

# ***Effective MVE system***

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# 1. MVE Regimes

## ◆ Pre-market verification

*What are the energy efficient products?*

- Voluntary self declaration
  - Products suppliers' claim(self testing) on energy efficiency
  - Low companies' expense and low reliability
  - Appropriate when the standards are relatively simple
  - Periodic education and monitoring are needed.
- Third party verification (TPV)
  - Independent testing parties' inspection on energy efficiency
  - High companies' expense and high reliability
  - Appropriate when the standards are complex and stringent
  - Management of, and cooperation with testing parties

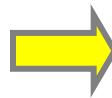
# 1. MVE Regimes

## ◆ Post market surveillance

*Are they working as energy efficient products?*

- Field test and label check
  - Labeling condition check in factory and retail stores
  - Low expense; simple test such as standby power
- Performance test
  - Independent testing parties' inspection on energy efficiency
  - High expense; complicated performance test in laboratories
  - Enhancement of reliability of the whole S&L process

Pre-market verification



Post market surveillance

How can we ensure that the whole process works properly?



# 1. MVE Regimes

## ◆ Pros and cons of each designs

- Overall design can work effectively when combined.
  - The purpose and target is different from each other.

| Categories                        | Pre-market verification    |                          | Post market surveillance                                 |                        |
|-----------------------------------|----------------------------|--------------------------|--|------------------------|
|                                   | Voluntary self declaration | Third party verification | Field test and label check                               | Performance test       |
| <i>Cost of the administration</i> | low                        | medium (supervising)     | High<br>(Continuous injection of funds, time and labors) |                        |
| <i>Participants' cost</i>         | Low<br>(low barrier)       | High<br>(high barrier)   | Low<br>(basically governments' area)                     |                        |
| <i>Compliance Rates</i>           | Relatively Low             | Relatively high          | High<br>(Actual monitoring and management are possible.) |                        |
| <i>Other issues</i>               |                            | testing Infrastructure   |  | testing Infrastructure |



# 1. MVE Regimes

## ◆ Appropriate Metrics

- Realistic **compliance rates**?
  - Ultimate goal and target of every MVE systems
  - Each government must set up a specific compliance rates target and annual feasible MVE action plan.
    - Statistical approach for introduction of methodology
- **Sampling methodology** is crucial
  - Currently, compliance rates are not perfect and do not reflect realistic levels of compliance in the actual market.
    - If we focus on the specific products or market with suspicion?
  - To get information representing the market, sufficient samples have to be selected deliberately according to regulation.
  - International cooperation is needed for standardization.



# 2. Korea's MVE for Energy S&L

## ◆ Overall legal process

### ■ 3 Energy Labels and Standards Programs

| Categories                            | Energy efficiency Label and Standard (M) | E-Standby Program (M) | High Efficiency Equipment certification (V) |
|---------------------------------------|--|-----------------------|---|
| <i>Voluntary self declaration</i>     | ○<br>(approved)                          | ○<br>(approved)       |   |
| <i>Third party verification (TPV)</i> | ○<br>(designated)                        | ○<br>(designated)     | ○<br>(designated)                           |
| <i>Post market surveillance</i>       | ○<br>(Annual)                            | ○<br>(Annual)         | ○<br>(Annual)                               |

\*designated, approved : by MKE(Ministry of knowledge Economy)

### ■ Process for annual surveillance



*Second test (one time if applicable)*



## 2. Korea's MVE for Energy S&L

### ◆ The results of MVE activities

| Category  |                  | Y2006            | Y2007            | Y2008            | Y2009            | Y2010(p)         |
|---|------------------|------------------|------------------|------------------|------------------|------------------|
| <b>Energy efficiency Label and Standard</b><br>(Self : 5%, TPV : 95%)     | Reported         | 16,440           | 19,654           | 21,608           | 20,011           | 21,012           |
|   | <b>Tested(%)</b> | <b>180(1.1%)</b> | <b>181(0.9%)</b> | <b>142(0.7%)</b> | <b>179(0.9%)</b> | <b>172(0.8%)</b> |
|   | Failed           | 26               | 47               | 10               | 10               | N/C*             |
|   | <b>CR(%)**</b>   | <b>85.6%</b>     | <b>74.0%</b>     | <b>93.0%</b>     | <b>94.4%</b>     | -                |
| <b>E-Standby Program</b><br>(Self : 43%, TPV : 57%)                       | Reported         | 3,699            | 3,993            | 4,973            | 5,529            | 5,805            |
|   | <b>Tested</b>    | <b>84(2.3%)</b>  | <b>88(2.2%)</b>  | <b>93(1.9%)</b>  | <b>109(2.0%)</b> | <b>112(1.9%)</b> |
|   | Failed           | 0                | 5                | 3                | 0                | N/C*             |
|   | <b>CR(%)**</b>   | <b>100.0%</b>    | <b>94.3%</b>     | <b>96.8%</b>     | <b>100.0%</b>    | -                |
| <b>High Efficiency Equipment certification</b><br>(Self : 0%, TPV : 100%) | Reported         | 3,256            | 3,449            | 4,512            | 5,116            | 5,372            |
|   | <b>Tested</b>    | <b>160(4.9%)</b> | <b>135(3.9%)</b> | <b>82(1.8%)</b>  | <b>50(1.0%)</b>  | <b>78(1.5%)</b>  |
|   | Failed           | 7                | 18               | 22               | N/C*             | N/C*             |
|   | <b>CR(%)**</b>   | <b>95.6%</b>     | <b>86.7%</b>     | <b>73.2%</b>     | -                | -                |
| <b>Total (3 programs)</b><br>(Self : 11%, TPV : 89%)                      | Reported         | 23,395           | 27,096           | 31,093           | 30,656           | 32,189           |
|   | <b>Tested</b>    | <b>424(1.8%)</b> | <b>404(1.5%)</b> | <b>317(1.0%)</b> | <b>338(1.1%)</b> | <b>362(1.1%)</b> |
|   | Failed           | 33               | 70               | 35               | 10               | N/C*             |
|   | <b>CR(%)**</b>   | <b>92.2%</b>     | <b>82.7%</b>     | <b>89.0%</b>     | <b>97.0%*</b>    | -                |

\*N/C : not completed, \*\*CR : Compliance rates

**Note) All failed products were made public and administrative action was taken against them.**



## 2. Korea's MVE for Energy S&L

- Annual Budget (2010)

| Energy efficiency Label and Standard | E-Standby Program | High Efficiency Equipment certification |
|--------------------------------------|-------------------|---|
| 400K USD                             | 250K USD          | 230K USD                                |

- Treatment for non-compliance

- Public reporting (official gazette) and press coverage
- Administrative action such as prohibition against sales, indication of correct energy efficiency label, etc
- Punishment with 20,000 (MEPS) or 5,000 USD fine

### ◆ Issues and challenges

- MVE process is very dependent on annual budget.
  - Is MVE of the whole market the right of only government?
- Effective sanctions that affect manufacturers' activities





# 3. Requirements of effective MVE

## ◆ How to enhance the reliability

- Is pre-market verification itself enough for MVE?
  - Risks of circumvention and mistakes are not predictable.
  - Can autonomous operation protect consumers and savings?
- **Governments' proactive Intervention** is necessary.
  - Governments have to intervene in the overall MVE process.



### ***Governments' systematic intervention***

- The whole process conducted according to the regulation
- Measurement and management of realistic compliance rates



### ***Introduction of periodic and rational MVE scheme***

- Sustainable investment for post market surveillance



### ***Powerful and practical enforcement and sanctions***

- Heightening the perception of risk in industry
- Public reporting of information on all kinds of MVE activities



# *Thank You !*



**For more information,**

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