How has the European White Goods market changed in the past 10 years? – Analysis based on sales data reveals constant improvements, contradictory trends, and big successes for a new technology

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Data source: GfK

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What kind of data?

• Sales data for refrigerators, washing machines and tumble driers, 2004 – 2015: EU-21, France, Germany and Italy
• For each energy class: sales and average energy consumption, size and price (washing machines: also water consumption)
• Data was obtained from GfK, a professional market research company
• Additionally: public Swiss sales data on energy classes, 2004 - 2015
Why?

• To support Energy Label and Ecodesign revisions for refrigerators, washing machines and tumble dryers with sound data

• To allow countries to take informed decisions in ErP votes and on national product policy strategies and campaigns

• To demonstrate the potential of systematic market monitoring based on sound sales data (this study is a follow up of a previous study)
Refrigerators

- Less A++ sales than in the EU in FR and IT, more in DE
- Impact of Swiss MEPS (A++ since 2013) shows
Refrigerators (II)

• National differences: Energy consumption higher than EU average in IT (+34 kWh), in FR (+9 kWh), lower in DE (-59 kWh)
• Reasons: efficiency is lower (FR+IT) / higher (DE), but refrigerators are also smaller in DE
Despite this size bias, more energy-efficient refrigerators save a lot of energy on average: while A++ refrigerators save 51 kWh/year (21%) over A+ models, A+++ save 101 kWh/year (41%).
Average prices of refrigerators, according to energy class

Average prices of refrigerators sales, 2015

<table>
<thead>
<tr>
<th>Energy Class</th>
<th>EU</th>
<th>France</th>
<th>Germany</th>
<th>Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+++</td>
<td>732</td>
<td>937</td>
<td>704</td>
<td>910</td>
</tr>
<tr>
<td>A++</td>
<td>596</td>
<td>650</td>
<td>537</td>
<td>727</td>
</tr>
<tr>
<td>A+</td>
<td>408</td>
<td>397</td>
<td>358</td>
<td>459</td>
</tr>
</tbody>
</table>

Data: GfK, Graph: Topten.eu
Refrigerators (V) – Total costs

Europe

- Electricity savings (0.20 €/kWh) do not compensate for higher purchase cost in France
Refrigerators: conclusions

Large energy saving potential:
A++ as MEPS: 7 900 GWh in the EU, 1 670 GWh in France, 303 GWh in Germany and 997 GWh in Italy (if in 2015 all refrigerators sold had been in class A++, over a 15-year lifetime)

Recommendations:

• New Label classes A-G

• Simplified and more transparent EEI formula: 1 reference line is sufficient, no ‘correction factors’ for energy-consuming extra features

• Future MEPS at A++ level
• EU: > 50% of sold washing machines in top class A+++, only four years after new label introduction
• Inferior efficiency in FR and IT, higher in DE and CH
Washing machines (II)

- Tier 1 (2010) banned Classes B; Tier 2 (Dec 2013) banned Classes A
- The most energy-efficient WM model exceeds the A+++ threshold by 50%. Clearly, MEPS and Label classes defined … the current revision is needed.
• While the exact values have to be read with caution, … shows trends before 2011 and after.
Energy consumption differences between classes are minimal.
Washing machines (V)
Washing machines: conclusions

- Unclear correlation between good efficiency classes and low energy consumption
- Washing machines in good efficiency classes are mostly large machines (≥ 7kg)
- Large washing machines bear the risk of wasting water and energy
- With the current EEI formula, it is not possible to introduce more stringent MEPS without banning small and low-consuming models
- Hence, the EEI formula needs to be revised to better link good efficiency to low energy consumption
Tumble driers

- 47% heat pump driers (classes A and better) sold in EU in 2015
- Large differences between countries: 18% in FR, 75% in DE, 93% in IT
- Swiss MEPS leave only classes A+ and better on the market since 2014
Tumble driers (II)

• Heat pump driers save > 50% energy
• Class B consumes more than C (small efficiency improvement, larger drums); Class C has been banned since November 15
• Key that consumers do not choose B, but A+ and better instead!
Despite higher purchase costs, heat pump driers save total costs to consumers, thanks to their low electricity consumption.
Tumble driers: conclusions

• Good efficiency classes (A+ to A+++ ) consume less energy and are economical in terms of total costs

• Ecodesign tier 2 (class B since Nov. 2015) has an energy-saving effect only if consumers do not switch to class B, but to classes A+ and better instead

→ Promotions of heat pump driers

• Large saving potentials: 5 800 GWh in EU, 1 600 GWh in France, 550 GWh in Germany and 16 GWh in Italy (had only A+ driers been sold in 2015; over a 15 year lifetime 15)

• EU market is ready for future MEPS at A+ level, but not all individual countries where high purchase prices will be a barrier
Synthesis

• Market monitoring reveals market trends, national differences, problematic aspects and saving potentials
• On a regular basis it would allow policy makers to launch improvements and Label updates on time, and to base decisions on sound data.
• The planned EU product database will improve the market overview, but it will not allow to weight models according to their sales. Sales-based market monitoring could complement the DB, and it could start now.
• Results need to be compared to measurement campaigns
• Research will start in France to better understand its surprisingly “poor” situation
Thank you!

Full report available on

www.topten.eu/Documentation.html

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