

## ***EEPLIANT 2 Horizon 2020 project:***

### ***Circumvention and efforts to reduce it***

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## We really don't like circumvention because...

- Lost energy savings
- Higher costs to users
- Corrosive effect on competitive market
- Stalls improvement (long term harm)
- Damages trust in labelling so price becomes more important in choices

## What is circumvention?

*When “a model's performance is automatically altered in test conditions with the objective of reaching a more favourable level”*

*REGULATION 2017/1369 - framework for energy labelling*

5. The supplier shall not place on the market products that have been designed so that a model's performance is **automatically altered in test conditions with the objective of reaching a more favourable level** for any of the parameters specified in the relevant delegated act or included in any of the documentation provided with the product.

*Refrigerators showing this behavior*

*“shall be considered not compliant”*

*according to 2019 adopted draft of household  
refrigerator label regulation*

# What is circumvention?

*When “false and misleading information” is provided to regulators and consumers*

*IEC definition*

*(IEC TC 59 Internal Guide)*

*“Any control device, software, component or part that alters the appliance operating characteristics during any test procedure, resulting in measurements that are **unrepresentative of the appliance's true characteristics** that may occur during intended use under comparable conditions”*

*“A circumvention device saves energy ... **ONLY** during the test procedure [and] not during intended use”*

# What is circumvention? (from ‘Dieselgate’: the ‘defeat device’ and ‘defeat strategy’)

*“any element of design ... which reduces the effectiveness of the emission control system under [normal] conditions [of use]”*

*Regulation (EC) No 715/2007 on vehicle type approval*

# What is circumvention?

## *Level 1: “Circumvention”*

*deliberately, artfully or deceptively bypassing the requirements*

## *Level 2: “suspect behaviour”*

*deliberately bypassing the requirements ... in a way that does not follow the spirit of the relevant legislation*

## *Level 3: “conform behaviour”*

*compliant but not sufficiently reflecting ... daily life*



# Challenges

- Is that ‘smart control’ or circumvention?
- Products or use conditions can be complex, so it’s hard to simulate ‘real use’ in a lab
- Hard to balance maximum repeatability & reproducibility against variability to foil circumvention (easy to detect a precise test)

## Defeating circumvention

- EU: Define banned behavior (what it's *not* allowed to do)

Interesting alternative:

- US DOE: Define how a unit *shall* behave. Supplier must request a waiver if product behaves differently  
*“The unit, when tested under this test procedure, shall operate in a manner equivalent to the unit in typical room conditions”*



# Defeating circumvention

- Addressed in Commission standardization requests (“ensure that the ... standard includes a procedure that avoids an appliance being programmed to recognize the test conditions and reacting specifically to them”)
- IEC guidance for its technical committees
- Example: Refrigerator test standard, IEC 62252:  
“Where ... circumvention ... is suspected, a laboratory should subject the appliance to measures such as door openings ... in an attempt to detect ... any such devices. Details ... shall be included in the test report”

# Defeating circumvention

## Collaborative EU projects:

- **ANTI-Circumvention of Standards for better market Surveillance (ANTICSS)**  
Define it; learn from cases; look for loopholes; define test methods less prone to circumvention; build capacity to detect it
- **Energy Efficiency ComPLIANT Products 2 (EEPLIANT2)**  
Developing best practice amongst authorities; testing of appliances to screen for circumvention

## EEPLIANT2 work on circumvention

- Work with authorities on how to screen technical documentation thoroughly and effectively
- Developed guidance that authorities can pass to lab staff, on what to look for during testing
- Developed specific variations to test methodology aimed at revealing additional signs of any circumvention
- Tested a range of models using the screening methodology (household and professional refrigerators)

# Intentional vs. unintentional circumvention

## View of ECOS:

- It is impractical for authorities to have to prove not only that performance is altered under test, but also that this was the supplier's intention
- Regulations should disallow unintentional circumvention, or they risk that circumvention requirements are virtually unenforceable.

Source: Approaches to address circumvention of ecodesign and energy label requirements - an ECOS discussion paper, May 2018.

# Lessons from ‘Dieselgate’ (the automotive emissions testing scandal)

***“Evidence cannot be found  
unless it is sought”***

(European Parliament Report on automotive emissions, 2016/2215(INI))

- Possible existence was acknowledged in 2007
- Discussed between JRC/Commission in 2008 & 2010
- Only in September 2015 an MSA searched for defeat devices
- The MSA later proved illegal use

# Lessons from ‘Dieselgate’

(the automotive emissions testing scandal)

- Most Member States did not take steps to better understand large discrepancies between emissions measured in the lab and on the road
- No assessment criteria to distinguish prohibited defeat devices from behaviour justified “for engine protection”

New rules from September 2020:

- Every member state minimum number of checks per year
- Commission has power to carry out tests and trigger recalls, with fines up to €30k *per vehicle*

## Concluding remarks

- Attempts at circumvention will continue
- But EU systems are now much more alert, carefully designed and empowered via better regulation
- Circumvention is not just an attempt to advantage an individual player; it damages the market for all
- The best detectives work in the relevant industry

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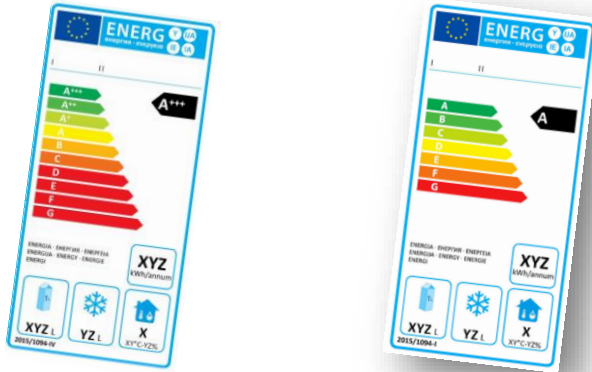
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