

# Market Monitoring, Verification and Enforcement for EELA

## Market Verification of Lighting Products in Sweden

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## Presentation Outline

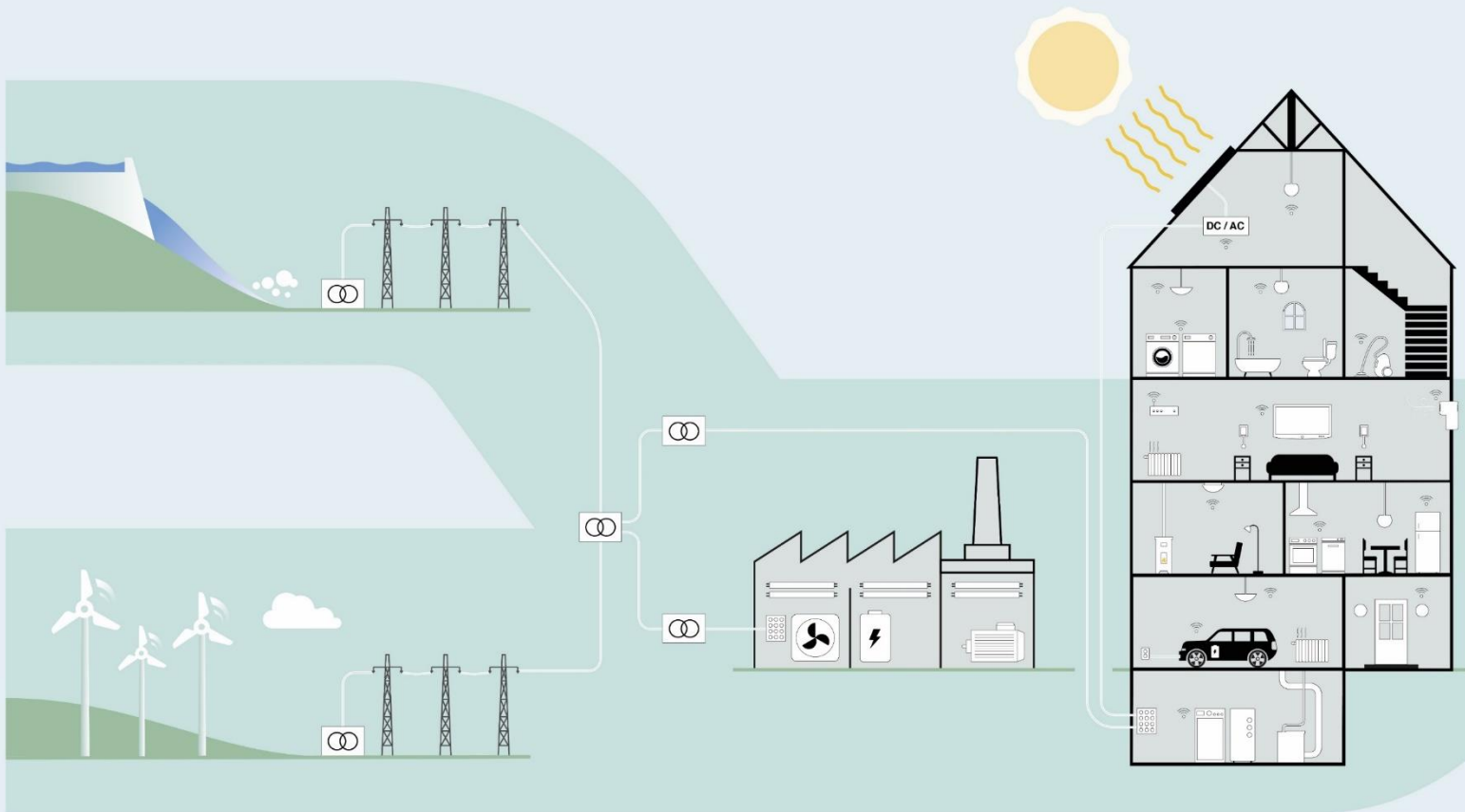
- Who we are
- Planning of Market Verification and Enforcement (MVE)
- Alternative activities
- National level
- International collaboration
- Benefits of the MVE
- Proposed MVE structure for EELA region



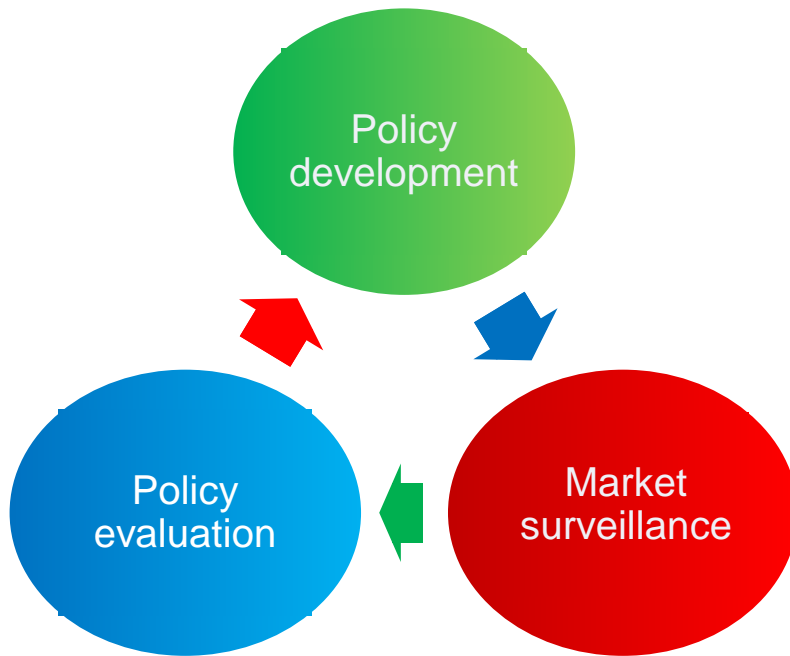
## About the Swedish Energy Agency (SEA)

- Part of the Swedish Government
- National authority for energy policy issues
- Subordinate to the Ministry of Infrastructure
- The Director-General is appointed by the Government
- Government funded
- 400 employees
- ISO 14001 (environment) and ISO 50001 (energy)

## EU: ca 30 Products Regulated by MEPS and Energy Labelling



## How to Work Efficiently?



Constant loop between:

- *Policy development*
- *Market surveillance*
- *Policy evaluation*

Requires:

- *Technical analysis of products*
  - *In-house testing*
  - *External testing*
  - *Technical reports (public)*
- *Market assessments*
  - *Inspection*
  - *Commercial data*
  - *Technical reports (public)*

## Planning of MVE

- The MVE is planned annually and reported to EU
- Product categories are distributed with a long term plan
- Example:

	2020	2021	2022	2023	2024	2025
Domestic light sources	x	x	x	x	x	x
Office Luminaires	x				x	
Street Lights		x				x
Connected Lighting			x			
Decoration Lighting				x		

- Parallell with the plan, additional MVE is made

## Sharing of Responsibilities Internally

- **The legal department**
  - Plans the MVE
  - Formally selects products to be tested
- **The testing department (Testlab)**
  - Purchases products
  - Inspects packages
  - Tests products
  - Writes the technical PASS/FAIL report for the legal department
  - Writes market status reports for the policy department
- **The legal department**
  - Contacts the producer if the product FAILs

# Activity Alternatives

- **Information campaigns**
  - Stake holder meetings with policy updates
  - Web page
  - Weekly email correspondence from dedicated email adress ("lighting@energyagency.gov") with both consumers, producers and distributors
  - Informing researchers about policy
- **Request of documentation**
  - CE-compliance
  - Data sheets
  - Test reports

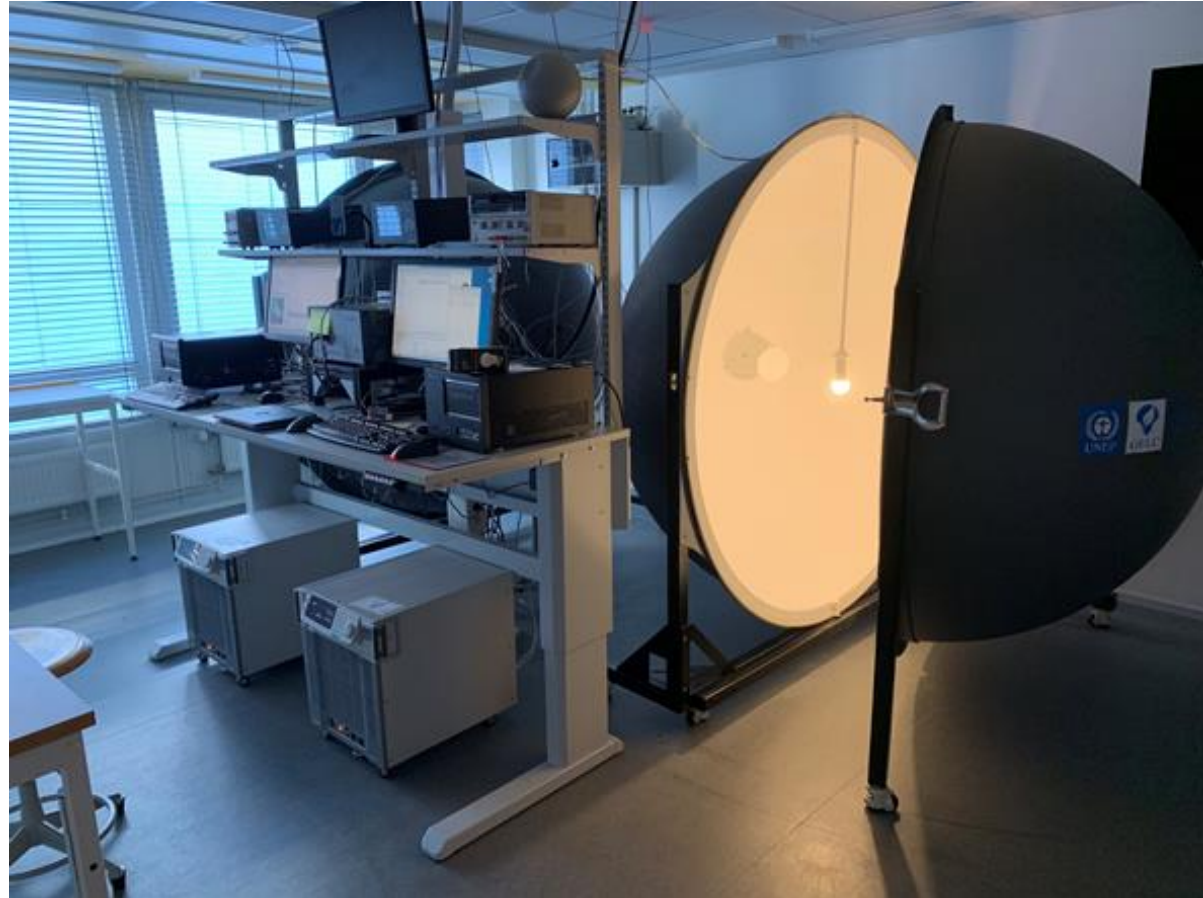


## Activity Alternatives

- **Inspection visits to**
  - Online e-commerce stores
  - Physical stores (control of available information)
- **Purchase of products**
  - Inspection of package information
  - Testing of product performance

## Testing of Light Sources – Sphere for volume testing

- Flux (lumen)
- Power (Watt)
- Efficacy (lm/W)
- Colour Temperature
- Colour Rendering
- Flicker (PST, SVM)
- Power factor
- Total Harmonic Distorsion



## Near field Goniometer

- Flux (lumen)
- Power (Watt)
- Efficacy (lm/W)
  
- Colour Temperature
- Colour Rendering
- Flicker (PST, SVM)
  
- Power factor
- Total Harmonic Distorsion
  
- **Directional Properties (Beam angle)**



## Aging of Products

- 400 E27 sockets
- Power quality log
- Dual Timers
- 2.5h on/0.5h off for 3600h
- 3 phase 10kW power supply
- Room temperature 25C +/- 15C



## Common findings

- **Missing Documentation**
  - CE-compliance
  - Data sheet
- **Missing information on package**
  - Lack of color temperature information
- **Wrong information on package**
  - Tested data out of range from package information
- **Test result failing MEPS requirement**
  - Lumen/W (not so common for LED)
  - Wrong Energy Class
- **Test result failing other quality requirement**
  - Color rendering

## Effectiveness of MVE Alternatives

- **Information Campaigns – Very Efficient**
- **Inspection of Technical Documentation – Limited Effect**
- **Inspection of Package Information – Very Efficient**
- **Testing of product performance – Very Efficient**

## Time usage

- **Annual Planning**
  - Short time, the testing department is aware of the market status and suggests products to the legal department
- **Purchase of products** – Rather time consuming
- **Registration and labelling of products** – Short time
- **Testing of products** – Rather short time
- **Technical reporting** – Time consuming (IT and admin)
- **Legal process** – Very time consuming

## Suggested EELA MVE

- **Use pre market testing**
  - Keeps laboratories operating
  - High control of market status
- **Post market testing**
  - Supplier guarantees in the CE-compliance document
  - MVE Authority samples the market
- **Focus on system for quick technical report generation**
  - Make use of integrated report generators of commercial lab equipment
- **Prepare for straightforward legal procedure**
- **Work closely with policy developers to remove obstacles and loopholes**





**ENERGY  
EFFICIENT  
LIGHTING  
AND APPLIANCES**  
*in East and Southern Africa*

# THANK YOU

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