



The role of independent product testing in energy efficiency policy

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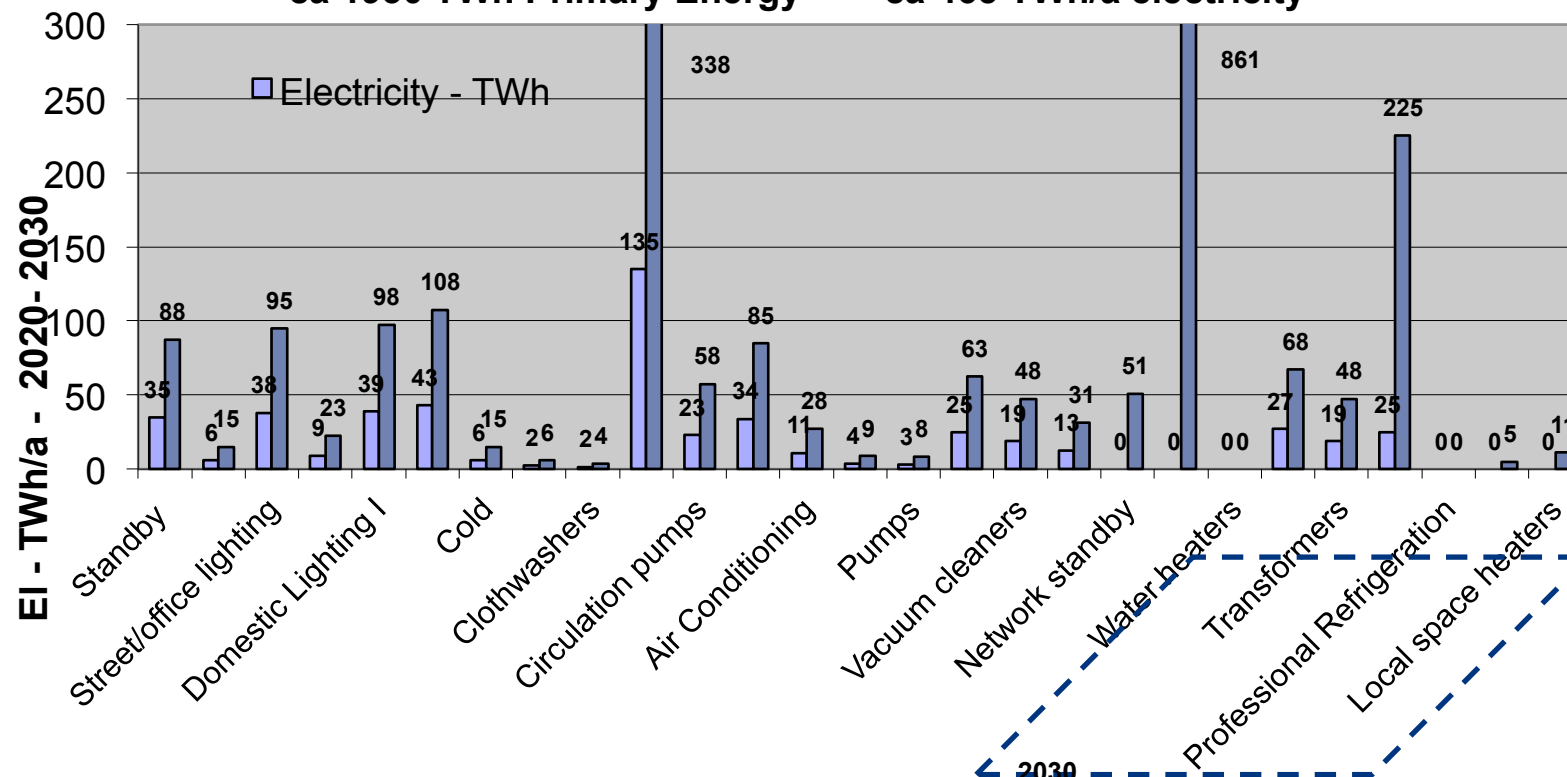
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 - formulating MEPS; market surveillance;
Information, training and other promotion activities;
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- **Part II: How to organise testing?**
 - EU overview; Swedish case study and discussion
on in-house lab capacity
- **Conclusions**

Ecodesign & Labelling, Savings 2020/2030 in EU *

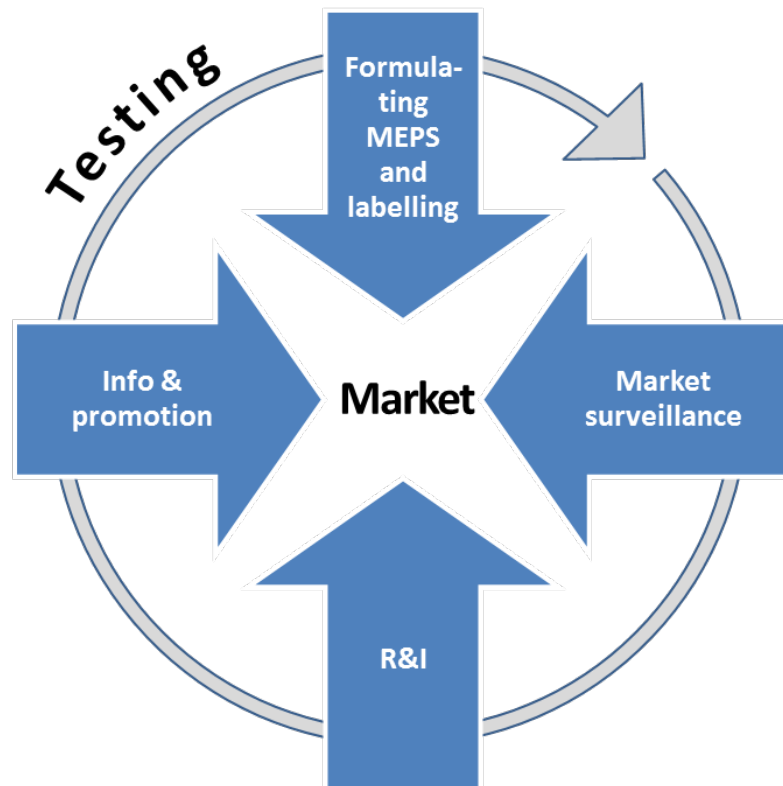
ca 1930 TWh Primary Energy ca 465 TWh/a electricity



* Swedish Energy Agency based on data from EU-Commission. Includes some double counting

If market surveillance is carried out

Testing for what?



When?

Standardized information not available

Suspicion about the quality of the information

- metrics and the stringency of the requirements
- appropriateness of the test methods in terms of verifiability

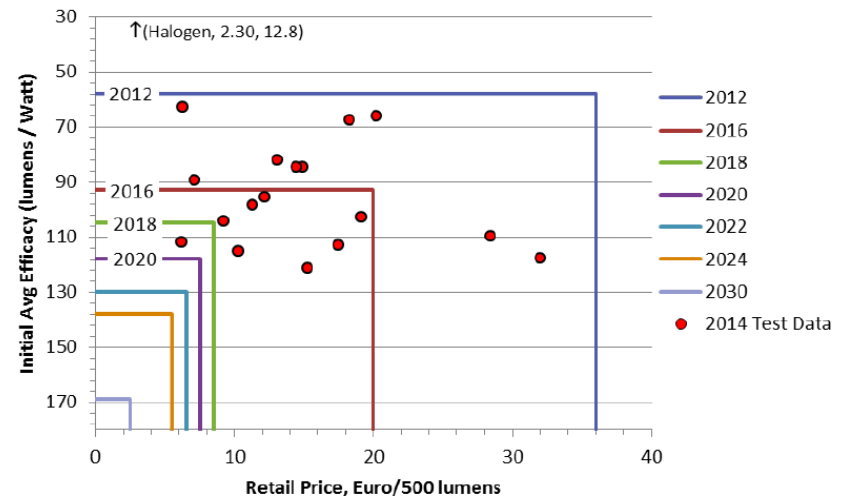
Develop technical guidelines
Transitional methods

New approaches incl. for complex products:

- Measurements *in-situ*, system approaches, screening tests, as well as control of technical documentation and inspections

Formulating MEPS and energy labelling requirements

- “To test is to know”
- Supplement data available for the member states and commission
- In rapidly evolving technology it is important to have the latest data
- Stage 6, domestic lighting 244/2009



Bennich et al., Panel 7,
Friday 11 am, 7-337-15,

Formulating MEPS and energy labelling requirements

Table 1. Examples of tests results performed or commissioned by SEA used as contributions to the EU decision process.

Product	Defining ecodesign requirements and energy labelling classes	Supporting Implementation and market surveillance
Lighting	Test report assesses the proposal to delaying the 2016 ban on general service halogen lamps. Compiles own tests and available test reports. (Bennich et al., 2014).	Screening used help to target segments with a higher rate of non-compliance.
Room air conditioners	Level of the requirements: Seasonal Coefficient of Performance (SCOP) and noise.	Investigating unclarities in the test method, namely regarding the settings to use for the test.
Heat pumps	Appropriateness of the test method, level of the requirements.	Contribution to the Implementing guide, test of transitional methods.
Exhaust air heat pumps	Level of the requirement. Adequacy of test method.	
Solid fuel Boilers	Level of requirements – emissions and energy efficiency.	
Electric water heaters	Test accuracy in the test method. Level of the requirements.	
Variable Speed Drives	Level of the requirements. Adequacy of the IE-classes in the proposed standard FprEN 50598-2. (DTI and STEM, 2015)	
Range hoods	Parameter (total extracted air volume), metrics, and level of the requirements. Contribution for the revision to a new standard on odour removal.	Contribution to the Implementing guide, test of transitional methods.

Testing as an information tool



- During 2009-2013 the SEA tests generated 1710 articles (retriever analysis)
- Web statistics SEA test pages, 366' visits during 2014
<http://www.energimyndigheten.se/tester>
- Tests also used by the municipal energy advisors

Testing for Market surveillance

Table 2. Market surveillance tests carried out by the Swedish Energy Agency in 2014.

	No of regulations	No of products
In-house	6	51
External national labs	2	24
External foreign labs	2	12
Total	10	87



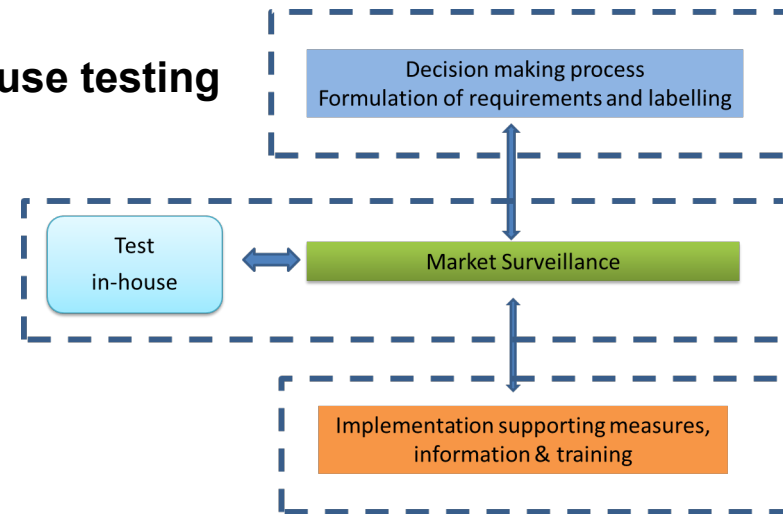
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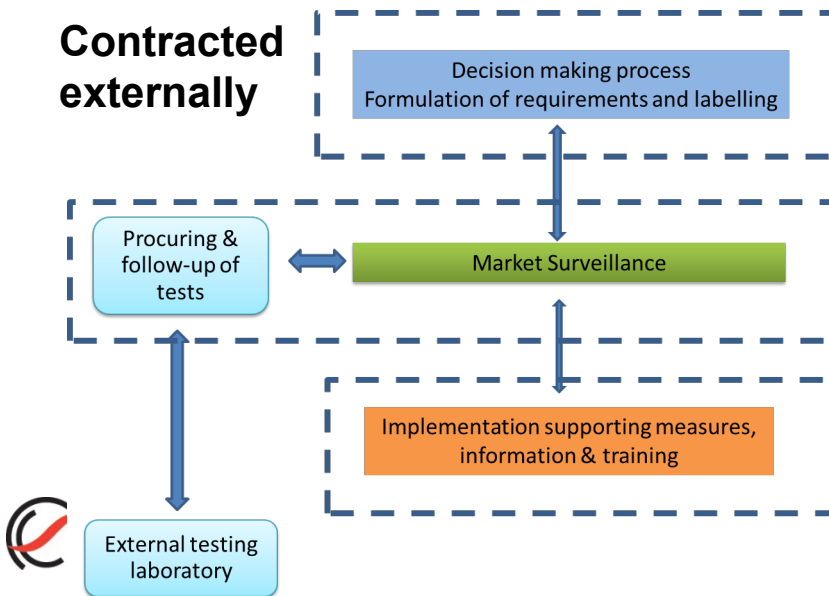
Part II: How to organise testing?

- Most common: Focus on market surveillance
- 3 basic types

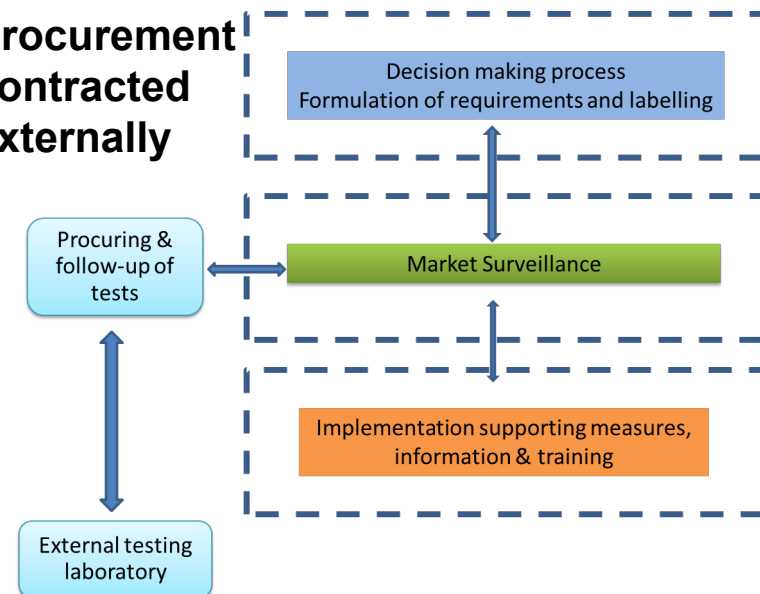
In-house testing



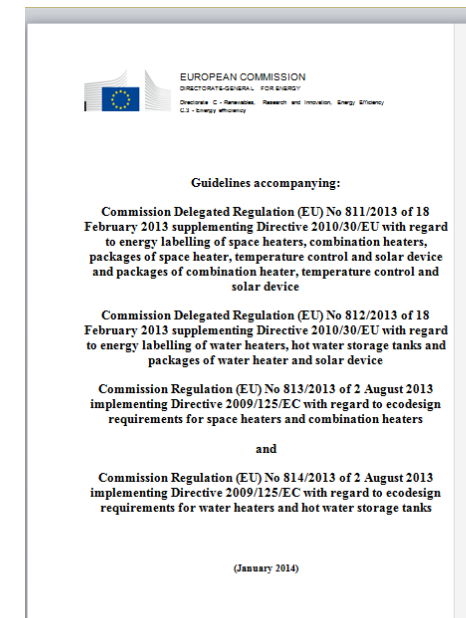
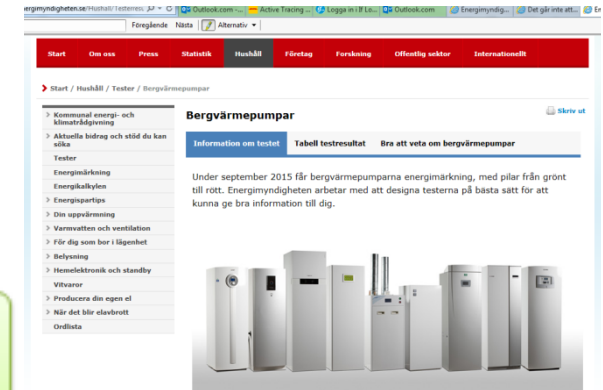
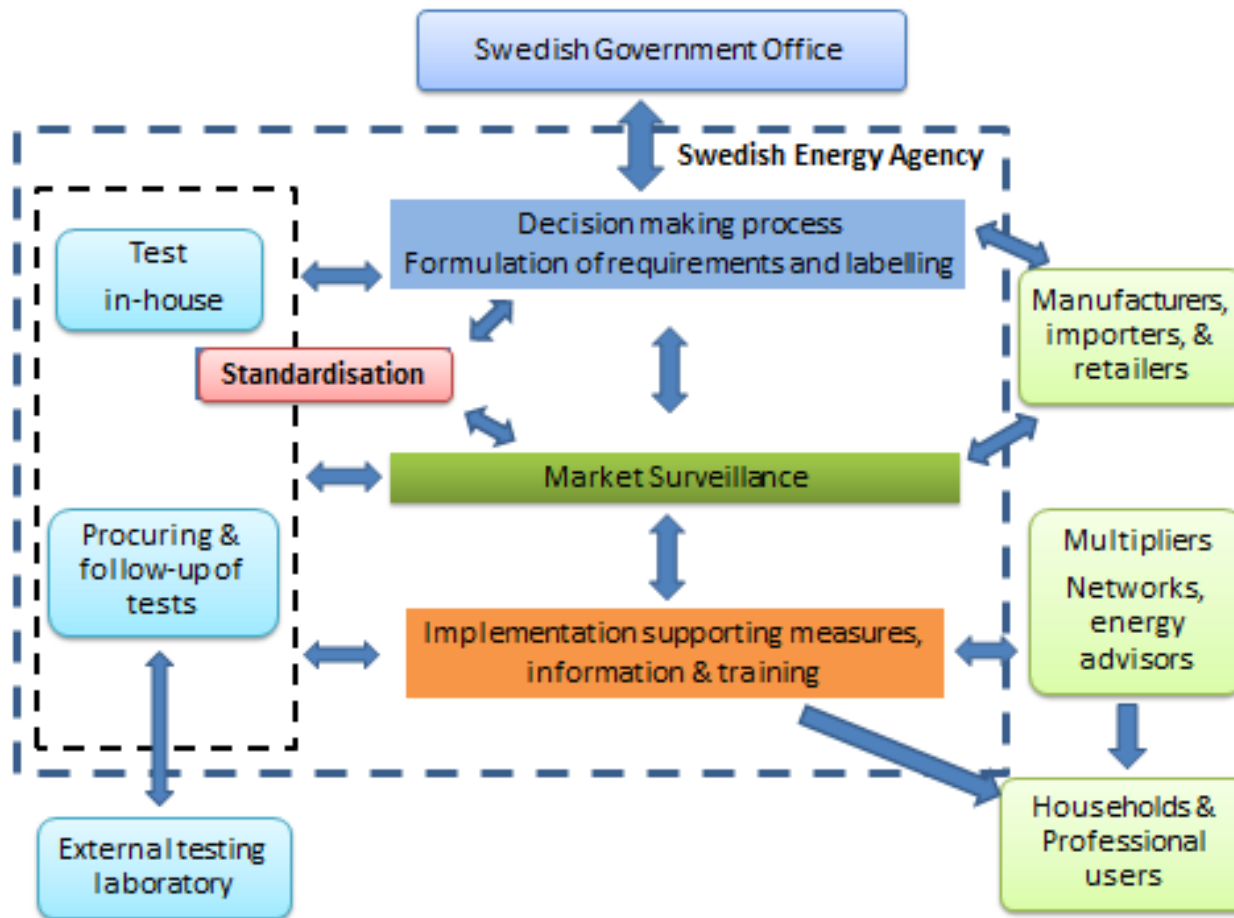
Contracted externally



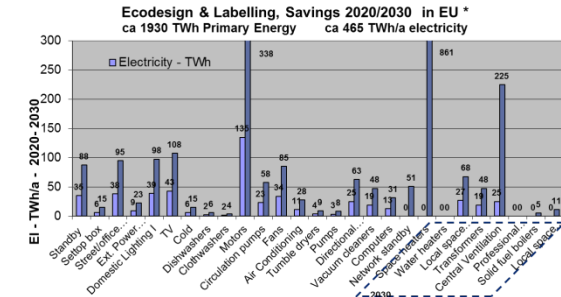
Procurement contracted externally



How to organise testing? The Swedish case

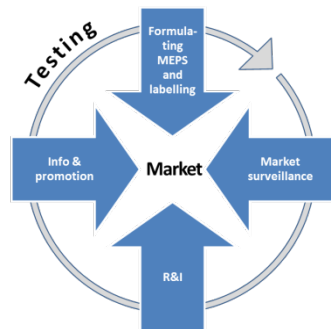


Conclusions



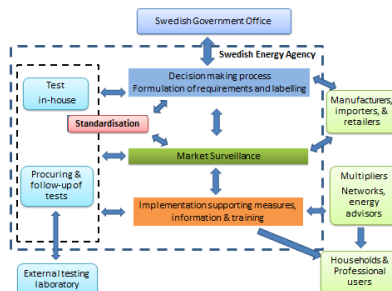
Increased need for testing

- Quantity of regulated products
- Complexity; product to system, resource efficiency



Authorities need expertise in testing and metrics

- Formulating the requirements & ensuring their implementation and their enforcement
- Participate in standardization processes



in-house testing generates this know-how

Thank you!

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