

Effective market surveillance for ecodesign: focus on large industrial products

12 February 2019, Brussels



Agenda

8:45 Registration & welcome coffee

9:15 Welcome

Ingrid Welss, Head of Unit, Smart Cities and Networks,
WIP Renewable Energies

9:30 Towards a better market surveillance for large industrial
products: Introduction to the INTAS project

Oronzo Dalorso, Project Advisor, Executive Agency for Small and
Medium-sized Enterprises (EASME), European Commission

9:45 State of play: challenges and benefits of improving market
surveillance for industrial products

Tomas Jezdinsky, Market Research Consultant, European Copper Institute
Bram Soenen, Scientific Advisor, Belgian Federal Public Service Health,
Food Chain Safety and Environment

10:30 Coffee break

11:00 Focus on industrial fans: methodology and policy
recommendations for effective market surveillance

Christian Holm Christensen, Senior Specialist, Energy and Climate,
Danish Technical Institute

Francisco Zuloaga, In-house Consultant, ECOS

11:30 Solutions lab: how to enhance market surveillance of industrial
fans? Panel discussion

Christian Holm Christensen, Senior Specialist, Energy and Climate,
Danish Technical Institute

Ronald Piers de Raveschoot, Policy Officer, DG ENER, European Commission

Bram Soenen, Scientific Advisor, Belgian Federal Public Service Health,
Food Chain Safety and Environment

Karsten Witt, European Ventilation Industry Association (EVIA)

12:30 Networking lunch

13:30

Focus on transformers: methodology and policy
recommendations for effective market surveillance

Sonia Martin, Manager, Energy Efficiency Area, Foundation for the Promotion
of Industrial Innovation (FFII-LCOE)

Nerea Rulz Fuente, Programme Manager, ECOS

14:00

Solutions lab: how to enhance market surveillance of
transformers? Panel discussion

Rafael Guirado, International Business Director,
Foundation for the Promotion of Industrial Innovation (FFII-LCOE)

Milena Presutto, Senior Researcher, Energy Efficiency Department,
Italian National Agency for New Technologies, Energy and Sustainable
Economic Development (ENEA)

Michel Sacotte, T&D Europe

César Santos Gil, Policy Officer, DG GROW, European Commission

15:00

Coffee break

15:30

Outlook for the future: European plans for market surveillance
and the Goods Package

Hans Ingels, Head of Unit, Single Market Policy, Mutual Recognition
and Surveillance, DG GROW, European Commission

15:50

Towards a more effective market surveillance for all large
industrial products: INTAS conclusions

Paul Walde, Director, Walde Strategic Efficiency

16:10

Concluding remarks

Ingrid Welss, Head of Unit, Smart Cities and Networks,
WIP Renewable Energies

16:30

End of conference



Effective market surveillance for ecodesign: Focus on large industrial products Project overview



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Ingrid Weiss &
Antonio Fuentes
12-02-2019
Brussels, Belgium

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About INTAS

Ingrid Weiss &
Antonio Fuentes
12-02-2019
Brussels, Belgium

- European project (Horizon 2020 - Energy Efficiency)
- Active from 1st March 2016 to 28th February 2019
- 16 partners
 - 11 national Market Surveillance Authorities (MSAs)
 - 5 cooperating organisations at European level
- Budget: ca. 1,9 million Euros (incl. product testing)

<http://www.intas-testing.eu/about-project/team-and-contacts>



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Project partners

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Europe: WIP – Renewable Energies, European Environmental Citizens' Organisation for Standardisation, European Copper Institute, Engineering Consulting and Design, Waide Strategic Efficiency

Austria: Austrian Energy Agency

Belgium: Federal Public Service Health, Food Chain, Safety and Environment

Czech Republic: SEVEN Energy Efficiency Center

Denmark: Danish Technological Institute

Finland: Finnish Safety and Chemicals Agency

Italy: Italian National Agency for New Technologies, Energy and Sustainable Economic Development

Poland: The Polish Foundation for Energy

Portugal: Directorate General of Energy and Geology, Economic and Food Safety Authority

Romania: Romanian Regulatory Authority for Energy

Spain: Foundation for the Promotion of Industrial Innovation



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INTAS key goals

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Antonio Fuentes
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- Support European Member State **MSAs** deliver compliance for **large industrial products**:
 - Fans
 - Power transformers
- Support the **industry** to be sure of what their obligations are under the Ecodesign Directive and to deliver compliance
- Foster a **common European approach** to the delivery and verification of compliance for these products



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Target stakeholders

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INTAS provides technical support and capacity building activities to:

Market Surveillance Authorities

(MSAs) concerned with the enforcement of Ecodesign Directive requirements for very large products.

Product manufacturers and

distributors to understand their legal obligations concerning the Ecodesign requirements for fans and transformers and to deliver compliance in a manner that will be broadly accepted by MSAs.

End consumers in professional sectors to understand the energy efficiency gains which they benefit from due to the minimum efficiency and performance requirements related to these product categories.



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Key activities 1/2

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Year 1: Completed

Landscape of testing avenues

INTAS monitors and analyses current testing practices in Europe and the rest of the world, and reviews test standards, facilities, procedures and methods already in place for large products with a specific focus on power transformers and fans.

Year 2: Completed

Defining an effective compliance framework for MSAs and manufacturers

INTAS is engaged in defining the process and methodology by which MSAs can identify, select, and evaluate large industrial power transformers and fans for the energy efficiency related requirements.

Key activities 2/2

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Year 3: Completed

Evaluation of compliance assessment methodology

INTAS analyses the results of the previously conducted assessments, processes and analysis, and ensures that the proposed methodology is valid and reliable by undertaking pilot testing schemes.

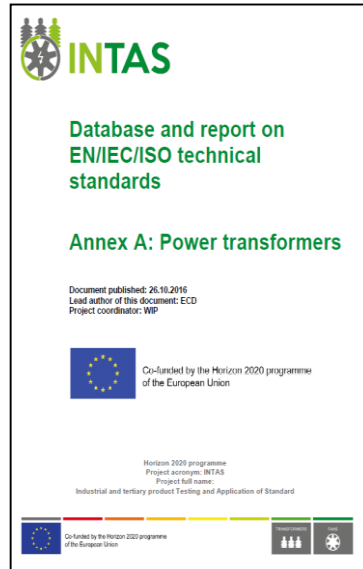
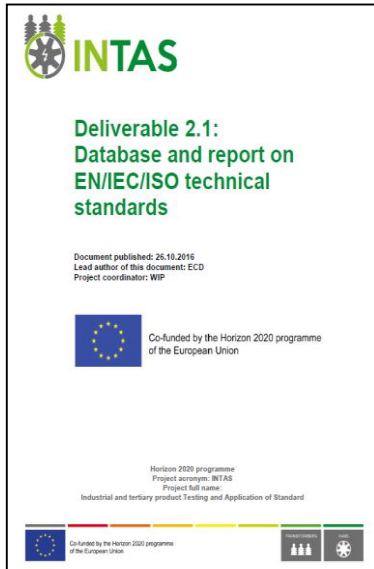
Active all years

MSA collaboration and strategic capacity building

Throughout the project, the INTAS partners will foster market surveillance collaboration between MSAs and raise awareness and information exchange of the product energy performance and market surveillance among key stakeholders, decision makers and end users.

Published documents

Ingrid Weiss &
Antonio Fuentes
12-02-2019
Brussels, Belgium



The latest can be downloaded from <http://www.intas-testing.eu/project-documents>



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Engaging with stakeholders

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Antonio Fuentes
12-02-2019
Brussels, Belgium

Stakeholder group	Organisation	Name
MSA - DE	BAM	Floris Akkerman
MSA - DE	MUKE BW	Georg Haubelt
MSA - CZ	SEI	Marcela Juračková
MSA - DK	DEA	Signe Friis Christensen
MSA - SE	SEA	Anders Hallberg
MSA - NO	NVE	Ingvoll Sjøvold Nilsen
Industry Association - Transformers	T&D Europe	Michel Sacotte
Industry Association - Fans	EVIA	Karsten Witt
Policy maker	EC DG Growth	Cesar Santos
Policy maker	EC DG Energy	Ronald Piers de Raveschoot
Standardization - Fans	ISO fans	Antony Breen
Transmission System Operators	ENTSO-E	Jean-Christophe Riboud

More information

about the INTAS project
and its results:

www.INTAS-testing.eu

Contact the project coordinator:
Ingrid Weiss

Ingrid.Weiss@wip-munich.de



Effective market surveillance for ecodesign: focus on large industrial products

12 February 2019, Brussels





Challenges of Market Surveillance with (large) industrial products

prepared for final INTAS Conference

12th February 2019, Brussels

Tomas Jezdinsky (European Copper Institute)



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General challenges of market surveillance



Tomas Jezdinsky
(ECI) 12-02-2019

- Market surveillance practices in the framework of Ecodesign and Energy Labeling are mainly focusing on **series produced consumer goods** (e.g. household appliance, lighting & lamps, consumer electronics).
- Already in this field, market surveillance authorities reported important barriers hindering effective activities:
 - Other priorities (e.g. safety)
 - Lack of finance
 - Lack of human resources
 - Lack of independent test labs
- Meta-study ***“Market surveillance of Energy Labelling and Ecodesign product requirements - Overview of challenges and opportunities”*** (for ADEME, in 2014) cited **ANNUAL budget for Ecodesign activities** heavily varying across member states from: € 1.000 /a in Iceland to over €500.000 in Denmark.



Specific issues and challenges with large industrial products



- Large power transformers and industrial fans are always customized and built-to-order, hence MSAs are unaware of when the product is placed on the market in time to be able to do conformity assessment.
- Due to size and weight often impossible to transport to a 3rd party lab for testing. Plus most independent labs have NOT the necessary installations (e.g. power connection) to test these large units
- Conformity assessment post putting into service would be disruptive, incur unacceptably high costs and inconvenience and is technically challenging
- Conformity assessment when putting into service (i.e. during installation) may not be technically viable and is legally defensible
- Even with “medium” sized transformers and fans, batch products, there is no permanent stock and MSAs are unaware when and how to sample units
- Issues with these smaller “batch” products from outside EU – no notification today

Large industrial products need a different approach in market surveillance



- Usual market surveillance activities like randomly select a number of identical products on stock for testing, do shop visits combined with label/ nameplate checks and catalogue research will NOT work with large industrial products like power transformers and heavy fans.
- Hence INTAS was looking into feasible and reliable alternatives to do compliance verification for the entire range of power transformers and fans
 - prior to be put into service
 - starting with screening and sampling ideally before / or close to be placed on the market

Challenges for Ecodesign Market Surveillance of large products



What ?

- MSAs need to identify units in scope – still a lot of questionable “exemptions”
- MSAs need proper screening and selection criteria to focus compliance verification actions for transformers

When ?

- MSAs are unaware of when the product is placed on the market
- Need for a mandatory notification procedure across EU

Where ?

- At manufacturer premises?...at warehouse?...at independent lab?...at customer location?...in-situ when putting into service?

How ?

- Documentation inspection?...visual checks (nameplate, tech data, etc)?...physical testing?

Input from the National Focal Point meetings on challenges – 1st round



National Focal Point meetings with participation of national stakeholders to explain INTAS approach, results and gather feedback on specific challenges

First round (2017) in Nordics (DK/SE/NO), FI, ES, PT, IT, RO, CZ, PL, AT

Q: What are the main concerns regarding the ability of national authorities to perform market surveillance and/or test large products?

- workload and resources
- costs
- transportation
- unavailability of laboratories
- lack of technically skilled staff and low awareness of the requirements
- need for simple and clear procedures
- current low market surveillance of large products impeding the level-playing field
- current lack of cooperation across MSAs as well as between MSAs/manufacturers/end-users



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Input from the National Focal Point meetings on challenges – 2nd round



Second round (2018) in Nordics (DK/SE/NO), FI, ES, PT, IT, RO, CZ, PL, AT, BE

Q: What are the main obstacles in the draft methodologies for compliance verification developed by INTAS?

- costs
 - delays
 - lack of expertise/interest/procedures
 - no skilled labs available
 - concerns with feasibility of in-situ testing
-
- Market surveillance authorities lack the resources/knowledge to improve their surveillance activities; other market actors (industry, utility, service sector) have not experienced market surveillance either and hence fear that such activity would result in increased administration, time delays and increase of product costs.



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Many Thanks !



Tomas Jezdinsky
(ECI) 12-02-2019

Questions ?

www.INTAS-testing.eu

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FANS



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State of play

Benefits of improved market surveillance



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Name Surname
10-05-2016
Brussels

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FANS



Manufacturer's obligation

Bram Soenen
12-02-2019
Brussels

- Design and construct in compliance with Eco-design requirements
- Use harmonized standards referenced in the OJEU for **presumption of conformity**
- Carry out conformity assessment: **self-assessment**
- Affix the CE marking
- Draft and sign **Declaration of Conformity (DoC)**

Member State's obligations

Bram Soenen
12-02-2019
Brussels

- Ensure only compliant products enter the Internal Market;
- Set up **market surveillance and enforcement**;
- Collaborate in the ADCO group; and
- Report to the Commission.

Every Ecodesign Regulation has a **Verification Procedure** for MSAs



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Market surveillance options

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12-02-2019
Brussels

Quick administrative check

- **CE marking** present ?
- DoC and Technical **documentation** file formally OK ?

Documentation check

- Test report uses harmonised **standaards** ?
- No abuse of **tolerances** ?
- Plausible information and correct **calculations**?

Laboratory testing of efficiency requirements

Benefits ?

Bram Soenen
12-02-2019
Brussels

This is a **flexible system** that is based on trust.

- Not every unit of a product is tested
- Not every model of a product group is tested

Free riders are a problem.

- Random and intelligence based **checks** are necessary to deter, correct and punish abuses.
- Ecodesign complexity requires '**awareness raising**'

Benefits of improved testing ?

Bram Soenen
12-02-2019
Brussels

Ensures **equal treatment** of competitors.

Guarantees **efficiency gains**.

- More testing options gives MSAs **more tools to test**
- Expertise and specialisation lead to more effective surveillance: **better targeting** and **less mistakes**
- Witnessed testing by MSAs of planned efficiency measurements **avoids double testing**
- Clearer procedures lead to less delays in commissioning process



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Methodology for Large Industrial Fans: 10-500 kW (current circumstances)



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Christian Holm Christiansen
12-02-2019
Brussels

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About the methodology

Christian Holm
Christiansen, DTI
12-02-2019
Brussels

- Developed by INTAS consortium based on surveillance, testing and market practices
- Presented for stakeholders at national focal point meetings in 10 countries and at various international events
- Evaluated by 5 INTAS partners being or collaborating with market surveillance authorities



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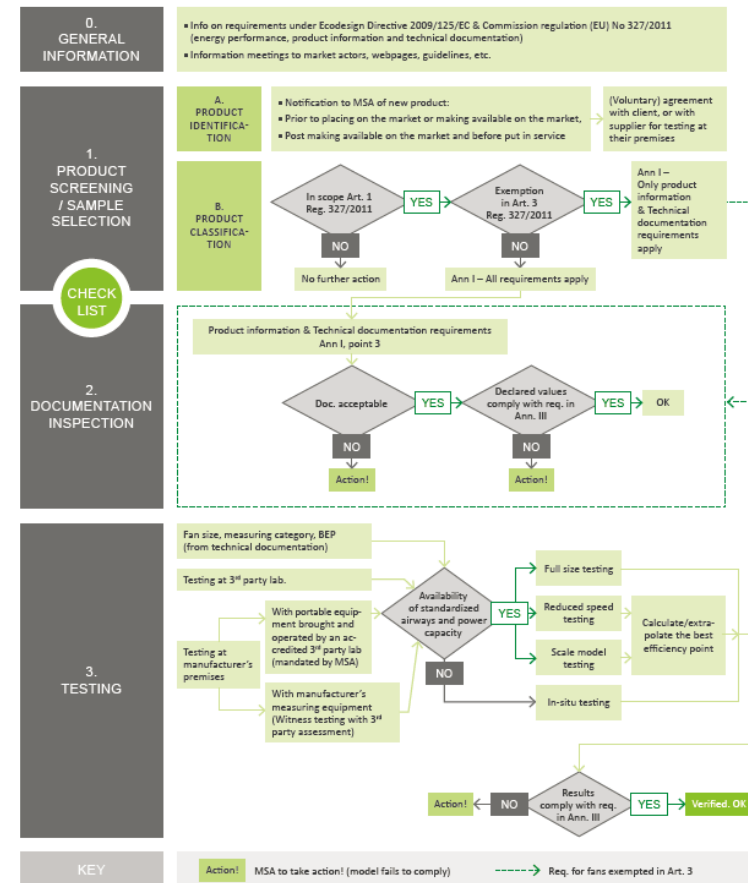
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Outline and graphical chart

Christian Holm
Christiansen, DTI
12-02-2019
Brussels

1. General market surveillance and preparatory actions
2. Product screening and sample selection
 - Checklist
3. Verification of compliance actions:
 - Documentation and rating plate inspection
 - Verification testing



1. General market surveillance and preparatory actions

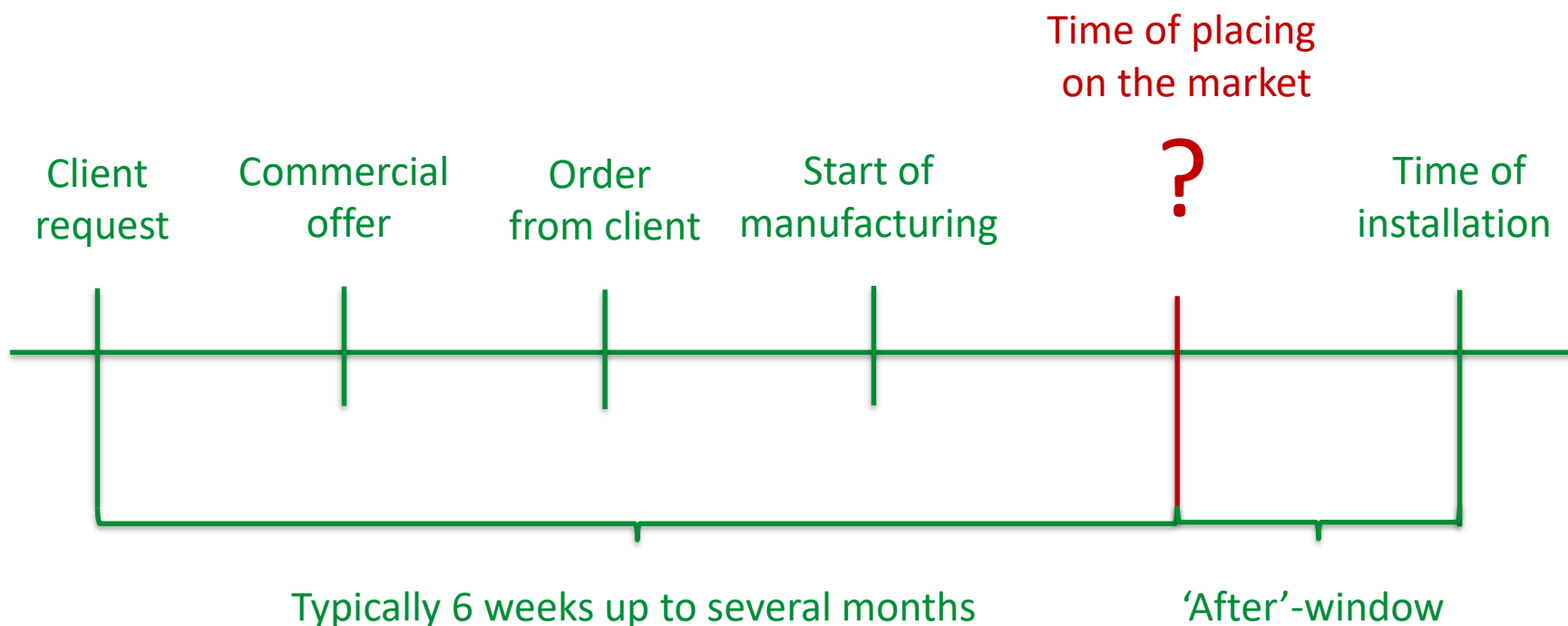
Christian Holm
Christiansen, DTI
12-02-2019
Brussels

- **Identify national/local market actors:** Manufacturers, sales representatives, importers, contractors, final clients)
- **Create awareness of market actor's obligations:** Directive 2009/125/EC (before/design control/10 years/10 days)
- **Build capacity and relations:**
 - Establish links with market actors (including site visits), trade associations, other national market surveillance authorities, customs
 - Establish links with technical experts of the specific product
- **Encourage to voluntary review of practices and notification of products being placed on the market** could reduce the likelihood of **more disruptive compliance verification**

2. Product screening and sample selection

Christian Holm
Christiansen, DTI
12-02-2019
Brussels

The 'invisible' fan, engineered to order, sold B2B



2. Placing on the market

Christian Holm
Christiansen, DTI
12-02-2019
Brussels

When notified the market surveillance authority can...

Before-case:

- Verification of compliance at manufacturer's premises for a specific product
 - Technical documentation and visual inspection checks
 - Test if facilities are available (e.g. witnessing factory acceptance test)

After-case:

- Verification of compliance for various products could entail:
 - A broader selection for technical documentation checks
 - A slightly narrower window for visual inspection checks
 - A smaller sample for laboratory verification testing



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2. Border-crossing inside/outside European Economic Area (EEA)

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Christiansen, DTI
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Brussels

Addressing products from elsewhere in the EEA:

- Collaboration between market surveillance authorities (MSAs)
 - When country/region where the fan is produced is different from where it's put into service, MSA of producing country can check as in the 'Before-case'

Addressing products made outside the EEA:

- Collaboration with customs and MSAs:
 - When country/region where the fan enters EEA is different from where put into service, custom authorities of entering country can forward information to MSA of the country/region of destination.
 - MSAs can do verification checks as the 'After-case'
 - If voluntary agreement with manufacturers, check as 'Before-case'



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2. Checklist

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Christiansen, DTI
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1. Identify fan type
2. Check if fan is exempted
3. Check if fan is only subject to product information
4. Check the fan product information/technical documentation
5. Check the fan rating plate/product label information
6. Identify the electric motor type
7. Check if the electric motor is exempted
8. Check the electric motor product information/technical documentation
9. Check the electric motor rating plate/product label



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2. Risk profiling

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Christiansen, DTI
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The market surveillance authorities can progressively develop risk profiles of the market actors/economic operators based on:

- The identification of market actors and their willingness to collaborate (site visits, their capacity, voluntary notification etc.)
- The compliance verification process

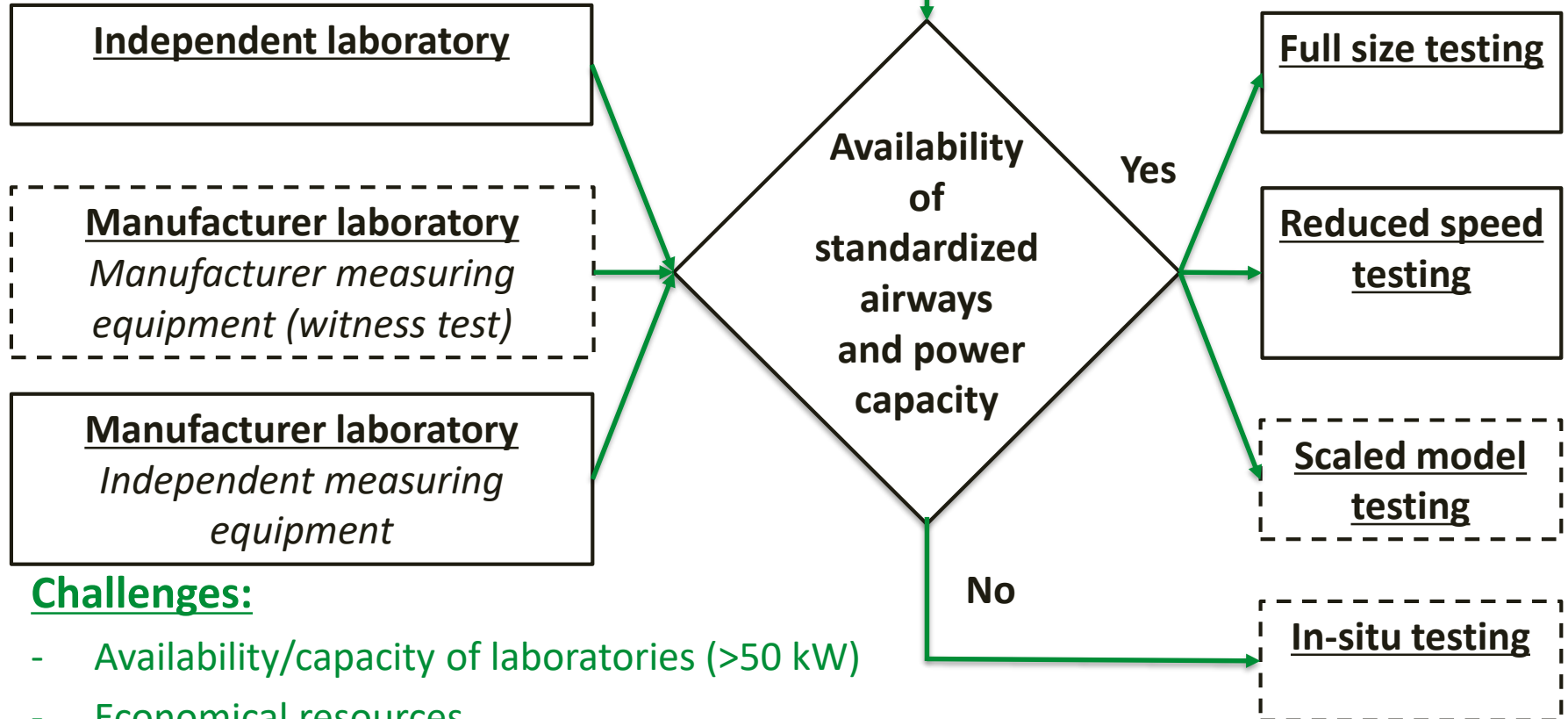
A simple risk profiling system, 4 classes of non-conformity risk per economic operator + sampling algorithms (INTAS D3.8):

- Low
- Medium
- High
- Unknown

3. Verification testing

Fan size, measuring category, BEP
(from technical documentation)

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Challenges:

- Availability/capacity of laboratories (>50 kW)
- Economical resources

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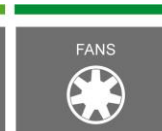
Policy Recommendations for Industrial Fans



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About the policy rec's

Francisco Zuloaga
12-02-2019
Brussels

- **Developed by INTAS consortium in late 2018.**
- **Build on INTAS methodology and consultations. And on existing initiatives:**
 - **Goods Package – Proposal COM (2017)795**
 - **Ecodesign regulation 327/2011**
 - **Existing fans standards**



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The Big Picture

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**Improving compliance with Ecodesign
regulation...**

**... while avoiding costly and disruptive
verification actions.**



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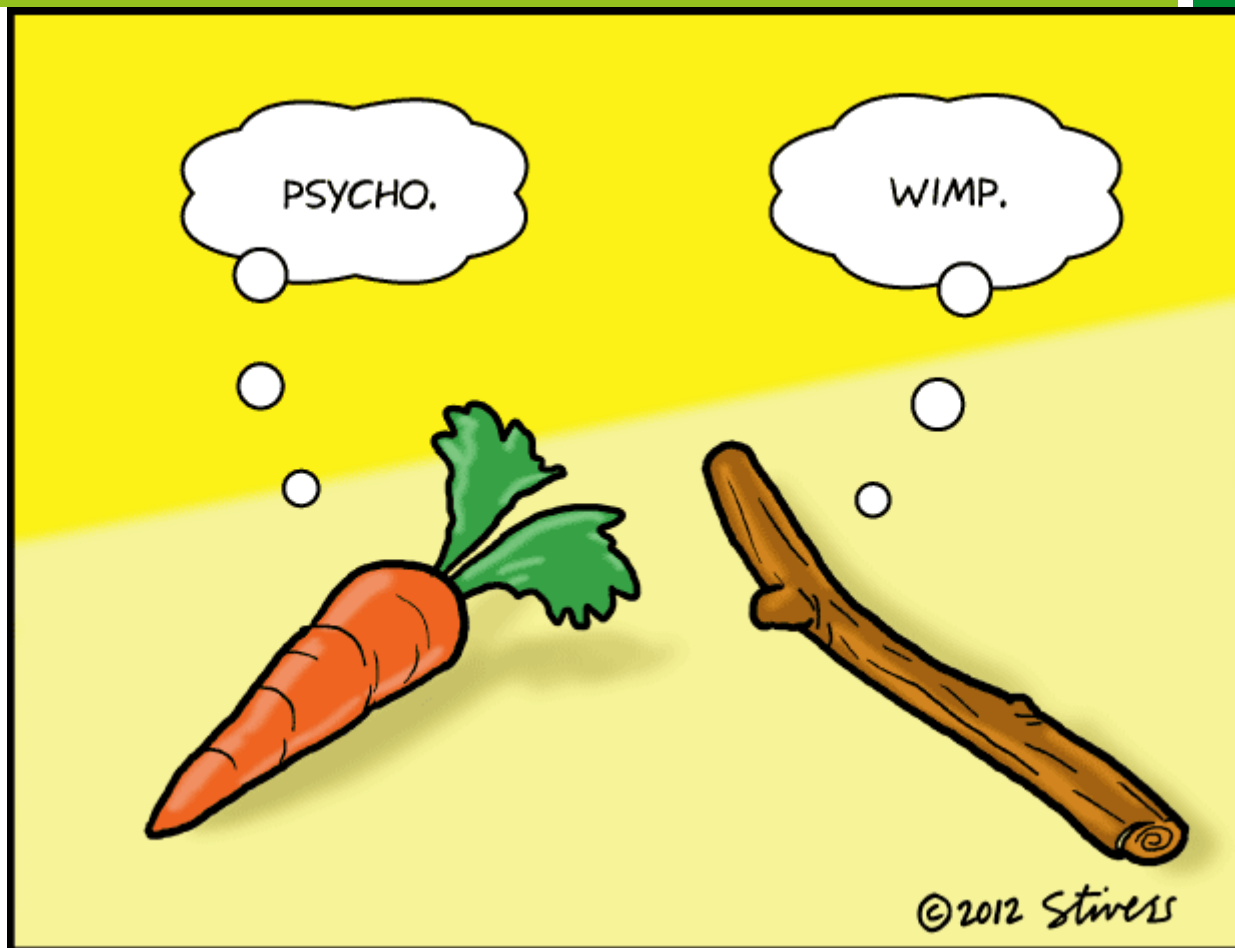


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Carrots & Sticks

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12-02-2019
Brussels



Carrots & Sticks

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12-02-2019
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- **Carrots:** help MSAs know when and where fans plan to be installed. Allow them to undertake the least disruptive verification actions.
- **Sticks:** leave the door open to all verification actions, including the most disruptive ones (e.g. in-situ testing).

Outline

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12-02-2019
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Set up a dedicated European market surveillance task force for fans

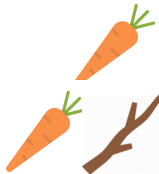


Establish a mandatory notification to MSAs



Foster cooperation with national stakeholders

Capacity building



Define “large fans” in the Ecodesign regulation



Allow market surveillance actions “on-site”



Allow and clarify alternatives to full-size, full-load testing as verification options



Improve fans standards for Ecodesign



Insert clauses to deter circumvention

Legal clarity



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12-02-2019
Brussels

“Set up a dedicated European market surveillance task force for fans”

Why?

- To improve cooperation between MSAs; and their understanding of Ecodesign.

How?

- MSA representatives, with support from fans experts. With budget for training, document inspections and some testing.



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“Establish a mandatory notification to MSAs”

Why?

- To ensure that MSAs know when and where large fans will be installed → avoid costly verification actions

How?

- The “person responsible for compliance information” informs the MSA, with enough time, of the planned sale of a large fan.



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“Foster cooperation with national stakeholders”

Why?

- To create additional certainty that MSAs know about the installation of large fans.
- To create awareness of Ecodesign requirements

How?

- Exchanging information with customs.
- Establishing “Partnership Arrangements” and “Memoranda of Understanding” with manufacturers, end-users and other stakeholders.



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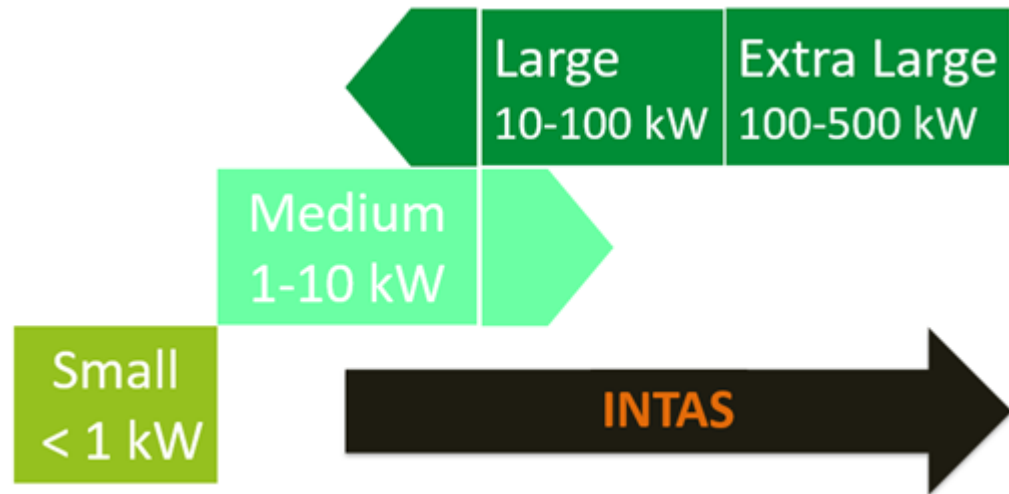
“Define “large fans” in the fans Ecodesign regulation”

Why?

- To address the specificities of market surveillance of large fans

How?

- By including definitions in “Article 2: Definitions” of the Ecodesign fans regulation





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“Allow market surveillance actions on-site”

Why?

- To provide MSAs with certainty that such actions will be legally valid.

How?

- Describing “**testing at manufacturers**”, “**witness testing**” and “**in-situ testing**”, in “Annex III: Verification procedures” of the Ecodesign fans regulation



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“Allow and clarify alternatives to full-size, full-load testing as verification options”

Why?

- So that MSAs can assess the evaluation techniques used by manufacturers: scale-model testing; reduced speed testing; part-load testing; computational fluid dynamics; and other “calculations and extrapolations”

How?

- Manufacturers to share the details of the “calculations and extrapolations”.



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“Improve fans standards for Ecodesign”

Why?

- Standards support regulation. Currently no EU-harmonised standards exist for the energy efficiency of fans.

How?

- Adopting a transitional method, and a harmonised standard that covers all possible verification options **(including in-situ)**
- Indicating the tolerances for each of the testing option in the Ecodesign regulation.



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“Insert clauses to deter circumvention”

Why?

- Circumvention is unfair and results in losses of energy savings and money.

How?

- Explicitly banning circumvention in the Ecodesign fans regulation.

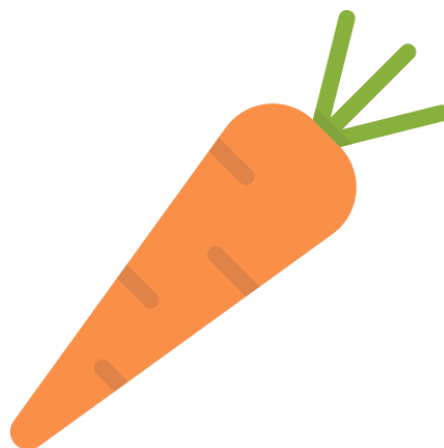
Advertising

Summary of Findings from INTAS

- Policy recommendations
- Best practice and experiences in verification procedures
- Evaluation of costs, benefits of compliance verification
- For fans and transformers



Thank you!



francisco.zuloaga@ecostandard.org



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More information

about the INTAS project
and its results:

www.INTAS-testing.eu

Contact to the project coordinator:

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12 February 2019, Brussels





INTAS Methodology for power transformers



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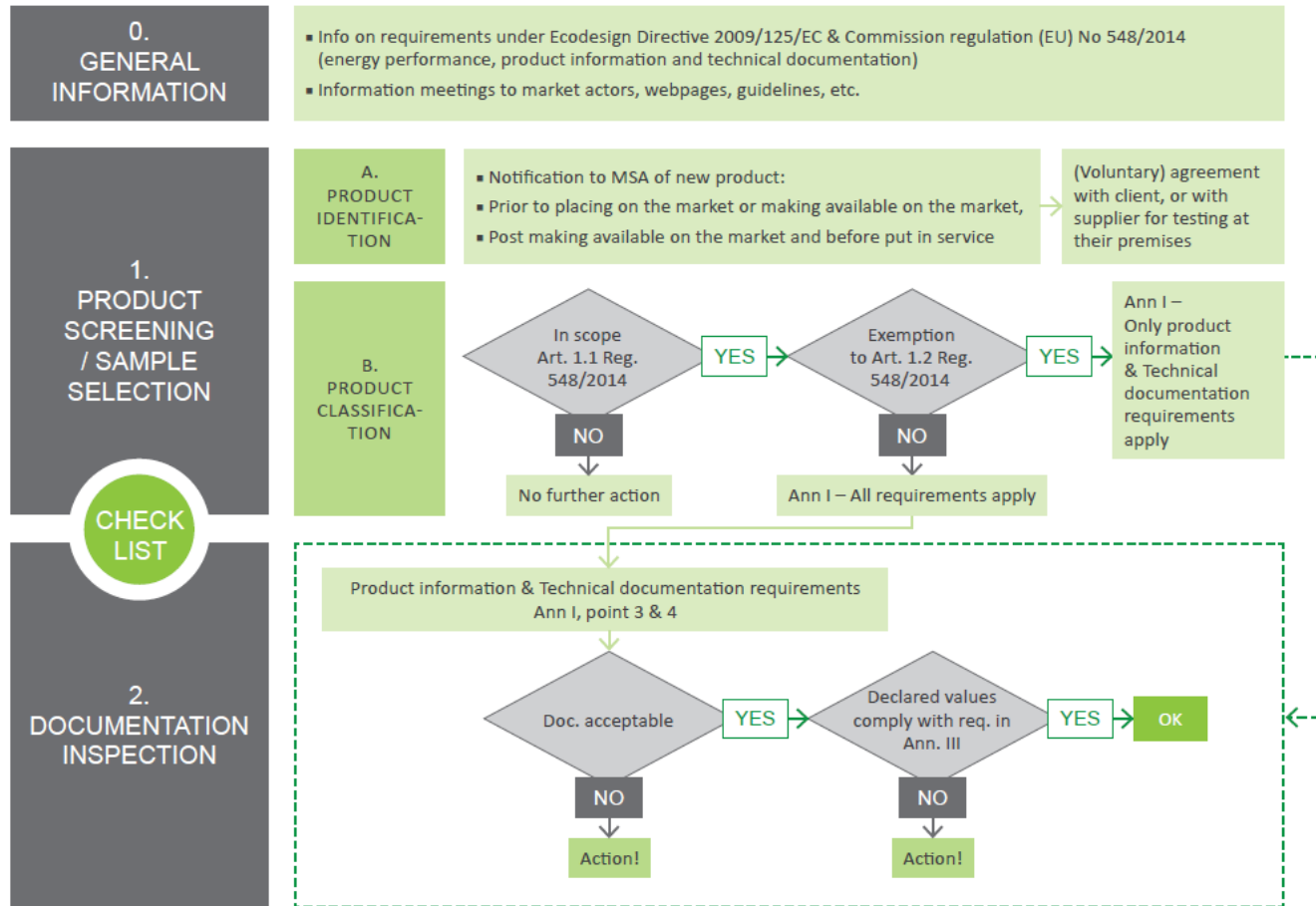
S. Martín
12/02/2018
Brussels

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Flowchart (I)

S. Martín



INTAS

INDUSTRIAL AND TERTIARY
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TRANSFORMERS



FANS



Flowchart (II)

S. Martín

3. TESTING

- Manufacturer failed to declare the production (or order) of the product to MSA, and product already installed in-situ, or
- Lack of agreement with client/supplier for testing at their premises, or
- Impossibility or failure to arrange witness testing at manufacturer's, or
- Impossibility or failure to arrange mobile lab testing before the product enters service, or
- Final assembly of the very large product is done in-situ

YES

NO

Testing at 3rd
party lab.

Testing at
manufacturer's
premises

With portable equip-
ment brought and
operated by an
accredited 3rd party lab
(mandated by MSA)

With manufacturer's
measuring equipment
(Witness testing with
3rd party assessment)

In-situ testing

Results
comply with req.
in Ann. III

Action!

NO

YES

Verified. OK

0. General information

S. Martín

- Identify market actors (manufacturers, final clients, utilities, etc)
- Create awareness of the requirements of Commission regulations (EU) No 548/2014

1A. Notification to MSA (I)

S. Martín

- **Why?**
- **When?**
 - a) before placing the power transformer on the market or
 - b) After placing the power transformer on the market and before it is put into service
- **Collaboration between different MSAs**



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1A. Notification to MSA (II)

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- Our proposal

Ecodesign regulation will be amended to require mandatory notification to MSA's whenever a power transformer is to be placed on the market.

1B. Screening/sample selection

- **Before** the product is placed on the market
- **After** the product has been placed on the market
- **“Market Intelligence”**. Knowledge of the market. Profiles of market actors

Conformity verification actions

- **The product is already placed on the market**
 - a) The product is not put into service
Document inspection + physical testing (at an independent lab or at manufacturer's premises)
 - b) The product is already put into service
Document inspection + in situ testing
- **The product is not placed on the market**
Voluntary agreement

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2. Documentation inspection

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- **Check list. Deliverable 4.2**

a) Product information and technical documentation requirements of Annex I

b) Declared values comply with requirements of Annex III?

3. Testing (I)

- **Independent lab**

Pros: Accuracy, independence, lower testing costs

Cons: Limited testing capability, transport and installation costs, risk of delays on transformer installation dates

- **Testing at manufacturer's premises with portable equipment brought and operated by an accredited independent lab**

Pros: MS tests in sequence with CA tests, accuracy, independence, higher testing capability, lower risks of delays

Cons: Moderate cost of testing, coordination



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3. Testing (II)

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- Testing at manufacturer's premises with manufacturer's measuring equipment (*Witness testing*)

Pros: MS tests in parallel with CA tests, higher testing capability, lowest cost of testing, lower risks of delays

Cons: Coordination, prior assessment, risk of performing the test not completely in line with the standard methodology

3. Testing (III)

S. Martín

- In situ testing

Pros: Most feasible option for transformers already put into service

Cons: Not according to harmonised standard, limitations in terms of power, voltage, highest costs, halting the installation could be complicated

More information

about the INTAS project
and its results:

www.INTAS-testing.eu

Contact to the project coordinator:

Ingrid Weiss

Ingrid.Weiss@wip-munich.de



Effective market surveillance for ecodesign: focus on large industrial products

12 February 2019, Brussels





Policy Recommendations for power transformers



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ECOS. Nerea Ruiz Fuente
12-02-2019
Brussels

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TRANSFORMERS



FANS



About the policy rec's

ECOS. Nerea Ruiz
12-02-2019
Brussels

- Developed by INTAS consortium in late 2018
- Build on INTAS methodology and consultations & on existing policy initiatives:
 - Goods Package
 - Revision of Ecodesign Regulation (EC) 584/2014
 - Existing standards for transformers
- Detail policy changes that would improve compliance with Ecodesign
- To unlock saving potentials and allow a level-playing-field



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Outline

ECOS. Nerea Ruiz
12-02-2019
Brussels

0. GENERAL INFORMATION

- **Set up a EU market surveillance TF transformers**
- **Foster cooperation with national stakeholders**

Capacity
building

1. PRODUCT SCREENING / SAMPLE SELECTION

- **Establish a mandatory notification to MSAs**

Timely
reaction

2. DOCUMENTATION INSPECTION

3. TESTING

- **Allow market surveillance to conduct witness testing or in-situ**
- **Improve standards on transformers for Ecodesign**
- **Insert clauses to deter circumvention**

Legal
certainty

Set up a dedicated European market surveillance task force for transformers

ECOS. Nerea Ruiz
12-02-2019
Brussels

Why?

- To improve cooperation between MSAs
- To allow for more uniform efforts across the EU, and
- To foster a better understanding of Ecodesign.

How?

- MSA representatives, with support from transformers experts.
- With budget for training, document inspections and some testing.
- Pooling of resources, sharing of testing evaluations, etc.



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Establish a mandatory notification to MSAs

ECOS. Nerea Ruiz
12-02-2019
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Why?

- To ensure that MSAs know when and where a power transformer will be installed in their territory → avoid costly verification actions

How?

- The « person responsible for compliance information » notifies the MSA, with sufficient time, of the planned contracting/purchase of a power transformer.

Foster cooperation with national stakeholders

ECOS. Nerea Ruiz
12-02-2019
Brussels

Why?

- To create additional certainty that MSAs are informed of the planned installation of a power transformer in their territory.
- To create awareness of Ecodesign requirements.

How?

- Exchanging information with customs.
- Establishing “Partnership Arrangements” with manufacturers and end-users.



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Allow market surveillance witness testing of FAT and in-situ testing

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Brussels

Why?

- To provide MSAs with certainty that such verification actions will be legally valid.

How?

- Unlike with fans, the current Regulation 584/2014 already foresees MSA to perform verification at the manufacturers given the weight and size limit in the transportation.
- To also include references to **“witness testing of Factory acceptance Tests at manufacturers”**, **“and “in-situ testing”**, in **“Annex III: Verification procedures”** of the Ecodesign transformers regulation

Voted
revised
Regulation

(20) 'witnessed testing' means actively observing the physical testing of the product under investigation by another party, to draw conclusions on the validity of the test and the test results. This may include conclusions on the compliance of testing and calculations methods used with applicable standards and legislation;

(21) 'factory acceptance test' means a test on an ordered product where the customer uses witnessed testing to verify the product's full accordance with contractual requirements, before they are accepted or put into service;

"The Member State authority can do this verification using its own testing equipment.

If Factory Acceptance Tests (FATs) are planned for such transformers, which will test parameters laid down in Annex I of this Regulation, the Member State authorities may decide to use witnessed testing during these FATs to gather test results which can be used to verify compliance of the transformer under investigation. The authorities may request a manufacturer to disclose information on any planned FATs relevant for witnessed testing.

If the result referred to in point 2 (c) is not achieved, the model and all equivalent models shall be considered not to comply with this regulation. The Member State authorities shall provide all relevant information to the authorities of the other Member States and to the Commission without delay after a decision is taken on the non-compliance of the model".



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Improve transformers standards for Ecodesign

ECOS. Nerea Ruiz
12-02-2019
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Why?

- Harmonised standards to support the requirements within the Ecodesign regulation.

How?

- Adopting a standardisation request to develop standard(s) to cover all possible testing options **(including witness testing and in-situ)**.



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Insert clauses to deter circumvention

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Brussels

Why?

- Bypassing Ecodesign regulations and/or test results impacts on the anticipated energy and environmental savings, undermined market competitiveness, etc.

How?

- Including an article in the transformers Ecodesign regulation that explicitly bans circumvention.

« Advertising »

ECOS. Nerea Ruiz
12-02-2019
Brussels

Summary of Findings from INTAS

- Policy recommendations
- Best practice and experiences in verification procedures
- Evaluation of costs, benefits of compliance verification
- For both transformers and fans



More information

about the INTAS project
and its results:
www.INTAS-testing.eu

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Effective market surveillance for ecodesign: focus on large industrial products

12 February 2019, Brussels





The European Association of the Electricity Transmission
and Distribution Equipment and Services Industry

Our involvement on

MARKET SURVEILLANCE

Organisation with Intas

Michel Sacotte (Wg Sub-Technical) -

WG Transformers P DOGNY Chairman

Secretary J Parsons

ABOUT T&D EUROPE

- T&D EUROPE is the European **association** of the electricity **transmission**

Since 2016, T&D Europe membership is open to T&D sector companies



ABOUT T&D EUROPE

T&D EUROPE is the European association of the electricity transmission and distribution equipment and services industry

Our scope includes the **complete range of products** and **services** necessary to **transport and distribute electricity** in **high and medium voltage**, between the producers and the end users

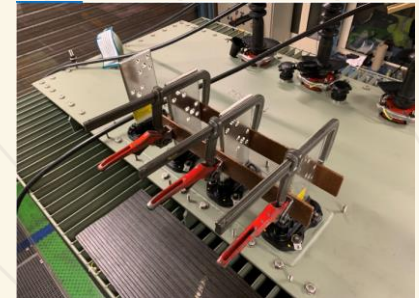
T&D Europe members provide the full range of **grid technologies**, including advanced, **smart systems** suitable for interaction with **renewable energies** and ICT

The companies represented by T&D Europe account for a production worth over **€25 billion**, and employ over **200,000** people in Europe

DIFFICULTIES OF MEASUREMENT AND IMPACT ON COST

- Measurement of losses and efficiency
 - The measurement is carry out with bars short circuited with often low voltage
 - The measurement of no load losses on distribution transformers is done in 400v leading to large deviation of losses ~3% for small deviation of voltage ~1%
 - The process use multiples apparatus of measurements(Voltmeter, Ohmeter, Wattmeter...) that can lead to uncertainties and cheating.
 - It is practically impossible to carry out measurement on site due to the available rated power as well the accuracy of the voltage and the equipment needed

- Small difference in losses (No load losses and load losses) or in Efficiency(PEI) lead to large difference of price
 - Eg. 10% of losses increase, gives ~5% or more of cost reduction
 - Eg. 0,048% Difference PEI gives 6% or more of cost reduction



16MVA		
No laod	Load Losses	PEI
12320,00	77000,00	99,615
10784,00	67400,00	99,663
-12%		0,048

CURRENT NON-COMPLIANT PRACTICES >10%?



- documentation by excluding transformers from regulation
 - Supplying Solar farm
 - Excluding transformers in ONAF
 -
- specifications
 - Transformers with cooling system (Losses in AN..)
 - Transformers with highest insulation classes (3,6kV)
 - Transformers with multiple voltage (20/15 without reasons)
 - Transformers with other thermal classes (85K instead of 60K)
- brown field concession and verification?
 -
- measurement



COMPLIANT NO COMPLIANT

630kVA ECO-DESIGN

IMPACT ON THE TRANSFORMER MARKET

- Without market surveillance
 - The market becomes unfair and more and more non-compliant with worse performance for transformers
 - Bad Importer as well bad manufacturers can disturb the market easily. European manufacturers disappearing.
- Transformers manufacturers request to have
 - More control on the transformers even by FAT with a third party
 - More control by random way by taking sample in the factory and with measurement in external accredited laboratory
 - Control in situ when possible
 - Strict control on transformers imported in Eu by measurement on sample and FAT
 - Solid verification of concession on brown field case.

CONCLUSION

- Why effective market surveillance for eco-design is essential to protect compliant manufacturers.
 - Process of assessment of losses is complex and can lead to uncertainties
 - Practice of non-compliant can be possible and already deployed
 - We need more control in factory as well on external laboratory
 - Market surveillance should be applicable to internal manufacturers as well as importers
 - The flux of transformers coming in Eu must be carefully checked to avoid to disturb market by non compliant practice
 - Cenelec starting to prepare a Technical report to guide the way to make an assessment of energy performance



Michel Sacotte

Schneider Electric

VP Prescription and standardisation

Michel.sacotte@Schneider-electric.com



Effective market surveillance for ecodesign: focus on large industrial products

12 February 2019, Brussels





The New Regulation on Compliance and Market Surveillance

***INTAS Final
Conference – 12
February 2019***

Goods Package (December 2017)

- ***Proposal on Mutual Recognition***
 - Provisional agreement between EP and Council in November 2018
 - Voted in the EP Plenary on 14 February 2019
- ***Proposal on Compliance, Enforcement and Market Surveillance***
 - Provisional agreement between EP and Council on 7 February 2019
 - To be voted in the EP Plenary in April 2019

Regulation on Compliance and Market Surveillance (1)

- ***Two major parts:***
 - **Compliance and Market Surveillance:** covers all harmonised non-food products (legislation in annex)
 - **Controls at the external borders:** covers all products, unless more specific provision in other Union legislation
- ***Replaces Articles 15 to 29 of Regulation (EC) No 765/2008***

Regulation on Compliance and Market Surveillance (2)

- ***Objectives:***

- **Improve compliance**
- **Strengthen market surveillance**
- **Organise controls at external borders**
- **Updating the framework to cover modern supply chains and online sales** (throughout the Regulation)

First objective: Improve compliance

- **Information to businesses:** Product Contact Points (+ Single Digital Gateway)
- **Agreements on joint activities:**
 - Between market surveillance authorities, other authorities and business and consumer organisations;
 - Results may be used for investigations
- **Distance sales:** products deemed to be made available when offer is targeted at end-users in the EU
- **For some products:** products may only be placed on the market when a **business in the EU** can supply declaration of conformity and technical documentation

Second objective:

Strengthen market surveillance (1)

- **Organisation, activities, powers and obligations of market surveillance authorities**
- **A 'Single Liaison Office' for market surveillance per Member State** to represent the coordinated position of Member States
- **Peer reviews** of market surveillance authorities
- **National Market Surveillance Strategies**: every 4 years
- **Union testing facilities** to enhance laboratory capacity for market surveillance authorities

Second objective: Strengthen market surveillance (2)

- **Mutual assistance between market surveillance authorities**
 - Requests for information
 - Requests for enforcement measures
- **EU Product Compliance Network**
 - Representatives from Member States, Single Liaison Offices, ADCOs and Commission
 - General horizontal issues of market surveillance
- **Administrative Coordination Groups (ADCO)**

Third objective: Controls at external borders

- Risk analysis and information sharing
- Customs authorities suspend 'release for free circulation' when they suspect non-compliance
- Market surveillance authorities have 4 working days to react
- When found non-compliant, destruction allowed; always labelled as non-compliant to prevent entering EU in different ways
- International cooperation

Next Steps

- **Formal adoption by EP and Council in April-May**
- **Application of EU Product Compliance Network and Financing: 1 January 2021**
- **Application of other provisions: Summer 2021**
- **Financing: Single Market Programme**

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Impact of INTAS on energy efficiency



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Paul Waide
13-02-2019
Brussels

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What has INTAS achieved?

Paul Waide
13-02-2019
Brussels

The INTAS project:

- liaised with a very wide array of relevant stakeholders
- established current conformity verification capacity and practice
- assessed the levels of non-conformity
- identified the problems that need to be overcome
- developed market surveillance solutions and best practice guidelines
- pilot tested these and verified their viability
- developed policy recommendations to improve the situation
- provided programmatic support



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How much non-compliance is there?

Paul Waide
13-02-2019
Brussels

INTAS investigated the conformity of 42 transformer units with the Ecodesign requirements and found:

- ~ 1/3rd of units failed documentation inspection checks
- ~ 1/5th of units failed energy performance tests (*Failure type: 60% failed in declared values; 40% failed in limit compliance*)
- On average energy consumption of non-compliant units were 27% above permitted levels = i.e. average non compliance of 5.6% per product investigated

NOTE: The INTAS exercise was not an actual market surveillance action and so does not represent the legal compliance of the market with the Regulation 548/2014 requirements at the moment it was conducted



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How much non-compliance is there?

Paul Waide
13-02-2019
Brussels

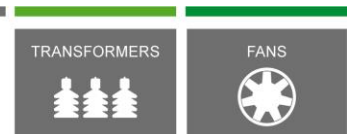
- BUT these were tests of units provided by producers who were willing to cooperate with the project
- They only concern transformers
- Therefore we still don't have a large sample to determine non-compliance among both product groups with non-self-selecting suppliers
- What about non-compliance among less cooperative suppliers?
- Anecdotal it seems likely/plausible that average non-compliance rates across both products is ~10% (as speculated at the project outset)



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What could be at stake for industrial fans?

Paul Waide
13-02-2019
Brussels

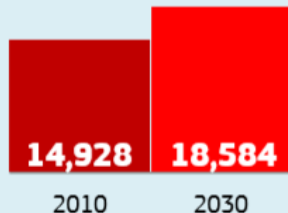
FACTS & FIGURES

Product: [FAN] Industrial Fans

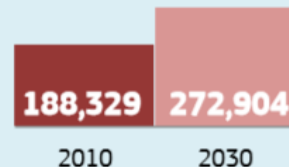
Measure(s): CR (EU) No. 327/2011

EFFECT
REGULATIONS

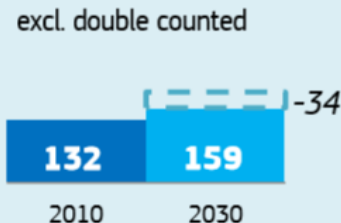
sales (x1000 units)



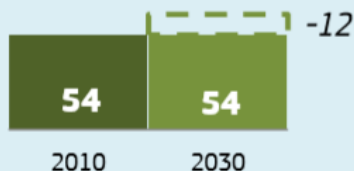
stock (x1000 units)



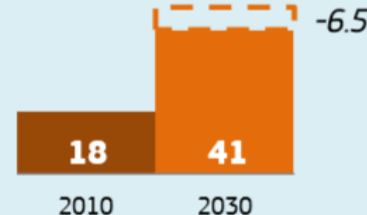
electricity [TWh/a]



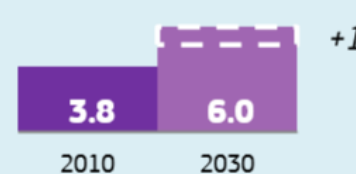
**GHG-emission
[Mt CO₂ eq./a]**



**consumer expenses
bn €**



**revenues
bn €**



If average consumption is 10% above the limit it equates to up to 16 TWh of extra consumption in 2030 (and 5.4 Mt CO₂) worth €3.5 billion. Half of ED savings!

What could be at stake for power transformers?

Paul Waide
13-02-2019
Brussels

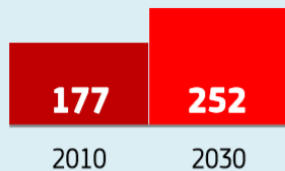
FACTS & FIGURES

Product: [TRAFO] Utility Transformers

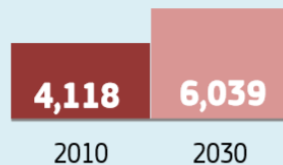
Measure(s): CR (EU) No. 548/2014

EFFECT
REGULATIONS

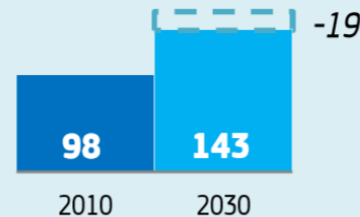
sales (x1000 units)



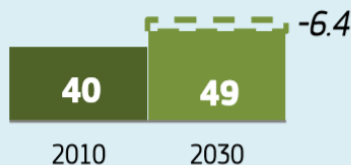
stock (x1000 units)



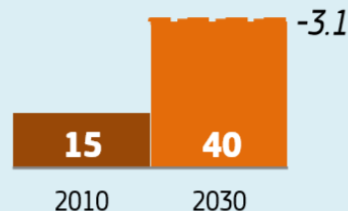
electricity [TWh/a]



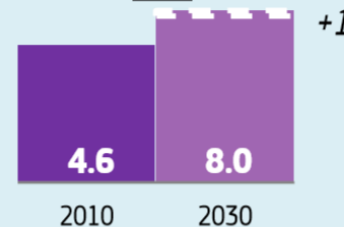
GHG-emission
[Mt CO₂ eq./a]



consumer expenses
bn €



revenues
bn €



If average losses are 10% above the limit it equates to up to 7 TWh of extra consumption in 2030 (and 2.4 Mt CO₂) worth €1.5 billion

How much non-compliance is there?

Paul Waide
13-02-2019
Brussels

- The previous figures are derived from post-processing the official impact assessments (the images are from the Ecodesign 2017 overall impact assessment study) but taking into account how much of the stock will be added to/renewed overtime and hence potentially be subject to market surveillance actions
- Evidently there is much uncertainty about the actual level of non-compliance in these products but INTAS seems to have established that an average of 5.6% above the regulations is the minimum and indicates that ~10% is quite likely

What could be at stake for all industrial products?

Paul Waide
13-02-2019
Brussels

(including electric motors, water pumps and compressors)

With improved ED compliance by 2030 we could be looking at:

- ~ 39 TWh/year of electricity savings
- ~ 13 Mt CO₂ savings per year
- ~ €8.5 billion energy bill savings per year

These ignore potential circumvention effects and does not include the savings impacts of VSDs for motors



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How much non-compliance can INTAS recommendations stop?

Paul Waide
13-02-2019
Brussels

- INTAS recommendations address: technical and procedural challenges, MSA resources and capacity, how conformity assessment and market surveillance is framed in Ecodesign regulations
- We have established that there has been almost negligible MSA activity for large industrial products so far but there is interest and MSAs have been seeking guidance from projects such as INTAS
- Already INTAS has led to some (but as yet insufficient) changes in regulations, to development of a clear set of procedures and clarity about technical development needs (e.g. standards)



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The biggest need is MSA resources

Paul Waide
13-02-2019
Brussels

- At present total MSA annual expenditure on ED market surveillance for large products across the EU is probably below €250k and certainly less than €500k
- If this figure could rise to around €3m the market surveillance impact would be significant and we would probably access a large part of the potential savings from improved conformity
- This may sound significant but it is 1 over 2.83 thousand of the value of the potential benefits i.e. the benefits outweigh the costs by a factor of 2.83 thousand
- Conservatively we could estimate that each €1 spent on surveillance should produce at least a €1000 of energy savings



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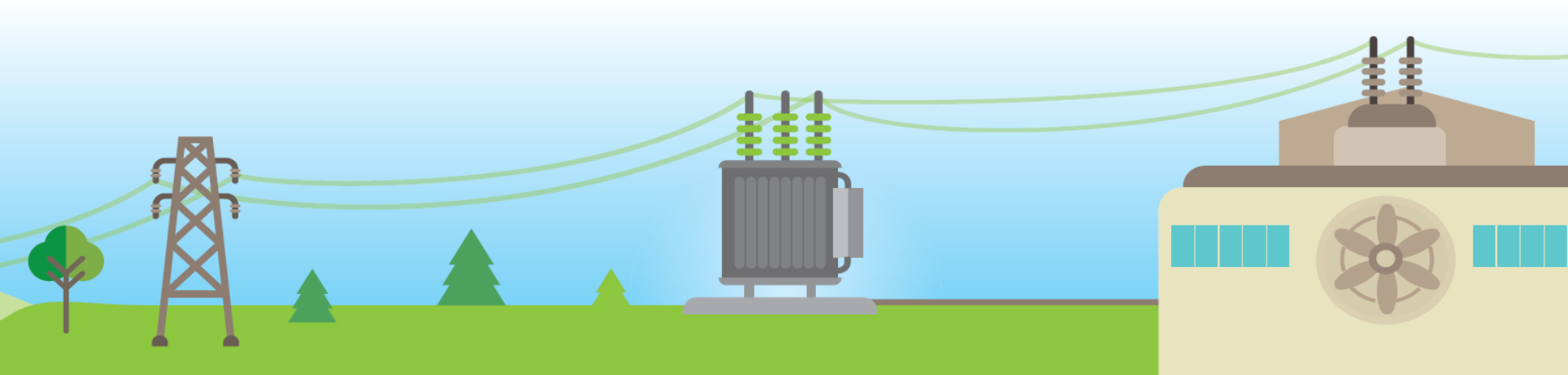
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Thank you!

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👉 Nerea Ruiz Fuente, ECOS
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Effective market surveillance for ecodesign: focus on large industrial products

12 February 2019, Brussels

