacturer name and address, model identification, performance data etc. prior to the product entering the program. The registration details being held on a database.
- SELF DECLARATION the claimed performance of a product by its supplier
- CERTIFICATION the declaration by a third party that a product meets its claimed level of performance, based on a specific test method
- ACCREDITATION an independent system for ensuring the expertise of test laboratories



Compliance Best Practice

- Common to 'Best Practice' compliance regimes in many sectors
- Based on Deterrence theory:
- □ There must be a credible likelihood of detecting violations
- □ Swift, certain, and appropriate sanctions upon detection
- A perception among the regulated firms that these detection and sanction elements are present



Which is the best deterrent?





How To encourage compliance

- Make sure all stakeholders understand their obligations
- Minimise the transaction costs for demonstrating compliance
- Increase the risk that instances of non-compliance will be discovered
- Take corrective action quickly to minimise damage (to all)
- Make penalties proportional to the extent of transgression but sufficient to be an effective deterrent
- Taking corrective action visibly to deter others



Carrots and sticks!





Key elements of compliance regimes

- Mechanism to facilitate compliance
- Market surveillance
- Verification testing
- Enforcement
- Communication, reporting, feedback
- Legal and administrative framework
- Budget and resource allocation
- Evaluation processes

Effective compliance regimes include all of these related elements



Key options in compliance regime design

Relationship between:

- Entry conditions
- Verification of energy performance



Options for entry conditions



Stringency of entry conditions vs. need for verification testing



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Distribution of costs

Information requirements on entry Post-market monitoring & verification

Costs to suppliers

Cost to programs & governments



Distribution of costs

	Distribution of Costs				
Entry Condition	Government/Progra m	Industry Participant	Consumers		
Third-party verification & certification	Low cost in market surveillance	High initial compliance costs	May fund compliance costs in price of equipment		
Independent tests	Medium cost in market surveillance	Medium initial compliance costs	May fund compliance costs in price of equipment		
In-house testing, calculation & self declaration	High cost in market surveillance	Low compliance costs	None	si	



THANK YOU



Country compliance regimes

Vietnam

Dang Hai Dung

Ministry of Industry and Trade





LABELING ROADMAP





LEGAL FRAMEWORK



- Law on Energy Saving and Efficiency on 05/17/2010
- Decision 51/2011/QĐ-TTg List of Mandatory labeling equipment, MEPS and Roadmap
- Decree 73/2011/NĐ-CP regulation on Penalty in Energy Efficiency and Conservation.
- Decree 21/2011/ND-CP on 29 / 3 / 2011
- Decree 79/2006/ND-CP dated 14/4/2006
- Decree 80/2006/ND-CP dated 14/4/2006

- Decision 68/2011/QD-TTg state procurement regulation vs product labeling energy efficient.



SCOPE & OBJECTIVES OF PROGRAM











- Large energy consumption Product;
- The product is widely used for living purposes, in the office, in business or production is expected to increase the amount of use.
- Important Products for consumers.
- Product employ new energy-saving technologies on the market.
- Labeling for a product can make a significant change in energy efficiency by repeating EE technology in the various products





1. Group appliances including straight fluorescent tubes, compact fluorescent lamps, electronic ballasts and electronic fluorescent lamp, air conditioning machines, refrigerators, washing machines, electric cooker, electric fans, televisions.







2. Group of office equipment and commercial including photocopying copy, computer monitors, printers, commercial refrigeration cabinets.









3. Group industrial equipment including machine threephase distribution transformers, electric motors.











4. Group means of transport including cars (of 7 seats or less).

5. The specialized equipment such as public lighting, machine air conditioners with a capacity greater than 28 kW water-cooled equipment and other required labeling route and apply the maximum energy efficiency minimum prescribed by the Ministry of Industry and Trade.









Activities	2010	2011	2012	2013	2014	2015	2020	2025
Upgrade standards								
Change Voluntary phase to Mandatory Phase								
Change from endorsement label to comparative label								
WIden products list								
Technical Assistant Program								
Market survey/Database								


Roadmap labeled

List	2011	2012	2013	2014	2015
1. Home appliances: Flourescent lamp, compact lamp (CFL), High Efficient Balast và and Electronic Balast, Airconditioner, refreegerator, Washing machine, Rice cooker, Electric Fan.			Bóng đèn sợi đốt >60w	MEPS	MEPS
2. Office equipment and commercial equipment: Photocopy machine, Display equipment, commercial freezers.	L				MEPS
3. Industrial equipment: distribution transformer, Motor.					MEPS
4. Transportation means: car with less 7 seats					
5. Others	ĸĸ	KK	КК	KK	КК



Labeling Program





Energy efficiency standards

ТТ	Số hiệu TCVN	Tên tiêu chuẩn	Title
		Động cơ điện không đồng bộ ba pha roto lồng sóc	High efficiency three-phase asynchronous squirel
1	TCVN 7450-1:2005	hiệu suất cao – Phần 1: Mức hiệu suất năng lượng tối	cage electrical motors - Part 1: Minimum energy
		thiểu	performance
		Động cơ điện không đồng bộ ba pha roto lồng sóc	High efficiency three-phase asynchronous squirel
2	TCVN 7450-2:2005	hiệu suất cao – Phần 2: Phương pháp xác định hiệu	cage electrical motors - Part 2: Methods for
		suất năng lượng	determination of performance
3	TCVN 7541-1:2005	Thiết bị chiếu sáng hiệu suất cao – Phần 1: Mức hiệu	High efficiency lighting products – Part 1:
		suất năng lượng tối thiểu	Minimum energy performance
4	TCVN 7541-2:2005	Thiết bị chiếu sáng hiệu suất cao – Phần 2: Phương	High efficiency lighting products – Part 2: Methods
		pháp xác định hiệu suất năng lượng	for determination of energy performance
5	TCVN 7826:2007	Quạt điện – Hiệu suất năng lượng	Electric fans – Energy efficiency ratio
6	TCVN 7827:2007	Quạt điện – Phương pháp xác định hiệu suất năng	Electric fans – Methods for determination of energy
		lượng	efficiency
7	TCVN 7828:2007	Tủ lạnh, tủ kết đông lạnh – Hiệu suất năng lượng	Refrigerator, refrigerator-freezer – Energy
/			efficiency ratio
8	TCVN 7829:2007	Tủ lạnh, tủ kết đông lạnh – Phương pháp xác định	Refrigerator, refrigerator-freezer - Methods for
0		hiệu suất năng lượng	determination of energy efficiency
9	TCVN 7830:2007	Điều hòa không khí – Hiệu suất năng lượng	Air conditioners – Energy efficiency ratio
10	TCVN 7831:2007	Điều hòa không khí – Phương pháp xác định hiệu suất	Air conditioners - Methods for determination of
10		năng lượng	energy efficiency
11	TCVN 7896:2008	Bóng đèn huỳnh quang compact – Hiệu suất năng	Compact fluorescent lamps – Energy efficiency
		lượng	
12	TCVN 7897:2008	Balat điện tử dùng cho bóng đèn huỳnh quang – Hiệu	Electronic ballasts for fluorescent lamps - Energy
12		suất năng lượng	efficiency
13	TCVN 7898:2009	Bình đun nước nóng có dự trữ – Hiệu suất năng lượng	Storage water heaters – Energy efficiency



Energy efficiency standards

-	TCVN 8248:2009 *	Balat điện từ dùng cho bóng đèn huỳnh quang – Hiệu suất năng lượng	Electromagnetic ballasts for fluorescent lamps – Energy efficiency
-	TCVN 8249:2009 *	Bóng đèn huỳnh quang dạng ống – Hiệu suất năng lượng	Tubular fluorescent lamps – Energy efficiency
-	TCVN 8250:2009	Bóng đèn sodium cao áp – Hiệu suất năng lượng	High pressure sodium lamps – Energy efficiency
-	TCVN 8251:2009	Thiết bị đun nước nóng bằng năng lượng mặt trời – Yêu cầu kỹ thuật và phương pháp thử	Solar water heater – Technical requirements and testing method
-	TCVN 8252:2009	Nồi cơm điện – Hiệu suất năng lượng	Rice cookers – Energy efficiency
-	TCVN 8525:2010	Máy biến áp phân phối – Mức HSNL tối thiểu và phương pháp xác định	Distribution transformers – Minimum energy performance and method for determination of energy efficiency
-	TCVN 8526:2010	Máy giặt – Mức HSNL tối thiểu và phương pháp xác định	Electric washing machine – Minimum energy performance and method for determination of energy efficiency
-	TCVN 8630:2010	Nồi hơi – Hiệu suất năng lượng và phương pháp thử	Boilers - Energy efficiency and test method



ENERGY CONSUMPTION



- Final Energy of Vietnam in 1998 only about 10.8 million Toe, increased to approximately 24.2 million Toe in 2008

- Average growth rate of ~
 10% / year
- Elasticity coefficient 1.7

The rate of electricity use in the household sector accounts for 43% of electricity demand in Vietnam and accounts for the largest share in total final energy demand in Vietnam, about 23%



- GDP per capita of Vietnam in the period 1990 -2008

GDP Trên Đầu Người (USD)





- Per capita spending per month



The number of devices on 100 households in 2002 and 2009

Equipment	2002	2009
Incandescent lamp	93,58	99,86
Fluorescent	497,76	609,24
CFL	9,55	219,86
Air Conditioning	55,73	69,18
Refrigerator	67,22	124,26
Rice Cooker	71,20	116,12
Washing machine	27,86	68,84
Water pump	22,69	47,46
Microwave	1,34	20,65





THANK YOU



Country compliance regimes

Thailand

Asawin Asawutmangkul

Department of Alternative Energy Development and Efficiency





Certification of Compliance with MEPS in Thailand





voluntary certification mark

mandatory certification mark

Objectives

The Industrial Product Standards Council (IPSC) has revised the criteria for product certification with a view to:

- 1. Operating the certification in an appropriate, clear, transparent and non-discriminatory manner.
- 2. Complying with the international certification system and to keep pace with the industrial development.
- 3. Complying with the policy of Ministry of Industry in enhancing the industrial capacity and increasing the responsibility of the industry for their enterprises, their society and their consumers.
- 4. Reducing the supervisory role of the government and change it to the monitoring role





Product certification of the Thai Industrial Standards Institute (TISI) is based on two technical criteria:

- 1. The products are in conformity with the applicable standards.
- 2. Manufacturers have adequate quality control system to maintain the conformity of the products with the standards



Certification model

- Initial Inspection of the Factory
- Surveillance Inspection



Major processes for certification

- 1. Application for certification
- 2. Inspection before a License is Granted
 - 2.1 Assessment of the quality control system of the manufacturers
 - 2.2 Evaluation of products
- 3. Surveillance after a License is Granted
 - 3.1 Routine surveillance
 - 3.2 Monitoring



1. Application for certification

1.1 Defining application unit for certification

- shall be defined according to model/type of product
- 1.2 Application documents (8 Items)



Application documents

- 1. Manufacturing process plan
- 2. List of equipment and accessories for use in the factory
- 3. Quality control chart
- 4. The detail of procedure for testing, measuring of products.
- 5. List of test equipment
- 6. Potential quantity of the imported products.
- 7. A certificate to show the names of the persons authorized to act on behalf of the juristic person (in case the applicant of the juristic person)
- 8. Documents showing the description of particulars of products.



2. Inspection before a licence is granted

Inspection before a license is granted will be conducted as follows:

- 2.1 Assessment of the quality control system of the manufacturers
- 2.2 Evaluation of products



2.1 Assessment manufacturers' quality control

The quality control system of the manufacturers will be assessed according to:

- 1. The particular requirements for products certification.
- 2. The general requirements for products quality control system.



General requirements for products quality control system

- 1. Factory visit and/or assessment of documents showing the quality control process.
- 2. Examination of the ISO 9000 certificates
 - 2.1 The ISO 9000 certification body which has been accredited by the Office of the National Accreditation Council (ONAC) of Thailand, or
 - 2.2 The ISO 9000 certification body which has been approved by the Industrial Product Standards Council.



2.2. Evaluation of products

TISI will evaluate the product against the applicable Thai Industrial Standard (TIS) and the relevant particular requirements for products certification by the one or more of the following procedures



Procedures for evaluating products

- 1. Taking sample to be tested by designated laboratory
- 2. Taking sample to be tested at the factory by the factory's staff under supervision of the competent officials.
- 3. Examination of test report: Product sampling for testing will be exempted for the manufacturer whose product testing has been approved by the Industrial Product Standards Council.



3 Surveillance after a licence is granted

- Surveillance will be carried out to ensure that the certified products continue to conform to the applicable standards and that the manufacturer is still capable of maintaining the quality of the certified product.
- Surveillance scheme consists of:
 - 3.1 Routine surveillance
 - 3.2 Monitoring



3.1 Routine surveillance

Surveillance will be carried out by the one or both of the following, as the case may be:

- 3.1(1) Surveillance of the quality control system
- 3.1(2) Surveillance of the quality of certified products



3.1(1) Surveillance of the quality control system

The on-site surveillance of quality control system by TISI competent officials will be carried out regularly to ensure that the licensee still maintains the capacity to control the product's conformance. However, the licensee may or may not be informed in advance.



3.1(2) Surveillance of the quality of certified products

Surveillance will be carried out by the one or more of the following procedures where appropriate:

- 1. Taking sample from the factory to be tested by designated laboratory
- 2. Taking sample to be tested at the factory
- 3. Taking sample from sale premises to be tested by designated laboratory
- 4. Taking sample from each import to be tested by designated laboratory



3.2 Monitoring

The premises of the manufacturer and the importer as well as sale premises will be monitored without being informed in advance to ensure the manufacture and sale of products which conform to the standard, and to prevent the misuse or inappropriate use of standards mark as well as any activities which violate the Industrial Product Standards Act B.E. 2511 and its amendments.



Product Certification Process for Certification Marks



(Receipt of Application Period)



voluntary certification mark

mandatory certification mark



Reference: Thai Industrial Standards Institute (TISI) - www.tisi.go.th





Country compliance regimes

Indonesia

Awang Riyadi

Ministry of Energy and Mineral Resources





CFL Labeling Programme in Indonesia





- Current Condition
- Policy Direction
- CFL Industry Profile
- CFL Labeling Program





Current Condition
 Policy Direction
 CFL Industry Profile
 CFL Labeling Program



Final Energy Consumption (MTOE)



Primary Energy Supply (МТОЕ)





Current Condition
 Policy Direction
 CFL Industry Profile
 CFL Labeling Program



Policy Direction


Potential Saving from Household Appliances





Current Condition
 Policy Direction
 CFL Industry Profile
 CFL Labeling Program



Map of Indonesia's CFL Manufacturing



National Product Capacity : 250 Million / year

National Value (TKDN) : 27% - 69 %

CFL Sales in 2011 (247 MILLION, Increase about 25% from 2010)





Current Condition
 Policy Direction
 CFL Industry Profile
 CFL Labeling Program



CFL Labeling Program

- Objective : introducing energy saving level as a guidance for consumer and to promote energy efficiency
- Testing procedure : SNI IEC 60969 : 2009
- Label for energy saving marks : SNI 04-6958-2003
- Ministerial Regulation (MEMR) No. 6/2011 on Energy Labeling for CFL was issued as a legal basis. Mandatory will be impose in May 2013
- CFL as a pioneer for Labeling Program

	Power (Watt)	1 Star	Efication Valu 2 Stars	ie (Lumen/Watt) <u>A A A</u> SStars	4'Stars
	5 - 9	45 – 49	>49 – 52	>52 – 55	> 55
	10 – 15	46 – 51	> 51 – 54	> 54 – 57	> 57
	16 – 25	47 – 53	> 53 – 56	> 56 – 59	> 59
	≥ 26	48 – 55	> 55 – 58	> 58 – 61	> 61

CFL Profile





Source: Palaloi, CFL Survey in Indonesia Market 2011, BPPT

Product Standardization Regulatory Regime

REGULATION AUTHORITY



NEED INTENSIVE AND CLOSE COORDINATION AMONG THOSE MINISTRIES

Product Certification Process



SDOC Scheme for CFL Labeling



Progress of CFL Labeling program

□ Status: June 2012

- 3 companies have been submitted SDOC
- •expected sales in the first year around 93 million pcs CFL.
- •Mostly in the top level of label (star 4)





- Reluctancy from some stakeholders due to low involvement during the label development process
- There are no comprehensive approach promoting CFL labeling, lack of stakeholder involvement in promoting the labeling program





THANK YOU



Country compliance regimes

China

Yujuan Xia CNIS (Presented by Stuart Jeffcott)



Background

Increasing focus on Energy Consumption/Efficiency in China

- Reduce costs
- Conserve limited resources
- Energy security

Major focus of current five year plan (2011-2016)

Reduce energy consumption per unit GDP by 16%



China Energy Labelling

Mandatory labelling since 2005. Currently labelling required for

- □ 25 types of products
- 48 standards in total
 - Includes some lighting products
- Labelling based on self declaration system
 - Requirement for registration of claim at China Energy Labelling Centre (CELC – part of CNIS)
- Following initial issues with false claims
 - Requirement from 2009 to support labelling registration with report from CNIS approved laboratory
 - □ Also system to identify products with "unlikely efficiency"



Problems identified with enforcement

Perceived problem:

- Label not displayed
- Products labelled without registration
- Incorrect information included on label
- Issues thought to be:
 - Unclear understanding of requirement by smaller manufacturers
 - Lack of clarity on roles and responsibilities for enforcement at the local level
 - Traditional enforcement concentrated on safety/EMC
 - Limited penalties for non-compliance



Research

Two part investigation

- Label usage check
 - Applied for and passed registration
 - Label information same as nameplate
 - Whether was displayed, and correct for registration
 - Label in correct position and defined format/type
- Energy efficiency check testing (checking displayed information in line with actual performance)



Two phase research – 5 provinces

Pilot provinces/ cities	Target products in phase I (2009-2010)	Target products in phase II (2010-2011)
Shanghai	Refrigerator, variable frequency air conditioner, computer monitor	Refrigerator, room air conditioner, induction cooker
Sichuan	Compact fluorescent lamp, electric motor	Compact fluorescent lamp, electric motor
Shandong	Electric motor, refrigerator, induction cooker	Electric motor, refrigerator
Jiangsu	Room air conditioner, compact fluorescent lamp, electric water heater	Room air conditioner, compact fluorescent lamp, electric water heater, induction cooker
Guangdong		Electric rice cooker, induction cooker, electric water heater



Results: Phase II Label Checks

	Jiangsu	Sichuan	Shandong	Shanghai	Guangdong
	Pass Rate (%)	Pass Rate (%)	Pass Rate (%)	Pass Rate (%)	Pass Rate (%)
Room air conditioner	100%			100%	
Self-ballasted fluorescent lamp	100%	25%			
Electric water heater	100%				100%
Three-phase asynchronous motor		22%	86%		
Induction cooker	100%			100%	100%
Domestic refrigerator			86%	100%	
Automatic electric rice cooker					100%

Results: Phase II Efficiency Checks

	Jiangsu	Sichuan	Shandong	Shanghai	Guangdong
	Pass Rate (%)	Pass Rate (%)	Pass Rate (%)	Pass Rate (%)	Pass Rate (%)
Room air conditioner	100%			100%	
Self-ballasted fluorescent lamp	75%	40%			
Electric water heater	100%				85%
Three-phase asynchronous motor		87%	100%		
Induction cooker	88%			80%	96%
Domestic refrigerator			86%	70%	
Automatic electric rice cooker					99%

Summary of Recommendations

- Greater communication with industry on labelling requirements (particularly rural/smaller manufacturers)
- Increased communications with government officials to raise importance of enforcement actions (incorporate into day to day activities)
- Increase technical training of enforcement groups at the local level (help them to understand EES and label implementation requirements, such as label printing and usage, label registration, lab registration, etc..)
- Clearer guidelines (and sometimes regulations/law) at local level on:
 - Organisational responsibilities and punishment
- Make registration system easier to interrogate for enforcers
- □ Share enforcement experiences/results between enforcers



Sichuan – additional issues

- Additional issues from Sichuan CFLs and Motors beyond small scale manufacturers and low end retailers
 - The local products quality supervision bureau and institute have their own annual goal of seeking financial income.
 - □ The fine for non-compliance is one of their financial source.
 - Attention focused on products likely to fail rather than "random" sampling





THANK YOU





Compliance

Critical success factors

Mark Ellis

Mark Ellis and Associates



Key elements of compliance regimes

- Mechanism to facilitate compliance
- Market surveillance
- Verification testing
- Enforcement
- Communication, reporting, feedback
- Legal and administrative framework
- Budget and resource allocation
- Evaluation processes

Effective compliance regimes include all of these related elements



MANY More details...

...ARE AVAILABLE IN THE CLASP MV&E **GUIDEBOOK**

Bv



Facilitating compliance

- Does everyone know what they are expected to do?
- Ensuring obligations are clear and well-understood is an easy way to improve compliance
- Keeping stakeholders informed of MV&E requirements is a continuous activity
 - New stakeholders all the time
 - Reach out to overseas suppliers
- Regular structured dialogue with industry associations can be beneficial



Market surveillance

- Surveillance of entry conditions
 - Registration
 - Product information + evidence
- On-line facilities with automated checking can help
- Importer economies are integrating reporting requirements into border control processes
 - Reduces transaction costs for suppliers



Correct display of energy labels

- Store surveys to check labelling display are common – although varied in scope and frequency
- Important to follow with action on the spot fines are very effective!
- More programs are focusing on retailer on-line sites
- What information must on-line retailers provide to end-users on energy performance?



Verification tests

- Independent verification tests still needed for where third-party certification
- Laboratory <u>availability</u>, competency and capacity are major issues for all programs
- Major opportunity for collaboration across APEC region
 - There are good private and public labs we just don't all know which they are!
 - □ Greater flexibility to use labs in other countries
 - Commission tests in country of origin



Targeting testing

- Most testing is expensive & time consuming
- Focus testing on those parts of the market judged to pose most risk to the program, e.g.
- □ Primary targets:
 - Appliance categories representing major energy consumption
 - Appliances categories with lower historic compliance rates
 - Models with high market share



Targeting testing

At brand level:

Does the brand have a good record of compliance?
 Here and/or in other economies?

At a model level:

- What is the quality of evidence for claims is the test lab known and credible?
- □ Have competitors provided evidence of non-compliance?
- Are the claims of performance excessively high unbelievable?
- □ These criteria help to target likely non-compliance



Third-party certification

- Can be very effective system, but needs oversight, competition and sanctions
- Operational guidelines to cover issues such as:
 How samples are selected to avoid golden samples
 Testing frequency
 Reporting of results
- Reduces testing costs for government, but some independent testing still required to check on certification agencies
- Industry certification schemes could be encouraged



Enforcement

Programs need a range of enforcement tools

- so they can act appropriately to suspected transgressions
 and quickly to minimise damage
- Informal advice & warnings can be sufficient in cases where suppliers lack knowledge
- Maintenance of detailed records are vital to support enforcement
 - □ Staff time
 - Detailed processes




Reporting

- Mixture of public & private reporting required:
- Public reporting to demonstrate that there is a risk of detection and sanctions
- Private reporting so that companies can take corrective action
- Most APEC program could do more in the way of public reporting by:
 - □ Listing the number and frequency of surveys and tests
 - Identifying plans for future compliance activities
 - Publishing the overall results of compliance activities
 - Identifying products and brands found to be non-compliant



Compliance Monitoring Publication of test results in Hong Kong (MEELS)

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_	Results of Compliance Monitoring Tests on Energy Performance under Mandatory Energy Efficiency Labelling Scheme (MEELS) (Room Air Conditioners) - Year 2011											
	測試結果	發放日期:2011年	12月									
	Test Resu 項目 No.	IIS Release Date. Da 品牌 Brand	ecember 2011 型號 Model Name	漫換電工 包署 編記 参考編號 EMSD Assigned Reference Number	強制性標範計 劃下的能源效 益級別 Efficiency Grade under	顧定製冷量 (千瓦) Rated Cooling Capacity (kW)	額定功率消耗 量(額定瓦數) (千瓦) Rated Power Consumption (Rated	測設出的製油 量 (千瓦) ^{建2} Measured Cooling Capacity	測設出的功率 消耗量 (測設出 的瓦敷) (千瓦) ^{都2} Measured Power	是否符合強制性標 範計創的要求? ^{都)} Conformance with MEELS Requirements? Nata 1	看註 Remark	
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	1	美的 Midea	MWH-09CM1	C080055	1	2.58	0.94	2.42	0.90	是 Yes		
	2	樂信牌 Rasonic	RS-PC9GK/RU-PC9GK	C090001	2	2.50	0.90	2.57	0.91	是 Yes		
21	3	日立牌 HITACHI	RAS-E10CYK / RAC-E10CYK	C090088	1	2.70	0.83	2.79	0.87	是 Yes		
	4	富士 電機 Fuji Electric	RSA18JPC	C090129	1	5.20	1.58	5.36	1.49	是 Yes		
	5	富士 電機 Fuji Electric	RSA24JPC	C090130	2	7.00	2.31	6.54	2.04	是 Yes		
	6	家榮華 Kelvinator	KASC18GNPWDR	C090328	2	5.28	1.75	4.93	1.72	是 Yes		
	7	三菱重工 MITSUBISHI	SRKAG50CN- E/SRCAG50CN-E	C090497	2	4.55	1.50	4.53	1.54	是 Yes		
ţ(⊈	8	北極 FRIGIDAIRE	FASC12GGCWD	C100040	1	3.52	1.15	3.39	1.10	是 Yes		
E E	9	聲實牌 SHARP	AF-A9LA	C100051	1	2.58	0.89	2.52	0.90	是 Yes		
離	10	AKAI	ACW18GM	C100092	2	5.30	2.10	5.20	2.02	是 Yes		
	11	格力 GREE	GSA18	C100095	1	5.20	1.60	4.89	1.60	是 Yes		-
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Delisting of Non-compliant Models Not Allowed to be Supplied in HK (MEELS)

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Consultants/ Contractors/ Suppliers' Corner	2008 © Important notices Priv	acy policy	Last revision date: 16) February 2012
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Legal and organisational framework for compliance

FRAMEWORK = LEGISLATION + REGULATIONS + PROGRAM 'RULES'

- Rules and administrative guidelines more flexible than laws
- Some APEC S&L programs are hindered by laws that provide insufficient mandate and clarity
- Shared responsibilities between Ministries/Agencies can lead to confusion and lack of leadership
- Transparency of operational rules is important for compliance – but often not published



Budgets and resources

- Sufficient budget & enough staff with the right skills
- Investment in a strong MV&E regime is highly cost-effective: Costs < 1% of savings from S&L activities
- Safeguards all future savings by protecting the integrity of programs
- Choices of compliance design influence costs
- Many lower cost options e.g. education, clarity of rules, publicity, surveys, timely responses lites.a
- But need to be planned and organized

Evaluation

S&L
 Programs

 always
 changing

 Feedback

 loops help
 improve
 programs
 over time



Program impacts often assume 100% compliance – seldom true!



Conclusions

- Large diversity amongst S&L programs
- No perfect MV&E regime lots of options and choices
- Designs need to take account of local circumstances
- Considerable opportunity to transfer knowledge and experience amongst economies





Facilitated discussion



Label display market surveillance

- Issue: Poor/variable label compliance in stores
- Check labels in stores (internet?)
- Same methodology
- Local contractors
- 1. Undertake Survey
- Communicate results to stores/suppliers within 3 months
- 3. Second survey within 12 months



Implementation

- lites.asia
 - Coordination
 - Methodology
 - Produce interim and final reports
- Participating country input
 - Select/pay local contractor
 - Undertake survey
 - Communicate results to stores/suppliers
 - Re-survey within 12 months



Communication between governments and suppliers across Asia

Issue: facilitating compliance by improving the transparency of national S&L programs' requirements to suppliers

- □ Labels, MEPS
- Entry and Testing requirements
- Regional events
 - □ 1-3 countries?
 - Audience: product suppliers
- Other ideas

E.g. centralised list of requirements



Implementation

- lites.asia
 - Organisation
 - □ Promotion
 - □ Funding?
- Participating countries
 - Provide knowledgeable speakers
 - Provide written materials



Laboratory education, training and round robin

- Issue: lack of local testing capacity/competence
- LEDS
 - Educational exchange between labs
 - Group training at one lab
- Compile lists of lighting labs across Asia
 - Capacity and capabilities
 - Based on agreed criteria (accreditation, registration lists, track records, etc)





THANK YOU

