



ENFORCING EFFICIENT LIGHTING REGULATIONS

GUIDANCE NOTE
FEBRUARY 2016

**Australian
Aid** 

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FOREWORD

In 2014, lighting accounted for approximately 15% of global electricity consumption. The United Nations Secretary-General's Sustainable Energy for All initiative identified energy efficient lighting as a "high impact opportunity", with the potential to reduce countries' greenhouse gas emissions, generate significant economic benefits and improve people's wellbeing.

High efficiency lighting technologies, such as light emitting diode lamps and smart control systems, offer up to an 85% improvement in efficacy, compared with conventional lighting technologies, while providing a better quality service.

Minimum energy performance standard programmes are a crucial policy tool for improving the energy efficiency of lighting, by contributing to the elimination of the least efficient products from the market, and accelerating the phase-in of energy saving technology replacements. However, while an increasing number of countries are adopting minimum energy performance standards, the continued availability of non-compliant, inefficient products jeopardises the achievement of countries' energy efficiency goals.

Robust monitoring, verification and enforcement schemes are crucial to safeguarding the energy efficiency benefits of performance standards and regulations. These activities protect markets from products that fail to perform as declared, or required; guarantee that products meet consumers' expectations; and ensure that policymakers, government regulators and programme administrators attain their energy saving objectives. Monitoring, verification and enforcement activities also protect suppliers' competitiveness by ensuring that they are all subject to the same market entry conditions.

Successful monitoring, verification and enforcement implementation requires long-term policy commitment and planning. The Government of Australia has long been committed to the development and implementation of monitoring, verification and enforcement policy and activities on its own territory, as part of its Equipment Energy Efficiency Program. Since 2009, Australia has been assisting other developed and developing countries to follow the same path, by sharing its expertise and best practices, and making its resources available to other countries¹.

Most recently, the Government of Australia has provided its financial and technical support to the United Nations Environment Programme-Global Environment Facility en.lighten initiative to strengthen capacities for monitoring, verification and enforcement in Southeast Asia and the Pacific. As part of this project, and drawing on the experience and knowledge of international experts and practitioners, the United Nations Environment Programme developed a series of six guidance notes on specific aspects of monitoring, verification and enforcement.

This guidance note and its associated publications are designed as manuals for government officials, technical experts and others around the world responsible for developing, implementing and refining structured and effective monitoring, verification and enforcement programmes. They describe the technical, methodological and institutional resources required, and provide easy-to-use, generic tools and templates that readers can adapt to their particular country situations.

We hope that these guidance notes will convince governments of the importance and benefits of monitoring, verification and enforcement and assist with implementation. We strongly encourage policymakers and those involved in implementing monitoring, verification and enforcement policies to take advantage of the practical advice presented.



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¹ Including: International Electrotechnical Commission (IEC), International Energy Agency's Energy Efficient End-use Equipment Solid State Lighting Annex (IEA 4E SSL Annex), lites.asia, Pacific Appliance and Labelling Programme (PALS), Vietnam Energy Efficiency Standards and Labels (VEESL), and others

ABOUT THE UNEP–GEF EN.LIGHTEN INITIATIVE

The United Nations Environment Programme (UNEP)-Global Environment Facility (GEF) en.lighten initiative was established in 2010 to accelerate a global market transformation to environmentally sustainable, energy efficient lighting technologies, as well as to develop strategies to phase out inefficient incandescent lamps to reduce CO₂ emissions and the release of mercury from fossil fuel combustion.

The en.lighten initiative serves as a platform to build synergies among international stakeholders; identify global best practices and share this knowledge and information; create policy and regulatory frameworks; address technical and quality issues; and encourage countries to develop National and/or Regional Efficient Lighting Strategies.

The United Nations Secretary General's [Sustainable Energy for All \(SE4ALL\) initiative](#) selected the UNEP

en.lighten initiative to lead its lighting 'Energy Efficiency Accelerator'.

The initiative is a public/private partnership between the United Nations Environment Programme, [OSRAM](#) and [Philips Lighting](#), with the support of the Global Environment Facility. The National Lighting Test Centre of China became a partner in 2011, establishing the [Global Efficient Lighting Centre](#), and the [Australian Government](#) joined in 2013 to support developing countries in Southeast Asia and the Pacific.

In 2015, based on the lessons learned from the en.lighten initiative, UNEP launched the [United for Efficiency \(U4E\) initiative](#) to support countries in their transition to energy efficient appliances and equipment, including room air conditioners, residential refrigerators, electric motors, distribution transformers and information and communication technologies.

ABOUT THE UNEP–GEF EN.LIGHTEN INITIATIVE MONITORING, VERIFICATION AND ENFORCEMENT SERIES

This guidance note is one of a series of six publications on monitoring, verification and enforcement (MVE) commissioned by the UNEP-GEF en.lighten initiative under its Southeast Asia and Pacific Monitoring, Verification and Enforcement Project, funded by the Australian Government:

- *Developing Lighting Product Registration Systems;*
- *Efficient Lighting Market Baselines and Assessment;*
- *Enforcing Efficient Lighting Regulations;*
- *Good Practices for Photometric Laboratories;*
- *Performance Testing of Lighting Products;*
- *Product Selection and Procurement for Lamp Performance Testing.*

The series provides practical tools in support of lighting policy compliance frameworks and to help countries achieve a successful transition to energy efficient lighting. These publications build on the existing guidance given in the UNEP-GEF en.lighten reference manual, [Achieving the Global Transition to Energy Efficient Lighting Toolkit](#). They focus on individual aspects of an effective MVE infrastructure and how these contribute to improved product compliance and the success of policies that aim at transforming the market to efficient lighting.

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ABBREVIATIONS AND DEFINITIONS

ADCO	Administrative Cooperation Group
CFL	compact fluorescent lamp
CLASP	Collaborative Labelling and Appliance Standards Program
Defra	Department of Environment, Food and Rural Affairs
Ecopliant	European Ecodesign Compliance Project
IEA	International Energy Agency
IEC	International Electrotechnical Commission
LED	light emitting diode
MEPS	minimum energy performance standard
MVE	monitoring, verification and enforcement
UNEP	United Nations Environment Programme

GLOSSARY

C

compliance: conforming to a rule, such as a law, policy, specification or standard.

E

enforcement: the actions taken by an authority in response to incidents of non-compliance with the rules of a programme, and to deter potential incidents of non-compliance. (CLASP 2010).

enforcement pyramid: an illustrative diagram displaying increasingly tough actions or steps that should be followed in an enforcement strategy, to bring non-compliant programme participants into compliance.

enforcement regime: a structured set of actions used to remedy incidents of non-compliance that may include the establishment of a set of sanctions coupled with a progressive action plan for their application. (CLASP 2010)

entry conditions: describes a set of specific requirements that product suppliers need to meet in order to participate in either voluntary or mandatory standards and/or labelling programmes. (CLASP 2010)

L

lamp: source made in order to produce an optical radiation, usually visible. Note: This term is also sometimes used for certain types of luminaires. (IEC)

M

market surveillance: those activities required to monitor compliance with programme conditions, usually registration and labelling conditions, once products are in the marketplace. It does not include the taking of products from the marketplace for verification testing. (CLASP 2010)

minimum energy performance standard (MEPS): a mandatory minimum performance level that applies to all lamp products sold in a market, whether imported or manufactured domestically.

model: manufacturer's particular lamp design.

monitoring (compliance monitoring): activities designed to collect information about compliance with the programme requirements, and observing and checking that programme requirements are being met, either as a one-off or systematically, over a period of time through an energy efficiency programme's duration.

N

non-compliance: any instance deemed by to be discordant with requirements of a programme. (CLASP 2010)

P

product: a category of appliance that is included, either voluntarily or mandatorily in an energy efficiency programme. A product may have a number of product models. (CLASP 2010)

programme: in the context of this guidance note, an initiative designed to promote the market adoption of more energy efficient appliances and equipment.

programme administrator: the person or organisation responsible for running a programme. (CLASP 2010)

programme participant: the body taking part in a programme, whether it is voluntary or mandatory. In the case of energy efficiency programmes, the participant usually refers to the 'supplier' (for example, manufacturers, importers and retailers). (CLASP 2010)

S

stakeholder: individual, group or organisation that has an interest in an organisation or activity. (IEC) Compliance programme stakeholders typically include representatives of suppliers, consumers, utilities, local governments, environment and energy efficiency groups and representatives of importers and international organisations. (CLASP 2010)

supplier: defined as a manufacturer, importer, authorised representative, or wholesaler or dealer of appliances or products included in an energy efficiency programme.

V

verification testing: a product test conducted by, or on behalf of, an enforcement authority to prove the performance of a product with regard to its energy consumption, in accordance with the specified test methodology. This process is used to determine whether a sample of units of a particular product model meet the requirements of a regulation or programme.





EXECUTIVE SUMMARY

This guidance note focuses on best practices for enforcing energy efficiency policies for lighting and other products, specifically, for minimum energy performance and energy labelling requirements. It is intended for use by those countries that have yet to develop and implement an enforcement regime for lighting products. However, countries with an existing enforcement regime may consider revising or strengthening their enforcement activities according to the best practices highlighted within this guidance note. It aims to be a practical resource for governments and enforcement authorities on processes to follow when implementing a national enforcement programme.

Enforcement of regulations is essential to support the transition to efficient lighting. It safeguards the benefits of efficient lighting policies by ensuring that non-compliant products are removed from the market, and that manufacturers, importers and retailers are held accountable for any non-compliant products on the market. Through enforcement actions, efficient lighting programmes can demonstrate that there are consequences to non-compliance with efficient lighting regulations, and can thereby help to ensure both consumer and competitor confidence in the market and in the technology.

Enforcement activities should be considered and established alongside monitoring and verification activities. However, enforcement is typically a consequence of non-compliance and therefore usually comes after monitoring and verification have been carried out and non-compliant products have been identified. High visibility of enforcement actions also acts as a pre-emptive measure to deter situations of non-compliance. These different situations will be addressed throughout this guidance note. The guidance note also considers both the development and implementation of an enforcement programme.

When developing a national enforcement programme, it is first and foremost essential to build a foundation for enforcement action in law. Legislation provides the basis for enforcement, however it is often too rigid to guarantee sufficient flexibility to enforcement bodies. For this reason, legislation should be supported by more flexible and adaptable operational guidelines or administrative procedures. These can provide valuable instructions and

guidance on how to proceed in enforcement cases, and can simultaneously help inform programme participants (for example, manufacturers, importers and retailers) on how the enforcement procedure functions, as well as what the consequences of non-compliance might be. It is also important to assess existing legislative frameworks or procedures, as these can often be adapted to respond to energy efficiency programme needs.

An effective enforcement programme requires clearly defined roles and responsibilities for the enforcement programme implementers, as well as for participants in the energy efficiency programme to which the enforcement activities apply. An enforcement body or bodies need to be identified, ensuring they can respond effectively to market needs, and responsibilities within these bodies should be determined. These can include enforcement staff, a communications team and a legal team. Finally, the requirements for programme participants, as well as necessary stakeholder input, should be clearly identified, particularly where the programme is voluntary, or industry- or civil society-led.

Foresight into budgeting for enforcement is essential. A greater budget can often lead to greater compliance; however resources should meet or match market requirements, and suit the risk-based programme needs. Regional resource and data sharing should be considered to help lower costs, while gathering increased market data. Different sources can help fund an enforcement programme, depending on the programme entry requirements (such as product registration fees) and non-compliance penalties or fines.

Once the programme has been planned and mapped out, the following steps can assure successful implementation of an enforcement programme.

Firstly, the different types of non-compliance should be identified. This can range from programme participants failing to register products at point of entry to the market, to products failing to meet the required MEPS levels, to showing misrepresentative labels at point of retail, or failing to respond appropriately to enforcement actions. Each of these will require a different type of enforcement response and it is important to determine the severity of the infraction, as well as the intention of the offender behind the non-compliance. A serious and deliberate infraction will require more attention, and a more severe enforcement response, than an instance where the non-compliance is the result of a misunderstanding of the energy efficiency programme requirements.

Once the non-compliances have been identified and assessed, consideration needs to be given to what actions will elicit the best and most desired responses from the offenders, and ensure confidence in the programme more broadly. A proportionate response should be applied to meet the severity of the non-compliance. This is often represented as an enforcement pyramid to which

enforcement authorities can refer to understand the different levels of responses available and when to move from more informal responses to serious actions such as prosecutions. Additionally, regional information sharing opportunities should be taken advantage of to learn from existing examples and best practice. Joint efforts on enforcement can also serve as a very effective deterrent to non-compliance for those businesses that operate across borders.

One of the most effective tools for enforcement, from the beginning of a programme through to when non-compliance has been identified, is communicating the actions and intentions of an enforcement programme. Consideration should be given to communications at the start of a programme, to help prevent non-compliance from occurring. Communications can also be implemented as an effective enforcement tool, by engaging consumers and discouraging them from purchasing non-compliant products. And finally, to ensure transparency of a programme and to avoid any risk of corruption, all relevant and publically shareable information should be reported on and published to prove to industry that the enforcement authority is taking action on non-compliance, and to increase consumer trust in the energy efficiency programme and in energy efficient technology.

.....

1 INTRODUCTION

Efficient lighting policies have the potential to reduce the increasing growth of electricity consumption in the residential sector, thereby helping to tackle the impacts of climate change and to reduce energy costs for consumers. If these policies are not appropriately monitored, verified and enforced, their anticipated benefits will be lost. Enforcement of product energy efficiency regulations plays a significant role in ensuring that industry is deterred from not complying with these regulations and for ensuring they are held accountable for their actions. This guidance note is intended to support the development and implementation of enforcement best practices that can be used by policymakers and those involved in the monitoring, verification and enforcement (MVE) aspects of efficient lighting programmes. This guide refers specifically to energy efficiency programmes for lighting products, however these enforcement best practices can also be applied to other product areas.

Enforcement refers to the actions taken by an authority in response to incidents of non-compliance with the rules of an energy efficiency programme, using a suite of timely and appropriate actions. These actions should be built on rigorous testing and yield a high return in terms of market and consumer protection.

Enforcement is an essential element of any regulatory programme supporting the transition to efficient lighting. It safeguards the benefits of efficient lighting policies by ensuring that non-compliant products are removed from the market and that manufacturers, importers and retailers are held accountable for any non-compliant products placed on the market. Enforcement also helps to ensure that compliant businesses can operate on a fair and level playing field. Through enforcement actions, efficient lighting programmes can demonstrate that there are consequences to non-compliance with efficient lighting regulations. Enforcement can thereby help to ensure both consumer and competitor confidence in the market and the programme.

Enforcement activities should be considered and established alongside monitoring and verification activities. As enforcement is typically a consequence of non-compliance, it usually occurs once non-compliant products have been identified. Non-compliance is

identified through monitoring programmes, including consumer and competitor complaints, then validated through verification activities. Ensuring high visibility of enforcement actions also acts as a pre-emptive measure to deter situations of non-compliance. While monitoring identifies potential cases of non-compliance, and verification proves cases of non-compliance, the goal of enforcement is to remove cases of non-compliance. This relationship is illustrated in Figure 1.

Figure 2 illustrates the two key stages of an enforcement regime, development and implementation, which are discussed in the following chapters.

⇒ **CHAPTER 2** describes the steps involved in developing and designing an enforcement regime, including building the national legislative and administrative framework for enforcement, and identifying roles and responsibilities of those enforcing, participating or that have an interest in the enforcement regime. Finally, it discusses planning for budgeting considerations necessary for implementation of the enforcement framework.

⇒ **CHAPTER 3** discusses how to implement an enforcement regime, looking at how to identify different types of compliance, where these might occur, and who

the offender might be. It then explains how to address cases of non-compliance through proportionate responses, how to engage with other regions to improve regional compliance, and finally how to deter and prevent non-compliance through effective communications campaigns.

⇒ **CHAPTER 4** outlines key recommendations for conducting an effective enforcement regime.

⇒ **CHAPTER 5** identifies helpful resources that policymakers and MVE practitioners can refer to for more information on enforcement and on MVE in general.

Figure 1

Role of enforcement in monitoring, verification and enforcement process

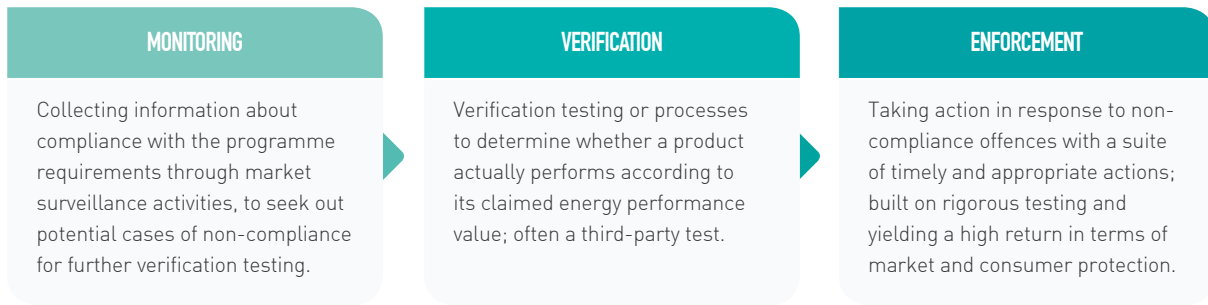
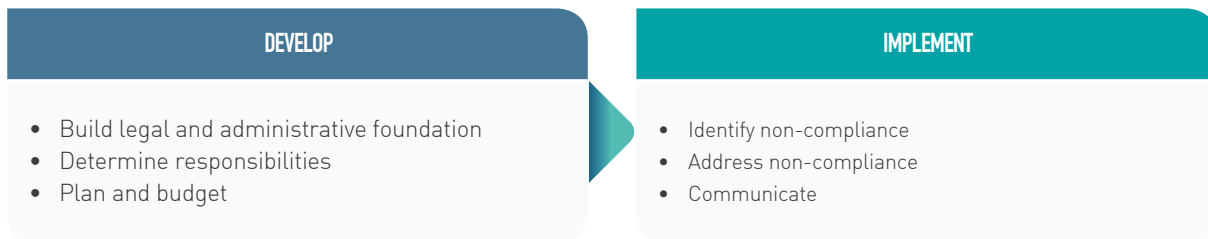


Figure 2

Key stages of an enforcement regime



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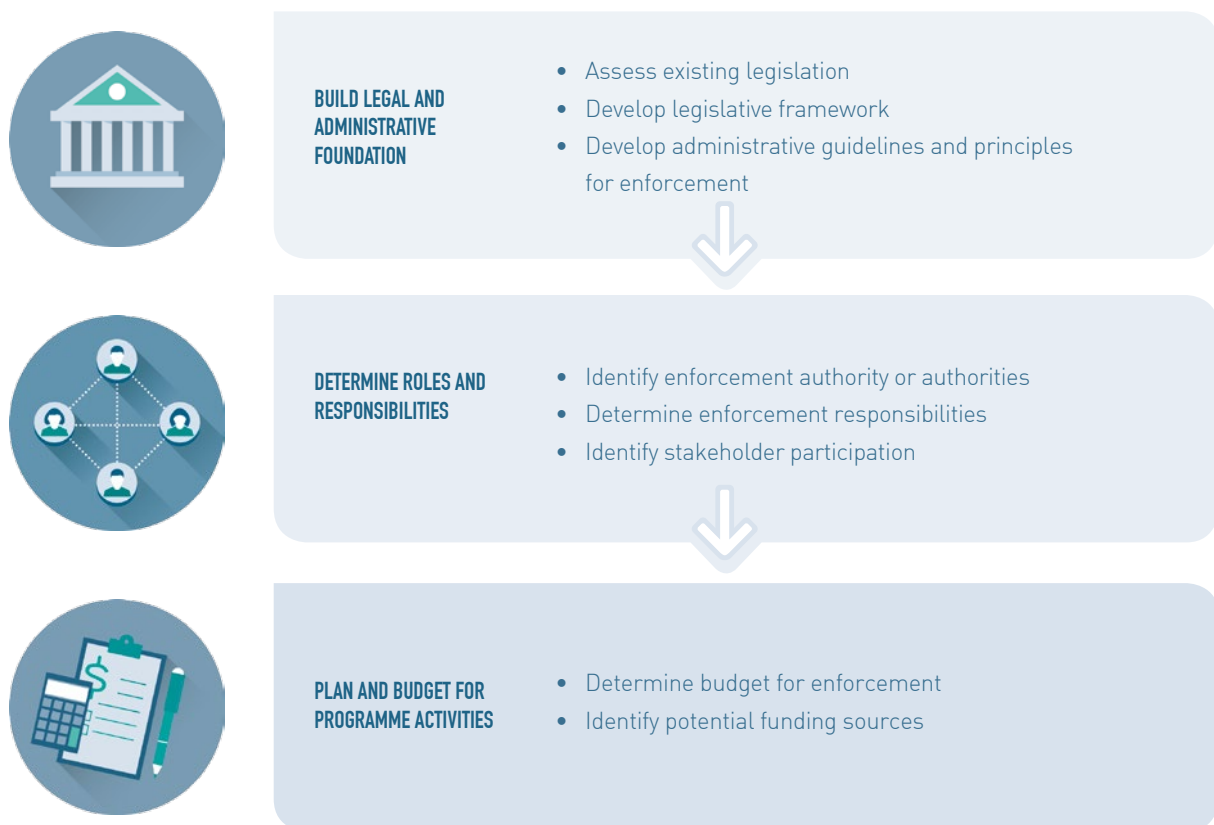
2 | DEVELOPING A NATIONAL ENFORCEMENT REGIME

A successful enforcement programme requires careful consideration prior to implementation. It requires a strong foundation in law, clear specification of the roles and responsibilities for the different actors involved, and a range of resources should be committed to implement the programme. This Chapter establishes the steps required to plan for an enforcement programme, and discusses the different organisational body and staffing needs, as well as budget planning for the programme.

Figure 3 presents an overview of the process for establishing a national enforcement regime. Each of these steps will be discussed in detail in this Chapter.

Figure 3

Process for developing a national enforcement regime



2.1 BUILD LEGAL AND ADMINISTRATIVE FOUNDATION FOR ENFORCEMENT



A legitimate and transparent enforcement regime requires a strong foundation within the national legal framework. When legislative requirements, legal authority, enforcement powers and penalties are enshrined in law, the requirements on different stakeholders will be clear from the outset and the consequences of non-compliance will be difficult to challenge.

However, not all requirements and procedures for enforcement can be set out in legislation. Working with industry involves certain sensitivities (as discussed throughout Chapter 3), where the rigidity of law can often be cumbersome and lead to less beneficial solutions – for the enforcement authority, for programme participants and for the consumer. For this reason, combining a legislative and an administrative framework can offer a well-rounded approach to enforcement, particularly when supported by guiding principles for enforcing an energy efficiency programme. Any administrative procedures must, however, be transparent, defensible and consistently applied for similar situations, to avoid cases of unfair or inconsistent application of the rules.

It is important to note that the legislative rules of an energy efficiency programme should not be too rigid, and offer sufficient flexibility to adapt to different circumstances. This may be achieved by the use of subsidiary legislation, such as regulations, that is easier to amend. Administrative or operational guidelines can also help inform both industry and programme administrators of their options, but it is important to note that these guidelines do not replace regulation.²

2.1.1 ASSESS EXISTING LEGISLATION, ADMINISTRATIVE PROCEDURES AND AUTHORITIES

The first step to building a foundation for enforcing energy efficiency regulations is to assess existing legislation and administrative procedures, and to consider whether authorities have already been established to enforce similar regulations.³ Assessing what legislation, powers, guidelines and authorities are already in place may save significant resources, and could form the foundation for an energy efficiency enforcement framework.

Relevant existing legislation and procedures could include, for example, regulations safeguarding the integrity of consumer information, product safety, or copyright law. These existing laws could address energy efficiency non-compliance, or they might offer a foundation for enforcement powers, penalties and procedures. It is important to determine whether these existing measures are sufficient, and appropriate, to form the basis for energy efficiency enforcement. If the energy efficiency programme is voluntary, existing copyright law could be used to address any abuse of, for example, a copyrighted voluntary label.

In addition, with training and guidance, existing authorities or institutions may be well-placed to enforce energy efficiency legislation. For example, authorities that have experience in product safety regulation or consumer protection may also be able to build capacity to address energy efficiency enforcement. They should only be granted additional authority, if they have both the mandate and resources for undertaking additional enforcement action, and if enforcing energy efficiency regulations does not conflict with existing priorities.

Box 1

Case study: Existing product safety legislation in Cambodia

Cambodia currently has no legal framework in place for authorising the enforcement of non-compliance for energy efficiency. However, a regulatory framework exists for the *Safety Label for Electrical and Electronic Household Products*. This piece of legislation covers provisions for:

- Commercial fraud repression;
- Actions against products or services which are likely to induce grave or imminent dangers;
- Inspection procedures for quality and safety of products, goods and services;
- Offences.

Although these provisions focus on product safety, they can be modified and adapted to address energy efficiency violations. The same agencies responsible for enforcement of product safety, the Ministry of Industry and Handicraft and the Ministry of Mines and Energy, can equally adapt their experience to enforce energy efficiency legislation.

(Council for Development of Cambodia 2000; UNEP 2014)

² For more information, see details on establishing an institutional framework in *Compliance Counts: A Practitioner's Guidebook on Best Practice Monitoring, Verification, and Enforcement for Appliance Standards & Labeling* [CLASP 2010].

³ "regulators should be of the right size and scope, and no new regulator should be created where an existing one can do the work" [Hampton 2005].

If sufficient elements are in place to support the legislative framework for enforcing efficient lighting regulations, MVE programme administrators will have to question whether any new provisions or legislation are required.

There are also opportunities to learn from approaches taken by other programmes. It can be helpful to observe how different enforcement models work with other pieces of legislation and how industry responds to these, to understand whether they should be modified or adapted for energy efficiency regulations.

2.1.2 DEVELOP LEGISLATIVE FRAMEWORK

Establishing the legal framework for an energy efficiency enforcement regime will depend on the national governance structure, on existing legislation and on the infrastructure and design of the MVE process. Legislation for an enforcement regime is likely to be included in the same legislative instrument that sets out the objective of the energy efficiency regulatory programme. This instrument will often specify the products subject to the regulation, and the product performance requirements, including the possibly of subsidiary regulation for each product type. When designing the legislative framework for enforcement, the following details should be addressed and incorporated into the legislation or programme rules.⁴

⇒ **RESPONSIBILITY FOR ENFORCING THE LEGISLATION**, which can either identify a particular or multiple authorities who will implement the enforcement programme, or might simply identify the minister or ministry responsible for the legislation, granting them authority to appoint an enforcement authority.

⇒ **PROGRAMME REQUIREMENTS FOR THE PRIVATE SECTOR**, including notes on who is obliged to comply with the programme (for example, manufacturers, importers and retailers - referred to in this guidance note as programme participants), so they are aware of their responsibilities and obligations under the legislation and what the consequences of non-compliance may be.

⇒ **MONITORING POWERS**, with details on the powers available to the regulator to monitor compliance, including for inspection, monitoring and investigation. These powers may include consideration of the use of search warrants, and evidence seizure, handling and retention. Consideration should also be given to how and when powers will be exercised, what rights suppliers have

during monitoring activities, and what monitoring activities (such as market surveillance, verification testing) will be used.

⇒ **THE PROVISION OF ENFORCEMENT POWERS AND SANCTIONS**, including the ability to impose sanctions where instances of non-compliance are identified during monitoring and verification activities; the ability to require product suppliers to provide information or take specified actions at the request of the regulator; the level or range of penalties that can be applicable depending on the level of non-compliance, such as cancelling or suspending product registrations or removing products from the market; whom the sanctions apply to, and the rules governing appeals processes.

⇒ **TRANSPARENCY MEASURES**, which set out requirements on the enforcement authority to ensure they are held accountable for their actions. This can include requirements to publish enforcement information, including expenditures for enforcement activities, the level and amount of activities carried out per year, and potentially the results of compliance activities where appropriate.

Box 2

Policy tip: Carefully consider transparency needs and consequences

The European Commission conducts an annual data collection exercise requiring Member States to, among other things, provide details on both financial and human resources devoted to compliance activities. There has, however, been some reluctance from different Member States to provide this type of information as, if it becomes clear that one region spends far more than another, it may inadvertently lead to government administrations reducing compliance resources.

When considering reporting on this type of information, it is important that consideration is given to any potential consequences that could result from making this information transparent, as well as providing appropriate context for that information.

⇒ **PROVISIONS FOR USING FOREIGN VERIFICATION RESULTS OR SETTING REGIONAL COLLABORATION REQUIREMENTS**, can be included in law, to support regional compliance activities by legitimising any information collected at a regional level and to authorise sharing of information between national enforcement authorities. This can include requirements

⁴ Note that the legal terminology may differ in different systems, and therefore the terminology used in this guidance note may need to be adapted to suit the relevant legal framework.

to adopt or use regional product registration systems to track enforcement actions.

2.1.3 DEVELOP ADMINISTRATIVE GUIDELINES AND/OR PRINCIPLES FOR ENFORCEMENT

Legislation underpinning efficient lighting programmes is most effective when supported by administrative guidelines and other documentation that define responsibilities of programme stakeholders and provide additional detail on how to implement the information outlined in the legislation, including on the authority, powers and sanctions for enforcement.

⇒ **ADMINISTRATIVE OR OPERATIONAL GUIDELINES**, can steer enforcement authority staff on what steps should be taken in enforcement cases. These offer more flexibility and can be more easily updated than legislation, providing details

on different options that can be applied in informal situations to help bring products into compliance, including informal methods such as developing product improvement plans with the programme participant. These often prove more effective than legal proceedings. These guidelines can also be made available to programme stakeholders to provide transparency into the enforcement process. Consultation processes, public accountability and enforcement outcome reporting are all activities that can be explained in these guidelines or procedures. Documenting information requirements and enforcement procedures, as well as making them publically available and accessible to programme participants, improves the prospects of compliance.⁵ However, it's important to remember that these guidelines are intended to support the legislation and not replace it, as administrative guidelines are not enforceable.

Box 3

Case study: The Indian Bureau of Energy Efficiency operational guidelines

India's Bureau of Energy Efficiency has developed, in collaboration with CLASP, a manual for the national standards and labelling programme for energy efficient appliances. This manual is the first of its kind within the Indian programme, and is expected to serve as an example for other schemes run by the Bureau. It addresses inconsistencies that have been identified through implementation of the programme, and is intended to provide transparency and credibility to the programme. It is intended to help streamline operational procedures, to provide more clarity to the legislative definitions of the roles and responsibilities of relevant programme administrators, and to lay out the requirements for programme participants.

The content and structure of the manual provides a rational discourse for understanding the various administrative, monitoring and implementation mechanisms of the appliance energy efficiency programme in India. The operational procedures and norms laid out in this manual are intended to act as a guide to the Bureau personnel responsible for developing, monitoring and implementing the programme. The manual currently covers information on enforcement, however, given the importance of this issue, a separate manual is in development to provide in depth information on India's enforcement regime. The manual is not currently publically available, but is expected to be made available to programme participants in the future.

For more information on the Indian MVE programme, see: <http://www.beestarlabel.com>



⇒ **GUIDING PRINCIPLES** for effective enforcement of energy efficiency programmes can also usefully support an enforcement regime. These principles can be used to ensure that any regulation or enforcement actions developed by the MVE programme administrator are fair and transparent, that they are not succumbing to corruption, and that they do not impose unnecessary burden on programme participants. By doing so, enforcement actions are more easily defended and

justified. These principles can also help show that any actions taken are appropriate, transparent and proportionate to the non-compliance they are targeting. These principles may be determined by the enforcement authority, or by a higher-level governing body responsible for general regulatory policies that can impact on the private sector, and they can be made publically available.

5 CLASP 2010

Box 4

Case study: Better regulation principles applied for enforcement in the United Kingdom

The United Kingdom's enforcement authority, the National Measurement and Regulation Office, relies on national legislation to inform enforcement procedures. However, their processes must adhere to a range of 'Better Regulation' principles. These principles form the foundation of the *Regulators' Code*, which helps to deliver better regulation – essentially reducing regulatory burdens and supporting compliant business growth. [Better Regulation Delivery Office 2014]

The enforcement authority is committed to seeking an appropriate balance between non-compliance deterrents and ensuring the costs of complying are not too burdensome on programme participants. The principles help them to meet their commitment, by ensuring that all enforcement regulation be:

- Transparent;
- Accountable;
- Proportionate;
- Consistent;
- Targeted (to those cases where enforcement action is needed).

More information is available on the United Kingdom government website at:
<https://www.gov.uk/better-regulation-and-the-regulators-code>



2.2.1 IDENTIFY ENFORCEMENT AUTHORITY OR AUTHORITIES

Energy efficiency enforcement programmes should identify an agency with responsibility for addressing compliance, with a full range of enforcement powers vested to it. This body may be the same institution as that responsible for developing and setting the energy efficiency lighting policies, or it might be a separate entity designated by the policymaker to enforce the regulations. Several agencies may also work together to target and enforce different areas of the market (for example at point of retail, in advertising, at customs, or directly from the manufacturer). In some cases, different bodies may be responsible for MEPS or energy labelling regulations, or for industrial or residential lighting products, or for imported products.⁶

In order to respond to different market needs, or depending on the legislative framework, an enforcement programme should be flexible and may be carried out at the national or local level. In some cases, a regional aspect to enforcement may be embedded in the legislation, particularly where there is a common market and information sharing can serve as a valuable resource. For smaller import markets with few resources to carry out market surveillance activities, the most cost-efficient and effective enforcement strategy may be to focus on checking documentation for imported products coming through customs and enforcing the regulations by not allowing non-compliant products onto the market. There might even be a combination of all levels of enforcement under the same piece of legislation – with activities undertaken at the national, local, or regional level and roles and responsibilities attributed to different bodies working in collaboration. Detailed administrative procedures for each of the bodies involved in enforcement may be set out in operational guidelines to complement the legislation. A comparison of national, local or regional enforcement approaches is given in Table 1. An example of how Australia has delegated authority for appliance energy efficiency enforcement is outlined in Box 5, while Box 6 shows how the United Kingdom elected different authorities as part of the national compliance framework.

2.2 DETERMINE ROLES AND RESPONSIBILITIES FOR ENFORCEMENT



An institutional framework should be well defined before implementing an enforcement regime. From the outset, the roles of those carrying out enforcement need to be determined, and the staff of enforcement agencies should be well trained and equipped with the necessary enforcement powers. The responsibilities of programme participants and stakeholders should also be understood, particularly where voluntary or industry self-regulated measures are in place. These roles and responsibilities should be set out in legislation, and guidance should be provided in any operational or administrative guidelines.

⁶ These bodies could also be well placed to carry out the full scope of MVE activities within a compliance programme – from monitoring the market to verifying product compliance through testing, and enforcing the regulations.

Table 1

Comparison of national, local or regional enforcement approaches

	National or Centralised Enforcement Authority	Local Enforcement	Regional Enforcement
Responsible body	A single body appointed by the national government to bear full responsibility for enforcement of product energy efficiency regulations, including MEPS and labelling. May be working in collaboration with other bodies at the local or regional level.	Local level authorities or officers responsible for 'on-the-ground' enforcement, where legislation is set or implemented by State or Province.	Collaborative group of enforcement authorities, or singular delegated authority responsible for multiple economies, as defined by legislation.
Specific responsibilities These can depend on their role as defined in the legislation.	<ul style="list-style-type: none"> • Provide advisory role to industry to encourage product compliance • Monitor compliance at a national level • Take action where products are non-compliant • Work with other agencies to address non-compliance at point of retail, in advertising, at customs, etc. • Communicate and share information with other enforcement bodies 	<ul style="list-style-type: none"> • Monitor and enforce multiple pieces of regulation, such as consumer protection • Check retail outlets for non-compliant energy labels with on the ground officers • Take action where products are non-compliant. • Communicate with industry 	<ul style="list-style-type: none"> • Collaborate with other enforcement authorities to share information on compliant and non-compliant products • Track foreign enforcement actions to determine how test results and compliance information are used across borders.
Potential benefits	<ul style="list-style-type: none"> • Consistent approach to compliance across the national market • Single point of contact for industry, civil society and other enforcement authorities • Funding committed to enforcement of energy efficiency regulations 	<ul style="list-style-type: none"> • Can have more coverage across the national market • More familiarity with local manufacturers and programme participants • Experience with other legislation 	<ul style="list-style-type: none"> • Leveraged and more efficient use of resources across a common market • Best practice sharing • Reduced regulatory burden on programme participants operating across borders
Possible risks	<ul style="list-style-type: none"> • If no funding available, severe lack of national compliance activity • Potentially less on the ground man-power to check compliance at point of retail 	<ul style="list-style-type: none"> • Inconsistent enforcement on a national market • Different priorities within each region, so allocation of funding may be impacted leading to lack of compliance activity in different areas • Burden on industry operating across the country, having to interact with multiple contact points 	<ul style="list-style-type: none"> • No real legislative powers to directly enforce regulations – may complement rather than replace a national approach. • Not a single body, but several different countries that may or may not take different stances on enforcement actions • Lack of funding at the national level will reduce capacity to contribute to a successful regional collaboration
Country examples	<ul style="list-style-type: none"> • United Kingdom • Australia • Thailand • Brazil 	<ul style="list-style-type: none"> • Germany • Philippines • Previously Australia and the UK 	<ul style="list-style-type: none"> • The EU • Australia and New Zealand

Box 5

Case study: History of responsibilities for compliance and enforcement in Australia

The Australian Equipment Energy Efficiency (E3) Program commenced in 1992 as a Commonwealth, state and territory initiative to establish a single, integrated energy efficiency standards and energy labelling programme for equipment and appliances. While policy and product performance requirements were developed cooperatively at the national level, responsibility for compliance and enforcement remained with individual state and territory authorities, with the level of compliance activity dependent upon resources available in each jurisdiction. New Zealand introduced regulations for energy labelling in 2002 and entered into a joint programme with Australia in 2005, maintaining their own national level regulation.

In 2012, the national *Greenhouse and Energy Minimum Standards (GEMS) Act* came into force at the national level, replacing the previous multi-jurisdiction scheme. Administered by the Commonwealth Government, the position of the GEMS Regulator was created, responsible for monitoring and enforcing compliance under the Act.

The GEMS Act also established GEMS inspectors to assist the GEMS Regulator to monitor and enforce compliance using the inspection, monitoring and investigation powers provided by the GEMS Act. The Act also provides for GEMS inspectors to be assisted by other persons to exercise powers or perform functions under the Act. In some cases, state government officials have been appointed as GEMS inspectors and funded for monitoring activities in order to broaden the reach of compliance and surveillance activities across Australia.

From a compliance perspective, this national level focus has enabled the creation of a specific national compliance team with a specific budget and a more focused approach to MVE activities. Since the introduction of the GEMS Act, the compliance team has developed a range of MVE compliance guidelines and strategies to direct their work, develop compliance priorities, and communicate with stakeholders.

The GEMS Regulator also cooperates with the New Zealand Energy Efficiency and Conservation Authority in relation to compliance where product requirements are shared under the joint Australian-New Zealand E3 Program.

For more information on the responsibilities within the E3 Program see:
<http://www.energyrating.gov.au/about/who-we-are>



Box 6

Case study: Different authorities involved in market surveillance in the United Kingdom

Prior to 2009, the United Kingdom's enforcement of the Energy Labelling Regulations took place at the local level, with regional trading standards officers acting as the market surveillance authority responsible for checking products against the energy labelling requirements and enforcing the regulation. In 2009, because many new product regulations were coming into force under the Ecodesign Directive, as well as under the Energy Labelling Directive, the responsible government ministry, the Department for Environment, Food and Rural Affairs (Defra), decided to review the existing compliance regime. They conducted a rigorous consultation to determine whether the existing structure required any changes, and proposed three options for consideration:

1. To increase the remit of the local trading standards officers to be the market surveillance authority for all regulatory requirements;
2. To transfer the function of market surveillance to an existing central agency; or
3. To adopt a hybrid approach where the local trading standards officers would enforce requirements for consumer products, and a different body would be responsible for enforcing requirements for non-domestic products.

Consultation respondents preferred the second option to use an existing Executive Agency that already carries out similar activities. This was considered the most cost effective option of the three. Many consultation respondents agreed that the decentralised nature of trading standards officers could lead to inconsistencies in approaches to enforcement, and that a centralised enforcement body would remedy this problem.

The model that was eventually adopted transferred responsibility to a centralised body, the National Measurement and Regulation Office, for: monitoring and enforcing the Ecodesign Directive's MEPS requirements; monitoring and enforcing the obligations of suppliers (including manufacturers, importers or authorised representatives) and the accuracy of the energy label; and reporting back to the responsible government ministry (Defra at that time, but now the Department for Energy and Climate Change). The National Measurement and Regulation Office collaborates with a range of other responsible bodies to support its work on energy efficiency compliance, such as:

- The local trading standards officers, who are responsible for monitoring and enforcing the obligations of dealers (retailers), essentially checking on the display of the label. This is carried out alongside their responsibilities for monitoring the market for other regulations, such as product safety.
- The Advertising Standards Agency, which monitors adverts and reports back on non-compliances related to display of the energy label in advertisements.

The National Measurement and Regulation Office also collaborates with other market surveillance authorities at the regional European level.

(Defra 2009)

For more information, see:
<https://www.gov.uk/government/collections/national-measurement-office-enforcement-authority>



2.2.2 DETERMINE ENFORCEMENT RESPONSIBILITIES

Once one or several authorities have been designated for enforcing energy efficient policies for lighting, the different responsibilities within the authority should be determined. Staff appointed to work on enforcement activities within these authorities should be experienced and trained to cover each of their respective areas of responsibility:

⇒ **THE REGULATOR** is the nominated representative typically empowered under the legislation to take compliance and enforcement decisions. A higher level government minister may be defined in the legislation, but this authority is often delegated to a civil servant working under the minister.

⇒ **INVESTIGATION OFFICERS/INSPECTORS** are responsible for investigating potential cases of non-compliance identified during the market monitoring and verification process, and for collecting evidence to support any enforcement actions taken forward by enforcement officers. They are often responsible for conducting interviews with the programme participant staff or for checking the premises of the programme participant for suspicious or non-compliant activity. Where formal and severe repercussions are necessary, it is their responsibility to collect all required proof of non-compliance in order to build a case against the non-compliant programme participant.

⇒ **ENFORCEMENT OFFICERS** are responsible for following up cases and investigations of non-compliance. It is their role to investigate the severity of the case, to determine whether the non-compliant product stems from negligence of the responsible party, is deliberate and intended to defraud customers, or is unintentional and easily repaired. They must work with the non-compliant programme participants to establish the circumstances and to gain their cooperation to bring products into compliance. Then the officer must recommend to the Regulator the best course of action to remedy the non-compliance.

⇒ **COMMUNICATIONS AND OUTREACH STAFF** are essential for deploying preventive actions to reduce cases of non-compliance, through communication of the requirements on programme participants and the consequences of non-compliance. This can be proactive, for example through engagement with trade and industry, supported by online or published information and advertising or communications campaigns; or reactive, for example

through online or phone-in hotlines. They also support enforcement officers by communicating enforcement actions and outcomes where appropriate, and by reporting actions of the authority to ensure transparency and accountability to the public.

⇒ **TESTING AND TECHNICAL EXPERTS**, who may or may not be involved in the market surveillance, can help build the case of non-compliance (including through interpreting product test results), and work with enforcement officers or investigators, and with the non-compliant programme participant to try and remedy the situation, for example by proposing changes to the product that can help bring it into compliance. It is essential that these staff have an understanding of the legislation, the standards involved and an ability to interpret test reports.

⇒ **LEGAL STAFF** may be called upon to interpret aspects of the energy efficiency legislation and to clarify powers and sanctions available to the enforcement authority. These staff may be centrally located and serve a range of regulators. They can provide additional support to the investigation and enforcement officers and to communications staff who should all also have a thorough understanding of the legislation.

2.2.3 IDENTIFY STAKEHOLDER PARTICIPATION

Industry and civil society stakeholders may also play a role in the enforcement process. Both market surveillance and enforcement can include the participation of different bodies, depending on the type of programme. The different stakeholders and their contributions to the enforcement regime are described below.

⇒ **TRADE BODIES AND ASSOCIATIONS OR INDUSTRY GROUPS:**

- Voluntary agreements for MEPS and labelling programmes are typically self-regulated and led by industry. Industry is therefore responsible for developing the programme requirements and rules, often in collaboration with governments. The onus is also on industry to ensure the credibility of the programme through monitoring and verification. Procedures for monitoring, verification and enforcement of the programme need to be established in order to protect the compliant programme participants. In some cases, voluntary agreements led by industry may be assessed through independent auditors to officially endorse the programme.

Box 7

Case study: LightingEurope industry-led initiative

In 2014, LightingEurope launched a new industry-driven Compliant Lighting Initiative to support increasing actions from market surveillance authorities in the European Union. This initiative covers a variety of lighting products, including LEDs, CFLs and halogen lamps, as well as a range of lighting regulations, including the European Union Regulations on Ecodesign, Energy Labelling, Low Voltage and the Restriction of Hazardous Substances. The LightingEurope Compliant Lighting Initiative involves four Member States: France, Germany, Hungary and The Netherlands.

Under the initiative, a significant number of compact fluorescent, halogen and LED lamps, including lamps from industry members of LightingEurope, are being tested on behalf of LightingEurope by different independent test laboratories in Europe (note that CFLs were removed from the programme in early 2015).

In cases of non-compliance, manufacturers and distributors are informed of the results, along with a request from the initiative to take appropriate corrective actions. Product related allegations raised in the LightingEurope initiative are also communicated to the relevant national market surveillance authorities, so they can investigate compliance of these products on a formal basis, which in itself should serve as a deterrent to non-compliance with the voluntary initiative.

For more information, see:
<http://www.lightingeurope.org>



- Collaborating with trade associations can support government energy efficiency programmes through, for example, joint market surveillance efforts such as in-store surveillance. Not only does this demonstrate to industry that compliance activity is being undertaken, but inspectors can benefit from industry knowledge, and associations or individual companies may gain more confidence in reporting instances of non-compliance.
- Industry also has a role to play in supporting enforcement by the national enforcement authority. Programme participants may inform enforcement authorities through competitor complaints, also known as whistle-blowing, about another programme participant's non-compliance. Regulators will often take reports from industry into account when setting priorities for their compliance activities. In some cases, the complainant may have to take responsibility for

product verification testing, and once non-compliance has been established, responsibility for enforcement is handed back to the enforcement authority.

Box 8

Case study: Indicating competitor non-compliance in India with 'challenge-testing'

The Bureau of Energy Efficiency uses challenge-testing to inform their compliance programme.

This type of verification testing occurs when a third party (either a programme participant or an independent stakeholder) lodges a written complaint of non-compliance against a programme participant's product. The complainant must submit an affidavit stating that should their challenge, or complaint, be proved false, they will cover all costs related to the testing exercise (the cost of samples, testing charges and the transportation cost) within one month from the date of receipt of the test report. The competitor is notified of the complaint and subsequent verification testing, and alerted that should the results prove the product is non-compliant they will be liable to cover the costs of testing.

The Bureau then carries out challenge-testing of the product in question in an independent laboratory. Depending on the outcome of the verification testing, the Bureau will recoup their costs from either the complainant making the failed challenge or the non-compliant supplier.

For more information, see:
<http://www.beestarlabel.com/Content/Files/Scheme%20of%20energy%20efficiency%20labelling.pdf>



⇒ CIVIL SOCIETY AND CONSUMER ASSOCIATIONS:

Civil society and consumer associations can support the national enforcement authority by carrying out testing and sharing the results to help target enforcement to those products that are likely to be non-compliant. The information shared can be of use, particularly where they follow a similar methodology for verification testing as that required by law. Consumer organisations also often publish test reports to inform consumers of the performance of products in different categories, including energy efficiency. This can encourage compliance with the regulations, as programme participants face a reputational risk if their product is declared to be below average in comparison to others.

Box 9

Case study: MarketWatch Project supports compliance activities in Europe

MarketWatch is a European-wide campaign formed by sixteen civil society organisations whose goal is to make sure consumers are getting the best deal through fully compliant energy-using products that match their energy saving claims in real-life situations, by supporting enforcement authority market surveillance activities. The three year programme involves purchasing and testing energy-using products across Europe to verify the energy saving claims made by manufacturers. Participants will carry out over 300 inspections in shops and 300 in online stores, checking a total of 25,000 products to see if they are properly labelled. The programme will also undertake verification testing to verify the claims on product energy labels. Results of these tests will be shared with national market surveillance authorities, who can then use this information to more effectively target their testing and enforcement programmes.

In 2015, MarketWatch investigations identified a number of products as non-compliant, which have since been checked by the United Kingdom's National Measurement and Regulation Office. As a result, the non-compliant programme participants have been held accountable by the enforcement authority and will be compensating consumers for the unanticipated energy costs of the products in question. Compensation typically reflects the costs of running the non-compliant products over their life span (an average of 12 years) and could result in payments to consumers of £50 per item or more.

[Energy Saving Trust 2015 and Telegraph 2015]

For more information, see:
<http://www.market-watch.eu>



targeting and addressing more cases of non-compliance, fewer non-compliant products will be left or placed on the market, so more anticipated savings from energy efficient lighting policies can be secured and safeguarded.

However, not every programme requires the same amount of funding to support an enforcement regime at the national, local or regional level. Every market is different so the enforcement regime should be flexible and adaptable to meet the market needs. For example, a larger lighting market will require more enforcement and therefore more staff to respond to cases of non-compliance. A smaller market, which imports all its lamps, may have fewer cases of non-compliance, many cases of non-compliance may be addressed at customs, and they may be able to leverage enforcement actions carried out by neighbouring countries, or within the region, thereby investing a lower amount in the national programme.

2.3.1 BUDGET FOR ENFORCEMENT

The costs of enforcement, as well as the whole MVE regime, will vary depending on the scope of the programme. They will also depend on local or regional factors, such as labour and services costs. When planning for costs, the allocation of compliance regime resources should reflect the relative seriousness of the non-compliance, taking into account the harm caused (including loss of energy savings opportunities and loss of consumer confidence), the costs incurred and savings lost, and the relative frequency of non-compliance. More resources should be allocated towards addressing cases of non-compliance that cause the most impact and that occur most frequently. However, cases with low frequency or impact should also have resources allocated to address them. In short, the allocation of any resources should involve an intelligence driven, risk based targeting criteria which is transparent and defensible. The main costs incurred in an enforcement programme are set out below.

⇒ **ESTABLISHMENT COSTS:** When initiating an enforcement programme, a range of activities will require up-front investment in order to guarantee future success of the programme. These activities can be practical, in terms of setting up new offices, or even field offices with new equipment and software. Other costs can involve light-touch enforcement activities to gently phase-in the enforcement process, for example focusing on publicising the objectives and enforcement mechanisms to address non-compliant products and programme participants.

2.3 PLAN AND BUDGET FOR PROGRAMME ACTIVITIES



One of the key questions to be addressed when planning an enforcement programme is how much funding should be allocated to cover the programme's activities.

This must be considered in line with, and alongside, other elements of an MVE scheme, such as the funding dedicated to monitoring and verifying products on the market, that for building and operating a product registration system.

Typically, the higher the investment in the programme, the greater impact can be made on enforcement.⁷ By applying a strategic communications campaign, and then

7 CLASP 2010

⇒ **STAFF COSTS:** Any enforcement programme will have to invest not only in staffing, but also in capacity building and training of staff, including management, administrative and investigation staff. They will need to have a firm understanding of the regulations and the powers bestowed upon them. External consultants may be called upon to help train or work with enforcement authority staff, or staff checking products at customs, which can incur additional costs.

⇒ **COMMUNICATIONS AND INFORMATION TECHNOLOGY COSTS:** Communications play a vital role in enforcing energy efficient lighting policies, as it is more effective to deter actions of non-compliance than to respond to cases of non-compliance. For this reason, significant investment should be made towards developing and operating awareness raising campaigns. These can include promotional materials, travel and participation in trade fairs and industry meetings, building and maintaining websites, and using registration systems to track cases of non-compliance, at local, national and even regional levels.

⇒ **LEGAL AND ENFORCEMENT ACTION COSTS:** An enforcement programme will be successful if there is sufficient funding to allow the use of the full range of enforcement powers available to the authority. If programme participants believe that a lack of funding seriously impedes the enforcement authority's discretion to use the higher-end responses, the credibility of the enforcement regime will be diminished. In addition, legal support may be required to respond to appeals or clarifications to specific situations. In some cases, budget may have to be made available for verification testing to follow up cases of non-compliance and to build the burden of proof against the non-compliant programme participants.

2.3.2 IDENTIFY POTENTIAL FUNDING SOURCES

In order to guarantee success of an enforcement programme, funding should be secured and maintained for all enforcement activities. In order to justify the allocation of funding, it is important to understand the cost-benefit for enforcement. For example, in circumstances where up to 20 to 50 per cent of regulated products are found to be non-compliant, investing in compliance may be a more cost-effective mechanism for increased energy savings than regulating an entirely new product category.⁸ For this reason, there should be a distinct annual budget allocation for enforcement, as well as other MVE activities. Various funding options may be considered:

⇒ **GOVERNMENT FUNDING:** If seen as a priority by government, resources can be allocated to cover the enforcement budget;

⇒ **PENALTIES:** A penalties or fines regime may enable the authority to recover the costs of any successful prosecution; or where the product is found to be non-compliant, the responsible programme participants can refund the costs of testing (also known as cost-sharing);⁹

⇒ **PRODUCT REGISTRATION FEES:** Fees generated through product registrations can support the enforcement budget. This may take the form of an annual payment, a one-off payment for a specified period, or a higher initial fee followed by a smaller annual payment. Registration fees are generally levied on models rather than brands or suppliers, as this best reflects the costs involved;

⇒ **STAKEHOLDER CONTRIBUTIONS:** Collaboration and cooperation with industry or civil society may provide additional resources. For example, through joint testing programmes, by providing expertise, supporting data collection and sharing, or even providing testing facilities. Prior to engaging in this form of collaboration, the goals of cooperating need to be established, as some contributions may not be admissible as a foundation for legal action (for example, there may be a conflict of interest in using industry funding to legally prove non-compliance of competitors in the market. This will depend on national regulatory restrictions and requirements).

Box 10

Case study: Product registration fees in India

In India, prospective programme participants must first register their organisation with the Bureau of Energy Efficiency, agreeing to abide by the programme terms and conditions. The agreement, valid for three years, costs 100 Rupees. A separate application is then required to register each product model, with non-refundable registration charges of 1,000 Rupees per model. Finally, an additional labelling fee is required for each individual product to be labelled. These labelling fees vary by product (for example, 10 Rupees for a refrigerator to 0.05 Rupees for a tubular fluorescent lamp) and are published in the respective product regulation. Once all fees have been paid, applications processed, and the product is deemed compliant, the product is registered on the market.

More information on the Indian programme is available at: <http://www.beestarlabel.com/Content/Files/Important%20Instructions.pdf>



⁸ IEA 2008

⁹ For example, the United Kingdom allows for recovery of testing costs should any product fail to comply with the regulation. Schedule 4 "Warrants and Testing Costs", SI 2010/2617

Box 11

Case study: Product registration fees in Australia

In Australia, products registered in the Equipment Energy Efficient (E3) Program are divided into four different fee-bands, ranging from AUS \$440 to AUS \$780, depending on the product category. The fees paid by the applicant cover a five-year registration period for each product. The registration fees help cover the costs for processing registration applications, maintaining the product registration system and undertaking compliance monitoring activities. Additionally, the fees can be used to deliver improvements to the registration system and compliance activities (Equipment Energy Efficient Program 2015a).

More information about the Australian registration process and fees is available at:
<http://www.energyrating.gov.au/suppliers/registration>



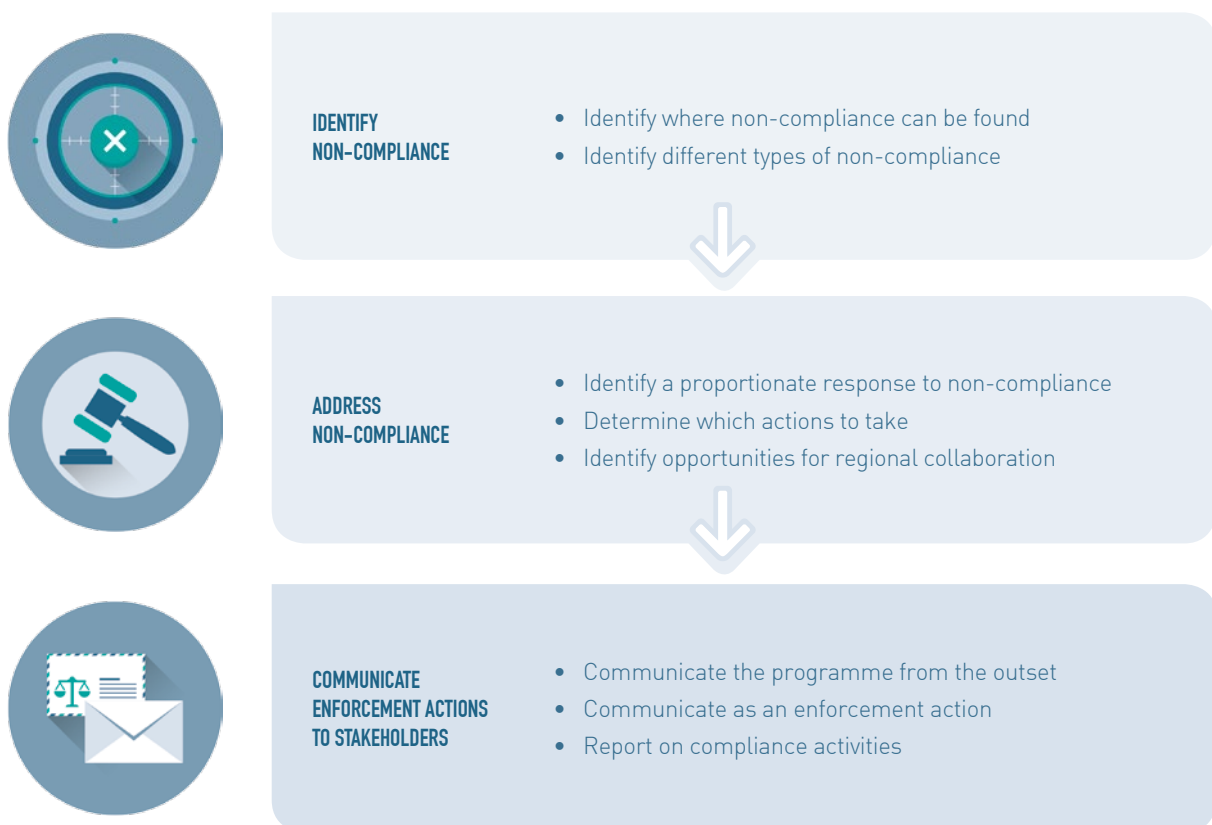
3 IMPLEMENTING A NATIONAL ENFORCEMENT REGIME

A truly successful enforcement programme should deter non-compliance and respond to cases of non-compliance in a timely and proportionate manner. This Chapter firstly identifies the different areas that require enforcement and how they should be addressed. It then proposes best practices for addressing non-compliance, and finally discusses how to communicate an enforcement programme, which can help deter or prevent actions of non-compliance from the outset.

Figure 4 presents an overview of the process for implementing a national enforcement regime. Each of these steps will be discussed in detail in this Chapter.

Figure 4

Process for implementing a national enforcement regime



3.1 IDENTIFY NON-COMPLIANCE



Non-compliance can occur at any stage of the supply chain – from product registration to point of retail. As such, the different types of non-compliance can range from products failing to meet the required

MEPS levels, to showing misrepresentative labels, or to programme participants failing to register products as required or to respond appropriately to enforcement actions. To initiate the appropriate enforcement action, the different areas where non-compliance or risk of non-compliance may be uncovered should be identified.

3.1.1 IDENTIFY WHERE NON-COMPLIANCE CAN BE FOUND

The life of a product creates many opportunities for non-compliance, and each of these stages requires attention through targeted market surveillance to identify cases of non-compliance. Programme participants are more likely to ensure their product and their actions are compliant if there is a risk of discovery at all points in the product's passage to market. In addition, identifying potential opportunities for non-compliance can enable the enforcement authority to apply preventative and deterrent measures before the non-compliance can occur (for example by applying targeted communications efforts). Checks for non-compliance should be carried out during the following points.

⇒ **PRIOR TO PLACEMENT ON THE MARKET:** Some suppliers may not be aware of the legislation governing the supply of their products (or types of products, or products contained within other products such as electric motors) and, as a result, may not even register their products in the programme. Regulators should therefore scan the market to identify the number of products that require registration versus the number that actually register. This may include looking at import data, sales data, etc.

⇒ **DURING PLACEMENT ON THE MARKET:**

- **When registering products** in the national product registration system, a manufacturer or importer is typically required to submit technical documentation that specifies whether the product meets the national or regional standards for energy efficiency, as well as other parameters. The responsible authority should check registration applications for completeness,

for accuracy, and for compliance with national requirements. Registration systems offer an initial compliance gateway, and can help identify potentially non-compliant products for full verification testing. These registrations might be administered by the same authority, or by a separate authority that reports back to the enforcement authority. Electronic registration systems can include some level of automated checking of submitted product data.

- **At customs,** customs officers can support the enforcement authority by checking technical documentation, as explained above, to ensure that only those products that have all necessary conformity assessment documentation or labels, or that have been registered into the national product registration system, are allowed to enter the market. Those products that do not meet the requirements on paper can be refused entry. This enforcement at point of entry of imported lighting products into a country may offer one of the most effective and cost-efficient ways to safeguard compliance. In cases where customs officers are not authorised, or do not have the resources, to take action themselves, they can share information on the import of relevant products with the energy efficiency Regulator.

⇒ **AT POINT OF RETAIL:** Enforcement authorities, or their relevant counterparts, should monitor the products at point of retail to ensure all information required to inform the consumer is accurate and available according to national requirements. This enforcement action can be undertaken by investigation officers, or other consumer protection officials who monitor products in stores for other requirements. The type of infractions that might be identified at point of retail include inaccuracy and lack of visibility of the energy label, as well as sale of products that do not comply with MEPS levels or that have not been officially registered on the market. In considering product sale, it is important to not only target conventional storefronts but also to monitor, and take action against, any non-compliant online sales, and against non-compliance in the wholesale supply chain servicing the building construction and renovation industry.

⇒ **IN ADVERTISING:** Some national legislation requires that energy efficiency performance information be included in any advertising materials, including on television and radio. These adverts can be monitored by either the relevant advertising standards body, or through monitoring of printed materials.

⇒ **IN THE HOME:** The identification of non-compliance can additionally occur once the product has been sold and is in the consumer's home. Consumers may realise their products do not meet their expectations according to the label or provided information, and they can alert the enforcement authority with a complaint about the product. This may be carried out using a variety of methods, by either providing a specific consumer contact point within the enforcement authority or consumer protection agency, such as a hotline, or by using the product registration system and any associated mobile applications to crowdsource real world compliance information.

These cases of non-compliance can be due to a number of factors, which are explained in the section below.

3.1.1 IDENTIFY DIFFERENT TYPES OF NON-COMPLIANCE

The type of non-compliance should first be identified, before engaging in any responsive enforcement action. This includes consideration of the reason for non-compliance, as well as the impact of the offence, as both of these will inform the type of action to be taken. All cases require careful consideration and a proportionate and fair response.

⇒ **SEVERITY OF NON-COMPLIANCE:** Cases of non-compliance can range from the very severe to more minor infractions. The level of severity should be considered when determining the most appropriate enforcement response. For example, a minor case of non-compliance could involve a manufacturer that has underrepresented the energy performance of a lamp on the energy label, applying a rating that is worse than the actual rating of the product. In such a case, the manufacturer's actions are not harmful to the consumer or the competitor and no energy or cost savings are lost. Where, however, a manufacturer has significantly overrated a product's energy performance on the energy label, the consumer will unknowingly incur unanticipated energy costs (and possibly an unjustified increased purchase cost), and the misrepresentation will offer the manufacturer an unfair competitive advantage over its competitors. This would be classed as a severe case of non-compliance. Non-compliance can also relate to characteristics other than energy performance, such as wattage. For example, wattage of CFLs and LEDs may be overstated by suppliers to suggest to consumers that their products are brighter than they are.

⇒ **INTENT OF NON-COMPLIANCE:** Cases of non-compliance can range from accidental or unintentional, to negligent, through to deliberate non-compliance. Using the example above, the manufacturer may intentionally produce a lamp that falls below the required MEPS, but apply an energy label on the product denoting a much greater energy efficiency in order to sell more products using fraudulent claims, creating an unfair advantage over their competitors. In other instances, the misrepresentation in energy performance may be the result of a genuine mistake. Therefore, it is important to identify the intent of the non-compliant stakeholder and reflect this in the enforcement response. One of the key objectives of an enforcement regime should be to deter intentional cases of non-compliance.

Table 2 provides some examples of types of non-compliance and where they are likely to be identified. It is important to note that the national legislation will clearly determine who the responsible party is. For example, legislation will probably put the obligation for compliance on the importer/supplier who has placed the product on the market, rather than on an overseas manufacturer.

Table 2

Examples of types of non-compliance with energy efficiency regulation

Point of Identification	Types of Non-compliance
At point of import or placing on the market	<ul style="list-style-type: none"> • Failure to register a product • Failure to provide proof of testing • Failure to submit product for testing • Failure to cooperate with authorities • Missing energy label or energy performance rating information • Inaccurate product documentation, energy performance information or energy label • Failure to meet performance claims or comply with MEPS
At point of testing	<ul style="list-style-type: none"> • Failure to provide proof of testing • Failure to submit product for testing • Measured results fail to meet performance claims or comply with MEPS

Point of Identification	Types of Non-compliance
At point of sale	<ul style="list-style-type: none"> • Missing energy label or energy performance rating information • Misuse of a voluntary or mandatory energy label • Inaccurate energy performance information or energy label • Failure to provide required energy performance or labelling class in product catalogues, websites or other promotional media • Failure to meet performance claims or comply with MEPS
At point of enforcement	<ul style="list-style-type: none"> • Failure to comply with enforcement requests

accordance with the legal requirements and resources available to the enforcement authority, and the characteristics of the programme and its participants and stakeholders. The bottom of the pyramid typically features more informal actions, while the top of the pyramid should reflect the most severe enforcement response to non-compliance. The example set out in Figure 5, shows five generic levels of potential enforcement response, but a programme can populate the pyramid with specific actions depending on the tools available to, and that will have most impact on, the programme. Responses to non-compliance should start with the least severe action at the bottom of the pyramid, and escalate to more severe actions depending on the type of non-compliance and the responsiveness of the offender. The least severe response should be applied to the least severe of offences. Usually these minor cases of non-compliance are best handled with 'informal action', which involves engaging with the offender to help them bring their product into compliance. For the more severe cases the responses should be elevated, rising up the pyramid with the severity of the case or lack of responsiveness of the offender, ultimately reaching the harshest sanction, which is often prosecution. The different actions or tools that can be applied in each level of the pyramid are explained in more detail in Table 3.

3.2 ADDRESS NON-COMPLIANCE



When addressing cases of non-compliance, it is recommended that enforcement authorities carefully consider the degree of non-compliance in order to respond with a proportionate action. Consideration

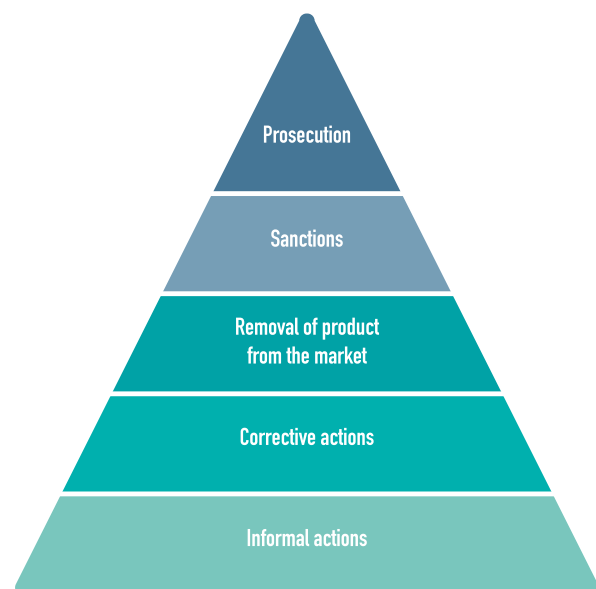
should be given to the level of effort required to prove non-compliance, and the most effective method of bringing the product, or industry player, into compliance.

Figure 5
Example of enforcement pyramid actions

3.2.1 IDENTIFY A PROPORTIONATE RESPONSE TO NON-COMPLIANCE

The available enforcement actions should be flexible, enabling the enforcement authority to assess the non-compliance situation and initiate a proportionate action. For this reason, the penalties and powers of the enforcement authority should be set out in law, and the toolkit of powers and actions should be further outlined in administrative procedures or operational guidelines. A toolkit of responses enables different types of non-compliance to be addressed in the most effective way and can allow for more practical and timely solutions for dealing with minor transgressions.

Many enforcement authorities develop an 'Enforcement Pyramid'¹⁰ to inform their enforcement response strategies. The pyramid can be populated to be most effective for the national enforcement strategy, in



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Table 3

Potential enforcement responses in an enforcement pyramid

Prosecution

Most severe using legal action to enforce the law. To be applied in cases where the programme participant refuses to comply or where the severity of the incident is great. Requires a strong burden of proof, supported by extensive evidence, to succeed. Penalties may include:

- Jail sentence;
- Court imposed sanctions such as fines, declarations and injunctions;
- Corporate probation (similar to probation for individuals).

Sanctions

When evidence of non-compliance is available and a sanction is required to deter future occurrences of non-compliance.

Penalties may include:

- Financial penalties such as:
 - Compensation to consumers'
 - Compensation to adversely affected persons or practical contribution to educational initiatives;
- Recovery of testing costs;
- Funding of educational initiative by the regulator or relevant third parties;
- Publication of instances of non-compliance, such as naming and shaming, warning labels on products.

Removal of product from the market

When the impacts of non-compliance are severe, the enforcement authority can limit the immediate impacts by removing the products from sale in the market. This can include:

- Product recall or removal from the market;
- Removal of a product from the product registration system;
- Removal of a product from a list of qualified products;
- Blocking products at point of customs.

Corrective actions

Applicable where there are reasonable grounds to suspect non-compliance, based on initial investigations, and there is a willingness from the programme participant to collaborate to rectify the infraction. Typically used for minor cases of non-compliance, where impacts of infraction are less severe. These actions can include:

- Voluntary (discrete) enforcement undertakings to rectify non-compliant behaviour, typically for minor infractions;
- Implementation of, or review and improvement to, an existing corporate compliance programme;
- Provision of relevant data and other information to assist both parties to resolve a particular matter and to assist future compliance initiatives;
- Suspension of products in product registration systems.

Informal Actions

May be used to prevent cases of non-compliance, or as first step of engagement and collaboration for cases of suspected non-compliance. Lowest level of proof necessary for engagement with programme participant, intended for least severe or unintentional cases of non-compliance. Actions can include:

- Educational initiatives and campaigns;
- Discrete engagement and discussions with programme participants to provide opportunities to respond to potential non-compliance.

3.2.2 DETERMINE WHICH ACTIONS TO TAKE

There are certain considerations when determining which actions in the enforcement pyramid to take. Enforcement authorities need to consider both the appropriate level of response for each type of offence, and at what point to move to the next level. These decisions can be defined, at a conceptual level, in the administrative rules or guidelines relating to the programme to provide some clarity and transparency to the compliance policy, and to ensure that enforcement responses are applied

consistently across similar infractions. A decision tree for enforcement actions can help enforcement officers determine how and when to escalate up the enforcement pyramid. Figure 6 provides an example of a decision tree, illustrating the process that enforcement officers can follow to decide how, and when, to move up the levels of the enforcement pyramid. This decision tree is based around the example enforcement pyramid in Figure 5 and is for guidance only. The specific content of a decision tree will vary depending on an individual country’s regulations and processes.

Figure 6

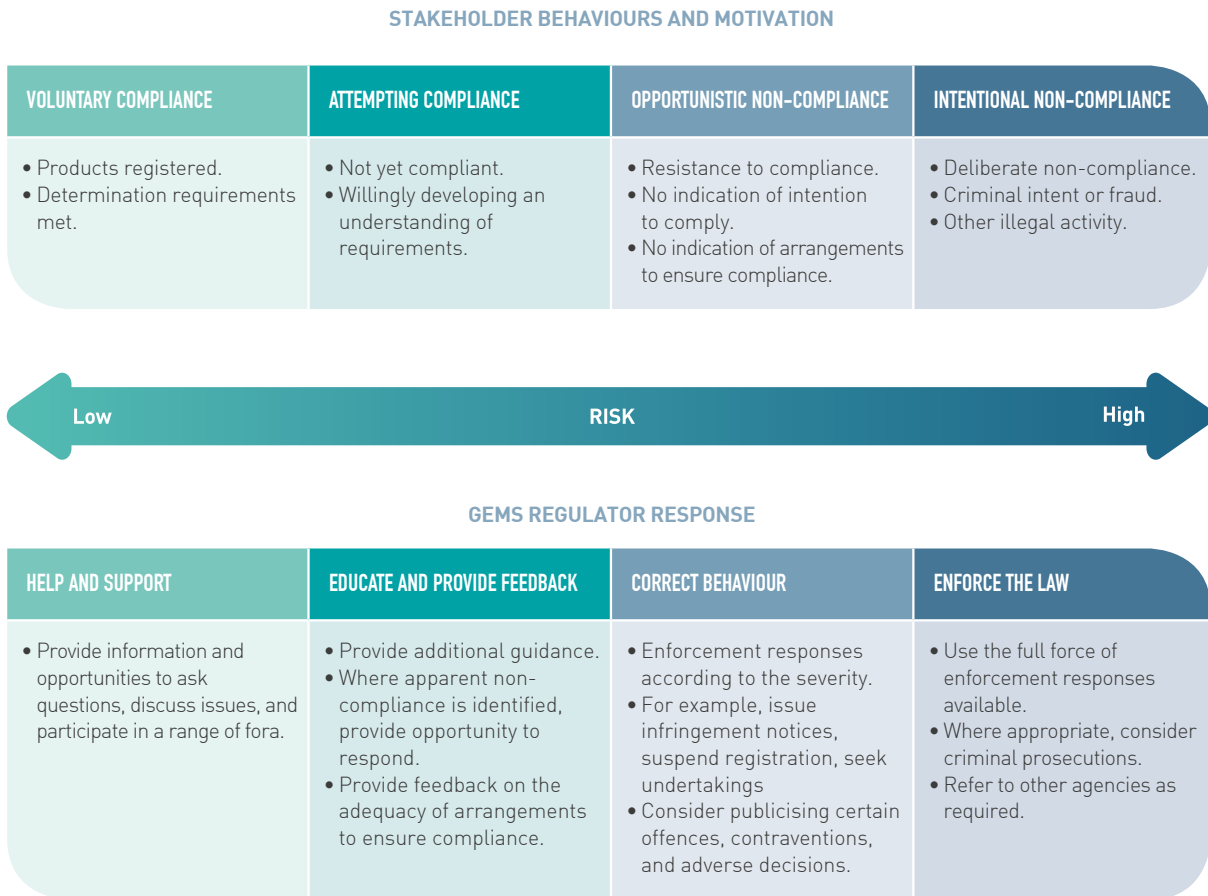
Enforcement decision tree for compliance¹¹



11 Adapted from National Measurement Office 2014

An alternative approach for summarising the rationale for determining the enforcement response is shown in Figure 7. This illustrates the Australian approach to non-compliance, and the type of response used depending on the level of risk involved and the stakeholder behaviours and motivation.

Figure 7
Australia’s risk scale to inform compliance support and enforcement response



Source: Equipment Energy Efficiency Program 2015b

Other considerations that can help determine the appropriate enforcement action to take include:

⇒ **TIMING:** An effective enforcement regime must have the capacity to identify compliance breaches and respond with an appropriate and timely penalty. An enforcement regime that enables authorities to respond in a credible and timely manner minimises the impact of the offence on consumers and on other market participants, who might otherwise suffer from the unfair marketing of non-compliant products. However, it is worth noting that a

higher burden of proof is required when taking more drastic action, which in turn will mean that more time is required to address the non-compliance. It is therefore important to consider the length of time taken to investigate and determine instances of non-compliance (including time for testing of products) for each possible response, as this will have a bearing on the speed of reaction.

⇒ **SEVERITY AND INTENTION OF NON-COMPLIANCE:** When non-compliance is identified, the severity and the intention of the case should be considered to help determine

next steps. Typically, where investigating officers have found there is an unintentional, or minor infraction, less investment need be allocated to prove and remedy non-compliance. Where the non-compliance is intentional, or has a major impact, more investment and more drastic measures may be warranted to remove the case of non-compliance and deter similar cases in the future.

⇒ **MARKET CHARACTERISTICS:** Market characteristics can also affect the impacts of different responses. In some cases, where industries have no significant investment in the market, corporate reputation may be relatively unimportant, and therefore lower level responses may not be as impactful.

⇒ **NATIONAL POLICY:** In some cases, national or local policies may dictate or influence the type of enforcement action to be taken against different types of non-compliance.

⇒ **TRANSPARENCY:** The consequences of non-compliance, along with potential enforcement actions and penalties or fines should be made available to industry stakeholders. Not only will this ensure the system is transparent and that it will be less liable to corruption, but it will also help deter non-compliance from the outset. Publication of non-compliance in the general media may also be a deterrent in situations where company reputation is important.

⇒ **REGIONAL COLLABORATION:** Compliance regimes in other countries can often support a national regime, as they may already have systems in place, or they may have previously dealt with non-compliance from the same stakeholder. It is therefore recommended that enforcement authorities consult with their regional counterparts and with industry associations, who may have experience dealing with similar non-compliance issues and can provide valuable insights, to better understand what types of sanctions are likely to be most effective. The cultural and behavioural environment may also have an impact on the type of action taken, as some actions in some countries may not have the same impact in others. For example, the threat of 'naming and shaming' will be highly effective in deterring non-compliance in one region, whereas financial or alternative sanctions may be more appropriate in other jurisdictions.¹² This is discussed in more detail in Section 3.2.3.

Table 4 summarises the different considerations when choosing between applying informal or severe enforcement responses.

Table 4

Informal versus severe enforcement responses

Using Informal Responses

- Most flexible tool
- Can avoid lengthy and costly legal processes
- Helps maintain confidence, trust and good relations with industry stakeholders
- Preferable to programme participants
- Can be used even while more severe actions (prosecution) is taking place to try and rectify non-compliance
- Not the strongest deterrent for non-compliance

Using Severe Responses

- Most successful action for removing and deterring non-compliance
- Can lead to higher costs and lengthier enforcement process
- Raises the perception of risk, as a realistic threat and deterrent
- If programme participants are aware of their use, they can be used less frequently
- Require strong burden of proof

3.2.3 IDENTIFY OPPORTUNITIES FOR REGIONAL COLLABORATION

Collaboration between different jurisdictions, countries and regions on enforcement approaches and enforcement knowledge is encouraged. Sharing enforcement data, lessons learned and best practice can help develop stronger and more innovative approaches to enforcement, and presenting a united front can enhance the perception of the risks of non-compliance. Additionally, stakeholders such as trade associations can be included or consulted in regular regional dialogue, to gain their cooperation and buy-in with regional collaborative efforts. Benefits of regional collaboration can include:

⇒ **LEARNING FROM OTHERS:** Even where there are differences in the legal and administrative frameworks between national enforcement regimes, opportunities to learn from others remain incredibly valuable and can help national programmes to invest more resourcefully in their enforcement activities. Learning how different enforcement responses are used, as well as industry's reaction, can help inform development of enforcement responses.

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⇒ **STRONGER DETERRENT THROUGH JOINT EFFORTS:** Sharing information on specific enforcement activities can lead to joint investigations or actions being taken in multiple jurisdictions on a particular brand, model, or programme participant. This can increase the severity of the penalty on global suppliers operating in multiple markets, which in turn can serve as a much stronger deterrent to non-compliance.

⇒ **RESOURCE-EFFECTIVENESS:** Collaboration on general market surveillance can lead to more resource effectiveness in terms of costs and personnel. Regional collaboration is particularly beneficial where countries in a region form relatively small markets for lighting products, and where they share similar socio-economic factors and market characteristics.

⇒ **NO PRODUCT DUMPING:** Regional collaboration can also eliminate the risk of product 'dumping'. In a region where there are mixed stages of regulations of energy efficiency programmes for lighting products, better quality products will likely be sold in regulated areas, whereas lesser quality products and banned lamp technologies may be 'dumped' where there are no enforced regulations. This situation can damage the overall regional development for efficient lighting products.

There are multiple tools, coordination techniques and strategies that can support regional collaboration:

⇒ **REGIONAL MVE NETWORKS:** Where regional MVE networks exist, enforcement information can be shared between different economies to instigate investigations of cases of non-compliance. This can help programmes learn from each other's experiences and best practices, and it can help identify non-compliance in other economies for more cost-effective market surveillance.

⇒ **A REGIONAL PRODUCT CERTIFICATION OR REGISTRATION SYSTEM:** Tracking enforcement actions in a regionally shared tool can support countries by storing test results and listing enforcement follow-up actions to track and monitor activities at a national and regional level.

⇒ **INDUSTRY PARTICIPATION OR CONSULTATION:** Regional trade associations can bolster regional collaboration through contribution of expertise, and insights to national industry stakeholders' approaches to non-compliance. Additionally, the burden of disseminating information to national stakeholders may be shared with regional industry partners.

Regional collaboration on compliance must occur within the constraints of the relevant national regulation. To clarify how to proceed in cases where there are constraints on the sharing of compliance data and product registration data, provisions on data and information disclosure should be incorporated when developing energy efficiency legislation.¹³ Even where sharing of data is allowed, it is advisable that information exchange occurs under an agreement specifying any constraints on the use and further sharing of any data, and should take into consideration any commercially sensitive data.

Box 12

Case study: The Ecodesign and Energy Labelling Administrative and Cooperative Group Network for Market Surveillance

In the European Union, Member States operate under a common legislative framework for Ecodesign and Energy Labelling, however market surveillance (including carrying out MVE activities of these Directives) is a national responsibility. In each Directive, Member States are encouraged to participate in the respective Administrative and Cooperative (ADCO) group for that Directive, where the market surveillance authorities are expected to share information on market surveillance activities, to coordinate on compliance testing activities and to share results of national or local compliance testing. The Directives state that *"The Commission shall take appropriate measures in order to encourage and contribute to the cooperation between Member States referred to in this point."*

Market surveillance authorities of all Member States meet twice a year to discuss common issues and potential solutions related to interpretation, testing and enforcement of the Directives. Throughout the year, they are encouraged to share information on an online discussion forum where they can upload testing plans and results, or discuss common challenges. There are also efforts to gather contact information for each authority, as well as for accredited test laboratories that each market surveillance authority can use within the region. The ADCO is led and supported by the Chair and Secretariat (a nominated market surveillance authority).

Two European-wide projects have started as a result of this network, intended to further increase collaboration and coordination of market surveillance, and to facilitate sharing of information. These projects, Ecopliant and EEPLIANT, have resulted in increased compliance activities and have identified good practices that can be implemented by all authorities operating in the ADCO.

[European Commission 2009 and European Commission 2010]

¹³ For example, Section 170 of the *Australian Greenhouse and Energy Minimum Standards Act* permits the disclosure of 'protected information' in certain circumstances, one such circumstance being to assist "in the administration or enforcement of another law of ... a foreign jurisdiction relating to standards for products that use energy ...".

Box 13

Proposed Asia-Pacific MVE joint project: A strategic regional approach to reduce non-compliance

Although implementing MVE activities can be resource-intensive, there are opportunities to achieve higher rates of compliance more efficiently and cost-effectively. Particularly, in the Asia-Pacific Economic Cooperation (APEC) region, many common high-impact appliances, such as lighting, are manufactured and traded within the region. This presents significant opportunities for authorities in the 21 APEC member economies to use coordinated and creative approaches towards minimising operation costs, such as verification testing costs, while improving compliance rates at the same time.

Working collaboratively achieves more than simple cost savings. Sharing market intelligence and expertise can also contribute to increasing human and information resources to implement MVE activities. A regional MVE joint project in the APEC region, convening market surveillance authorities and practitioners, is the first step towards achieving the goals of regionally coordinated and cost-effective MVE activities. The proposed joint project will establish mechanisms for compliance information-sharing and building regular communications among MVE authorities in the APEC region. This concept is currently being explored by the APEC Expert Group on Energy Efficiency and Conservation (EGEE&C) to help share experiences on compliance activities, including enforcement best practices, and to share test results where possible to help make more efficient use of economy resources.

(APEC Expert Group on Energy Efficiency and Conservation 2014)

3.3.1 COMMUNICATE THE PROGRAMME FROM THE OUTSET

If programme participants are unaware of the changes to the programme, their responsibilities under the programme, and the consequences of non-compliance, non-compliance may be considered excusable, or be more difficult to take action against, dependent on the national legislation and broader legal environment. Enforcement authorities should therefore strive to ensure that enforcement activities are clear, well communicated, and consulted on where applicable. Information about new or altered enforcement strategies must also be communicated to programme staff and consultants so they are able to conduct their tasks effectively, and share necessary information with their stakeholders. Recommended methods for communications and outreach to all programme participants are explained below.

⇒ PUBLISHING GUIDANCE ON REGULATIONS AND REQUIREMENTS:

Regulations set out programme requirements for manufacturers, importers and retailers, but these may often be written in the formal language of legal documents and therefore difficult to interpret. It is therefore recommended that legislation be supported with informative guidance that can steer programme participants through the process of complying with the regulation. Guidance should underpin the legislation, by including information on what the requirements are, and how to comply, as well as what the repercussions of non-compliance will be.¹⁴ As a result of this guidance, the programme participant has better knowledge of enforcement processes when they enter the energy efficiency programme. This guidance is also valuable to the enforcement authority in clarifying the different enforcement steps available under the regulations and ensuring consistent application via the enforcement pyramid.

⇒ PARTICIPATION IN TRADE FAIRS AND INDUSTRY EVENTS:

In addition to publishing guidance, enforcement authorities are encouraged to participate in trade fairs, conferences and other industry or civil society-led events to disseminate the guidance in a proactive manner. These also provide an opportunity to raise awareness of monitoring activities that are planned, or have already been carried out, by the enforcement authority, to give visibility to the compliance activity being undertaken. Participation in these events not only leads to better communication, it can also create a higher profile for the enforcement authority, presenting them as a threat to any non-compliant programme participant. It can also help build stronger relationships between programme participants and the enforcement

3.3 COMMUNICATE ENFORCEMENT ACTIVITIES TO STAKEHOLDERS



Effective communication is a critical component of an enforcement regime. Communication ensures transparency of an enforcement programme, but most importantly, it serves as the ultimate preventative measure to non-compliance, by informing and educating various stakeholders about the energy efficiency regulations for lighting, the benefits that can be experienced through compliance, stakeholder responsibilities and the consequences of non-compliance. To put it simply, communicating the programme requirements from the beginning helps programme participants comply with the programme requirements from the beginning.

¹⁴ In the United Kingdom, for example, the different pieces of legislation are accompanied by guidance, as are the enforcement components of the legislation. See National Measurement and Regulation Office 2014.

authority, helping to develop trust and confidence between both parties and encourage industry participation in the identification of non-compliance. It is important to note that corruption can be a risk when developing such relationships. Enforcement officers should be tough and resistant to corruption, and steps, such as reporting on compliance, can be taken to ensure transparency and minimise the possibility of corrupt activities.

⇒ **RUNNING PROMOTIONAL CAMPAIGNS:** Enforcement authorities may wish to consider the use of promotional campaigns to communicate the energy efficiency

programme to a range of stakeholders throughout the duration of the programme. Different stakeholders can be targeted, with a primary focus on manufacturers, importers, retailers, and consumers. There are different methods of outreach to these different stakeholders, such as pamphlets or posters for trade fair events or to disseminate at point of retail, or advertisements targeted to consumers to increase demand for compliant energy efficient lighting products. Where a mandatory product registration system is operated as part of an energy efficiency programme, this can provide the regulator with a ready-made contact list to use in communication campaigns.

Box 14

Case Study: Promotional communications in Ghana

Ghana has made significant investment in their communications outreach campaigns to support their MVE programme, operated by the Energy Commission. They have delivered a series of training workshops for experts across the country, training to mass media reporters on principles of energy efficiency, standards and labelling, and preparation of materials for radio and television.

They also carry out annual energy efficiency roadshows covering MEPS and labelling requirements as well as other aspects. They host occasional conferences for stakeholders. The Energy Commission also takes the opportunity of monitoring surveys to engage with consumers and retailers on energy efficiency and the importance of compliance. Finally, the Energy Commission talks to local importers to make sure that they understand their responsibilities under the legislation. If anomalies are found during monitoring and verification activities then the companies involved are invited to meet the Commission staff who brief them on how to meet the programme requirements.

[CLASP 2015]



[Photograph courtesy of Global Alliance for Clean Cookstoves]

For more information on energy efficiency programmes in Ghana see: <http://energycom.gov.gh/index.php/efficiency/standards-and-labelling>



3.3.2 COMMUNICATION AS AN ENFORCEMENT ACTION

Communications are essential to prevent non-compliance from the outset, but should also be considered as a valuable enforcement action or tool in their own right. 'Naming and shaming' has been used as an enforcement tool used in various energy efficiency enforcement programmes. Naming and shaming can take different forms, some of which have more impact in some regions than others. Some of these are set out below, along with examples of country programmes that have adopted the approaches. Some

may even use a combination of these naming and shaming channels to deter consumers from purchasing these products. This can be a large reputational risk to some companies, especially where consumers might associate their lamp products with other activities or products. It is strongly recommended that the enforcement authority consider any adverse effects of promoting non-compliance. For example, compliant programme participants could be adversely affected if consumers are deterred from purchasing the residual stock of products legally placed on the market before stricter requirements come into effect.

¹³ For example, Section 170 of the Australian Greenhouse and Energy Minimum Standards Act permits the disclosure of 'protected information' in certain circumstances, one such circumstance being to assist "in the administration or enforcement of another law of ... a foreign jurisdiction relating to standards for products that use energy ...".

⇒ **Adverts:** In India, the Bureau of Energy Efficiency publishes information in the national or local newspapers on non-compliant products that have been identified as a result of verification testing.

⇒ **Warning labels:** As part of their e-Standby programme, Korea applies mandatory Standby Power Warning labels to non-compliant products and is the first country to adopt this approach. These labels are visible at point of retail and are intended as an innovative and critical policy change to deter the consumer from purchasing the product, while minimising the burden and expenses on the programme participants.¹⁵

⇒ **Consumer watchdogs:** Certain consumer advocacy organisations or even national enforcement authorities will publish information on their websites or news publications so that interested consumers can inform themselves. China takes this a step further with an annual consumer watchdog show, on national television, which calls out products, services and companies that fail to meet national requirements. (See Box 15)

⇒ **Listing in product certification databases:** Australia and New Zealand use their product certification database to alert consumers that a product is no longer compliant, or is not eligible for sale in Australia or New Zealand. Consumers have access to this information and can use it to inform purchasing decisions, particularly when using the associated mobile application.¹⁶

⇒ **Trade Associations:** Enforcement authorities can work with trade associations to communicate instances of non-compliance to their members and encourage them to comply in order to avoid any potential negative press.

3.3.3 REPORT ON COMPLIANCE ACTIVITIES

Finally, enforcement activities, as well as general MVE programme activities, should be regularly reported on to guarantee transparency of the programme and to raise awareness amongst programme stakeholders of enforcement programme activities. Providing publically available reports shows programme participants that

Box 15

Case study: Chinese television consumer protection show and reputational risk

China hosts an annual television show, the 315 Gala, once a year on 15 March, where high level officials from product quality and market supervision related ministries, such as the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China, State Administration for Industry and Commerce of the People's Republic of China and China Consumers' Association, and their local branches, present the outcomes and results of testing programmes, covering a broad range of products and different requirements, such as product safety, energy performance, false propaganda. This high profile form of naming and shaming is used to deter non-compliance, as businesses face a high reputational risk. Moreover, as this show is getting more and more popular, consumers may look back to past shows to see what the non-compliant products, and who the non-compliant manufacturers, were. In this way, the negative influence of non-compliance has a long lasting impact which may deter programme participants from non-compliance in the long run.

Manufacturers that are exposed in the show, under pressure from both the government administrative agencies and the public/market, will normally make a statement expressing their apologies and conduct the recall of the exposed products. They are also likely to be subject to punishment from local government depending on how severe the non-compliance is and how much loss it has caused to the society.

The show is based on daily consumers' complaints received via a consumer hotline. Because of the huge influence of the show, the hotline is very effective. Complaints and questions are forwarded to relevant agencies and the consumers receive replies to help solve their problems. Meanwhile, the hotline workers keep records of each complaint and government looks into the most frequent and common issues. They then publish the results, such as responsible entities and administrative interventions, and how the problems are solved, and highlight these during the show every year.

Records of the show from recent years can be found on its official web site (in Chinese) at: <http://315.cntv.cn/special/2015/index.shtml>



¹⁵ Korea Energy Management Corporation 2015

¹⁶ The Energy Efficient Equipment Program product database and mobile applications can be accessed at: <http://energyrating.gov.au/consumers>

market surveillance and enforcement action is taking place, that enforcement is taken seriously by the enforcement authority, and that programme participants therefore can't cheat the system by placing non-compliant products on the market. This type of reporting can also increase consumer confidence in the general energy efficiency lighting programme, as they are assured that no false claims are going unnoticed on the market and that non-compliant programme participants are being held accountable for their actions.

Enforcement programme administrators should carefully consider the type of information they want to make available to the public.¹⁷ While it may be beneficial to make most of this information publically available, it is also vital to consider whether any information should, or must, be kept confidential. Any legislation might want to prescribe transparency through reporting, but the detailed description of the information to be reported (and how) is better placed in the administrative procedures or operational guidelines to allow for more flexibility depending on the case and the system.

The type of information that could be publically reported on includes:

- The type of market surveillance activity and number of activities throughout the year;
- The number of compliant and non-compliant products tested, as well as information regarding the types of products;

- The number of incidents of enforcement responses over a stated period;
- The number of responses at each level of response over a stated period;
- The result of these enforcement actions, i.e. the response by suppliers;
- A listing of the brand names of products subject to enforcement action;
- A listing of model numbers of products subject to enforcement action;
- Identification of the justification for enforcement action for each brand or model;
- Identification of the energy performance of the model subject to enforcement action.

Communications may include a combination of this information, however discretion is advised when releasing information and confidentiality issues should be carefully considered. Publication of detailed information can be considered inappropriate and have adverse effects for the enforcement authority. For example, releasing commercially sensitive information might jeopardise trust or confidence between the enforcement authority and its stakeholders. More importantly, where information is released before an enforcement case has been concluded, this could result in the enforcement authority being liable for damages to the reputation and business of the supplier. All public communications should be reserved until a case has been resolved, so as not to threaten on-going or future enforcement actions.

¹⁷ Section 162 of the *Australian Greenhouse and Energy Minimum Standards Act* permits the regulator to publicise offences, contraventions, and adverse decisions. Any other information published should not identify the regulated entity.

4 | RECOMMENDATIONS



Effective enforcement of energy efficiency programmes for lighting, particularly energy labelling and MEPS programmes, are key to removing and deterring future cases of non-compliance from the market. However, in order to be effective and avoid disproportionate or corrupt responses, enforcement should be carefully planned and implemented. The key recommendations for achieving this are outlined in this chapter.

The key recommendations for achieving the successful development and implementation of enforcement for energy efficiency programmes are:

1. Ensure the programme has a strong legal foundation with well thought out procedural guidelines, so that the enforcement body has authority to execute enforcement powers and serves as a credible deterrent to non-compliance.
2. Ensure roles and responsibilities for enforcement are clearly defined for all institutions and stakeholders involved in the process, to avoid any inter-governmental confusion and to ensure that programme participants have dedicated contact points for enforcement.
3. Carefully consider the budget required to implement the enforcement programme. Determine whether, and by how much, the potential savings that can be derived from reducing cases of non-compliance outweigh the anticipated costs required to drive the programme. Identify potential funding sources that can help secure the budget required for enforcement. Consider carefully the enforcement strategy that will be most cost-efficient yet effective for the market, and budget appropriately. Provide more focus on those areas likely to make the most impact on reducing non-compliance (for example, investing more resources in customs activities for import markets).
4. Identify the different types of non-compliance that will call for some form of enforcement action. Consider how to uncover these cases, which may range from severe and intentional to minor and inadvertent, using the full range of market surveillance tools at relevant points in the products' passage to market, taking into account emerging (such as online retail) as well as traditional supply chains.
5. Tackle non-compliance using responses that are proportionate to the severity of the infraction, by following the level of responses as set out in the 'enforcement pyramid' and determine which actions to take. Identify regional collaboration opportunities to help make the most of national resources available for enforcement activities.
6. Adopt a strong and comprehensive communications strategy for enforcement to inform industry of their requirements, preventing non-compliance from the outset. Engage consumers in energy efficiency programmes by regularly raising awareness of the consequences of non-compliance, by identifying non-compliant products and reporting on enforcement activities undertaken. This also ensures transparency and helps overcome corruption challenges, as well as posing a greater threat to industry, by making available information about enforcement actions within the programme.

5 RESOURCES

To support countries and regions in the development of efficient lighting activities and strategies, the UNEP-GEF en.lighten initiative, CLASP and other organisations offer a wide array of practical tools. The most relevant of these are described below.

⇒ UNEP-GEF EN.LIGHTEN INITIATIVE PUBLICATIONS

Achieving the Transition to Energy Efficient Lighting Toolkit

– delivers best practice guidance for policy development and provides technical and practical tools for those directly involved in national phase-out activities. This toolkit is available online in five languages: Arabic, English, French, Russian and Spanish.

<http://www.enlighten-initiative.org/ResourcesTools/EfficientLightingToolkit.aspx>



Enforcing Efficient Lighting Regulations: Guidance note

– presents best practices for enforcing energy efficiency regulations for lighting products. It can be used as a practical resource by policymakers and enforcement bodies when developing or revising their enforcement regime.

<http://www.enlighten-initiative.org/ResourcesTools/Publications.aspx>



Developing Minimum Energy Performance Standards for Lighting Products: Guidance Note for Policymakers

– illustrates how to develop MEPS for lighting products. It is a practical resource for governments on the processes to follow when establishing MEPS in a national or regional market.

<http://www.enlighten-initiative.org/ResourcesTools/Publications.aspx>



Good Practices for Photometric Laboratories: Guidance note

– provides guidance on the operation of photometric laboratories to ensure that testing results are fully supported by evidence of the legitimacy of the measurement values obtained and to give confidence in the accuracy of these results and conformance with test procedures/conditions.

<http://www.enlighten-initiative.org/ResourcesTools/Publications.aspx>



Developing Lighting Product Registration Systems: Guidance note

– provides practical guidance and examples to energy efficiency programme administrators on how to develop, operate and maintain a registration system for lighting products.

<http://www.enlighten-initiative.org/ResourcesTools/Publications.aspx>



Performance Testing of Lighting Products: Guidance note

– outlines the process for carrying out energy efficiency performance testing for lamps, and how to interpret and use the data. It is a practical resource for energy efficiency policymakers and programme administrators.

<http://www.enlighten-initiative.org/ResourcesTools/Publications.aspx>



Efficient Lighting Market Baselines and Assessment: Guidance note

– provides practical guidance to policymakers and energy efficiency programme administrators on how to determine national baselines, use this data for market monitoring purposes, and how to monitor the market to continuously update the baselines.

<http://www.enlighten-initiative.org/ResourcesTools/Publications.aspx>



Product Selection and Procurement for Lamp Performance Testing: Guidance note

– provides guidance on the steps required when selecting and procuring residential lamps to undergo performance testing, including defining the product scope, selection methodology, and the procurement and tracking protocol.

<http://www.enlighten-initiative.org/ResourcesTools/Publications.aspx>



Global Compact Fluorescent Lamp Check Test Results and Analysis Report – provides results and analysis of the safety, performance and mercury content of 47 models of CFLs tested at the Global Efficient Lighting Centre in 2013. The lamps were sampled in 10 countries (Azerbaijan, Chile, Costa Rica, Dominican Republic, Guinea-Bissau, Lebanon, Panama, Tonga, Tunisia and Uruguay) with the support of the UNEP en.lighten initiative.

<http://www.enlighten-initiative.org/ResourcesTools/Publications.aspx>



Southeast Asia Light Emitting Diode Lamp Performance Testing and Analysis Report – presents the results and analysis of testing undertaken by the Global Efficient Lighting Centre on LED lamps purchased in six Southeast Asian countries (Cambodia, Indonesia, Lao PDR, Philippines, Thailand and Viet Nam in 2014).

<http://www.enlighten-initiative.org/ResourcesTools/Publications.aspx>



Inter-laboratory Comparison Testing of Light Emitting Diode (LED) Lamps – presents the results of an inter-laboratory comparison testing exercise undertaken by six laboratories in Southeast Asia in 2015 (in accordance with ISO/IEC 17043, *Conformity assessment - General requirements for proficiency testing*), with the Global Efficient Lighting Centre as the nucleus laboratory.

<http://www.enlighten-initiative.org/ResourcesTools/Publications.aspx>



⇒ CLASP PUBLICATIONS

Energy Efficiency Labels and Standards: A Guidebook for Appliances, Equipment and Lighting – provides guidance for government officials and others responsible for developing, implementing, enforcing, monitoring, and maintaining labelling and standards-setting programmes.

<http://clasp.ngo/Resources/Resources/StandardsLabelsGuidebook>



Lamp Sampling in Cambodia, Indonesia, Lao PDR, the Philippines, Thailand and Viet Nam – presents a summary of a 2014 lamp sampling exercise coordinated by the International Institute for Energy Conservation to identify and sample compact fluorescent and LED lamps in six target countries. The objective of the exercise was to provide participating agencies with guidance on, and experience in, conducting a retailer survey, lamp purchasing and witnessing, and packing and shipping; and to sample lamps for subsequent testing undertaken by the Global Efficient Lighting Centre.

<http://www.enlighten-initiative.org/ResourcesTools/Publications.aspx>



Compliance Counts: A Practitioner's Guidebook on Best Practice Monitoring, Verification, and Enforcement for Appliance Standards & Labeling – provides guidance on designing and implementing effective compliance frameworks, and directs the reader to references and other relevant resources.

<http://clasp.ngo/Resources/MVEResources/MVEGuidebook>



Southeast Asia Compact Fluorescent Lamp Performance and Mercury Testing and Analysis Report – presents the results and analysis of testing undertaken by the Global Efficient Lighting Centre on CFLs purchased in six Southeast Asian countries (Cambodia, Indonesia, Lao PDR, Philippines, Thailand and Viet Nam in 2014).

<http://www.enlighten-initiative.org/ResourcesTools/Publications.aspx>



Assessment of Opportunities for Global Harmonization of Minimum Energy Performance Standards and Test Standards for Lighting Products – presents an assessment of test procedures and MEPS globally and identifies key gaps and similarities between them. It also examines the opportunities for the alignment of various economies to one global test procedure, and corresponding MEPS, for CFLs and LEDs and provides recommendations on possible steps to encourage and accelerate the global uptake of energy-efficient lighting technologies.

<http://clasp.ngo/Resources/Resources/PublicationLibrary/2011/Global-Harmonization-Lighting-MEPS-TestStandards>



Assessment of Verification Testing Capacity in the APEC Region and Identification of Cost Effective Options for Collaboration presents the results of a comprehensive survey of APEC countries to identify qualified testing facilities and analyse cost-effective policy options for conducting compliance testing.

<http://clasp.ngo/Resources/MVEResources/MVEPublicationLibrary/APEC-Assessment-of-Testing-Capacity-Facilitates-Compliance-Collaboration>



⇒ EXPERTISE AND COLLABORATIVE PROGRAMMES

UNEP-GEF *en.lighten* initiative Centre of Excellence – comprised of a network of over 50 lighting experts representing over 30 countries – offers recommendations, technical guidance and efficient lighting expertise to assist countries in the shift to energy efficient lighting. The Centre is based in Paris, France.

<http://www.enlighten-initiative.org/>



UNEP-GEF *en.lighten* initiative online support centre, 'en.lightened learning' - provides targeted technical advice and contains forecasting tools, publications and guidance documents. It also includes a series of informational webinars that provide more detailed guidance on specific aspects of MVE including:

- *Best Practices for Enforcing Efficient Lighting Regulations;*
- *CIE Test Method Standard for LED Lamps;*
- *Communication of Lighting Product Performance Standards and Labelling Programmes to Supply Chain Providers;*
- *Developing a Legislative Framework to Support Successful Monitoring, Verification and Enforcement Activities for Energy Efficient Lighting;*
- *Evaluation Indicators for Energy Efficient Lighting MVE Policy;*
- *How to Create and Operate a Lighting Product Registration System;*
- *Lamp Product Performance Tests and Interpretation of Results;*
- *Lighting Product Benchmarking as an Energy Baseline for Change;*
- *Lighting Product Registration Systems: Design and Operation;*
- *Market Baselines and Surveillance for Efficient Lighting Products;*
- *Testing Lamp Efficacy, Lumen Maintenance, Rated Life and Uncertainties.*

<http://learning.enlighten-initiative.org/>



UNEP Collaborating Centre for Energy Efficient Lighting, China - GELC offers a wide range of technical services to developing countries including laboratory training and establishing systems for lamp quality control.

<http://www.enlighten-initiative.org/About/GlobalEfficientLightingCentre.aspx>



lites.asia - is a network of lighting efficiency regulators and policy makers in the Asia region. Since its formation in 2009, membership of the *lites.asia* network has increased to over 700 participants from 30 economies, with delegates actively participating in IEC meetings, sharing knowledge on local standards and labelling electronically and in regional meetings, plus a number of other cooperative actions. The *lites.asia* website contains a range of resources on lighting efficiency and regulation including presentations from regular regional meetings and collaborative project and survey results, such as the regional labelling display survey.

<http://www.lites.asia/>



Australian and New Zealand Equipment Energy Efficiency (E3) Program - is a cooperative government programme that applies a combination of MEPS and energy rating labelling to a range of energy using products including lighting in order to inform consumers and increase the range of efficient products in the market. The Energy Rating website contains a range of reports on lighting related baseline data and analysis for the Australian and New Zealand markets, as well as a publicly accessible database of registered lighting products.

<http://www.energyrating.gov.au/>



CLASP - Works to improve the environmental and energy performance of appliances and related systems, lessening their impacts on people and the world around us. CLASP develops and shares practical and transformative policy and market solutions in collaboration with global experts and local stakeholders. It is a non-profit international organisation promoting energy efficiency standards and labels for appliances, lighting, and equipment. Since 1999, CLASP has worked in over 50 countries on six continents pursuing every aspect of appliance energy efficiency, from helping to structure new policies to evaluating existing programmes.

<http://www.clasponline.org/en>



The Clean Energy Ministerial's Clean Energy Solutions Center

- offers no-cost expert policy assistance, webinars and training forums, clean energy policy reports, data, and tools provided in partnership with more than 35 leading international and regional clean energy organisations.

<https://cleanenergysolutions.org/>



IEA - the International Energy Agency (IEA) is an autonomous organisation which works to ensure reliable, affordable and clean energy for its 28 member countries and beyond. The IEA's four main areas of focus are: energy security; economic development; environmental awareness; and engagement worldwide. Founded in response to the 1973/4 oil crisis, the IEA's initial role was to help countries coordinate a collective response to major disruptions in oil supply through the release of emergency oil stocks. It has a staff of 260 professionals (energy analysts, modellers, data managers/statisticians, technicians, secretaries and support staff) working together on global energy challenges.

<http://www.iea.org/>



IEA 4E Solid State Lighting Annex – the Solid State Lighting Annex was established in 2009 under the framework of the International Energy Agency's Efficient Electrical End-Use Equipment (4E) Implementing Agreement to provide advice to its ten member countries seeking to implement quality assurance programmes for solid state lighting. This international collaboration brings together the governments of Australia, China, Denmark, France, Japan, The Netherlands, Republic of Korea, Sweden, United Kingdom and United States. China works as an expert member of the Annex. The Annex website provides information on recommended performance specifications for LED lighting, as well as reports and advice on LED product testing, lighting and health and lifecycle analysis.

<http://ssl.iea-4e.org/>



LED Lighting Facts - LED Lighting Facts® is a programme of the United States Department of Energy that showcases LED products for general illumination from manufacturers who commit to testing products and reporting performance results according to industry standards. Their website contains information on their verification testing policy, a list of accredited laboratories in the United States and a list of products with their energy performance information. This is a useful web portal for policymakers and programme administrators to inform themselves about efficient lighting policies and testing.

<http://www.lightingfacts.com/>

















SEAD Initiative - The Super-efficient Equipment and Appliance Deployment (SEAD) Initiative is a voluntary collaboration among governments working to promote the manufacture, purchase, and use of energy-efficient appliances, lighting, and equipment worldwide. SEAD is an initiative under the Clean Energy Ministerial and a task of the International Partnership for Energy Efficiency Cooperation.

www.superefficient.org



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ABOUT THE UNEP DIVISION OF TECHNOLOGY, INDUSTRY AND ECONOMICS

The UNEP Division of Technology, Industry and Economics (DTIE) helps governments, local authorities and decision-makers in business and industry to develop and implement policies and practices focusing on sustainable development.

The Division works to promote:

- sustainable consumption and production,
- the efficient use of renewable energy,
- adequate management of chemicals,
- the integration of environmental costs in development policies.

The Office of the Director, located in Paris, coordinates activities through:

- **The International Environmental Technology Centre** - IETC (Osaka, Shiga), which implements integrated waste, water and disaster management programmes, focusing in particular on Asia.
- **Production and Consumption** (Paris), which promotes sustainable consumption and production patterns as a contribution to human development through global markets.
- **Chemicals** (Geneva), which catalyzes global actions to bring about the sound management of chemicals and the improvement of chemical safety worldwide.
- **Energy** (Paris), which fosters energy and transport policies for sustainable development and encourages investment in renewable energy and energy efficiency.
- **OzonAction** (Paris), which supports the phase-out of ozone depleting substances in developing countries and countries with economies in transition to ensure implementation of the Montreal Protocol.
- **Economics and Trade** (Geneva), which helps countries to integrate environmental considerations into economic and trade policies, and works with the finance sector to incorporate sustainable development policies.

UNEP DTIE activities focus on raising awareness, improving the transfer of knowledge and information, fostering technological cooperation and partnerships, and implementing international conventions and agreements.

For more information,
see **www.unep.fr**

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This guidance note focuses on best practices for enforcing energy efficiency policies for lighting, including compliance with registration, minimum energy performance and energy labelling requirements. It is primarily intended for use by those countries that have yet to develop and implement an enforcement regime for lighting products, but is equally relevant for countries seeking to revise or strengthen their enforcement activities. It aims to be a practical resource for governments and enforcement authorities on processes to follow when implementing a national enforcement programme and describes best practices for enforcing energy efficient policies at both a national and regional level.

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