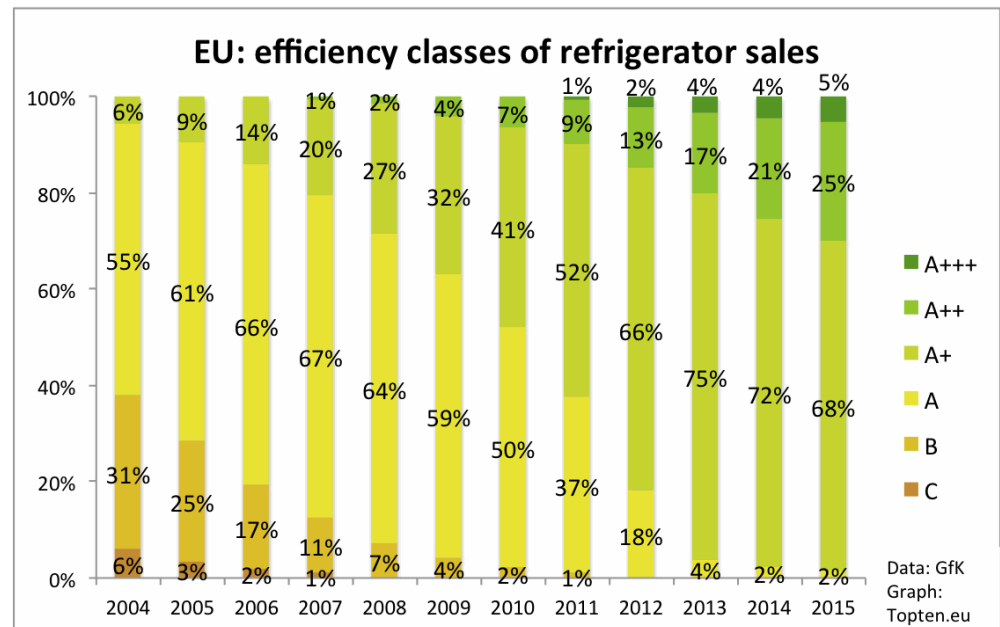


How has the European White Goods market changed in the past 10 years? – Analysis based on sales data reveals constant improvements, contradictory trends, and big successes for a new technology

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Data source: GfK

Financial support:
ADEME



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 driers 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)

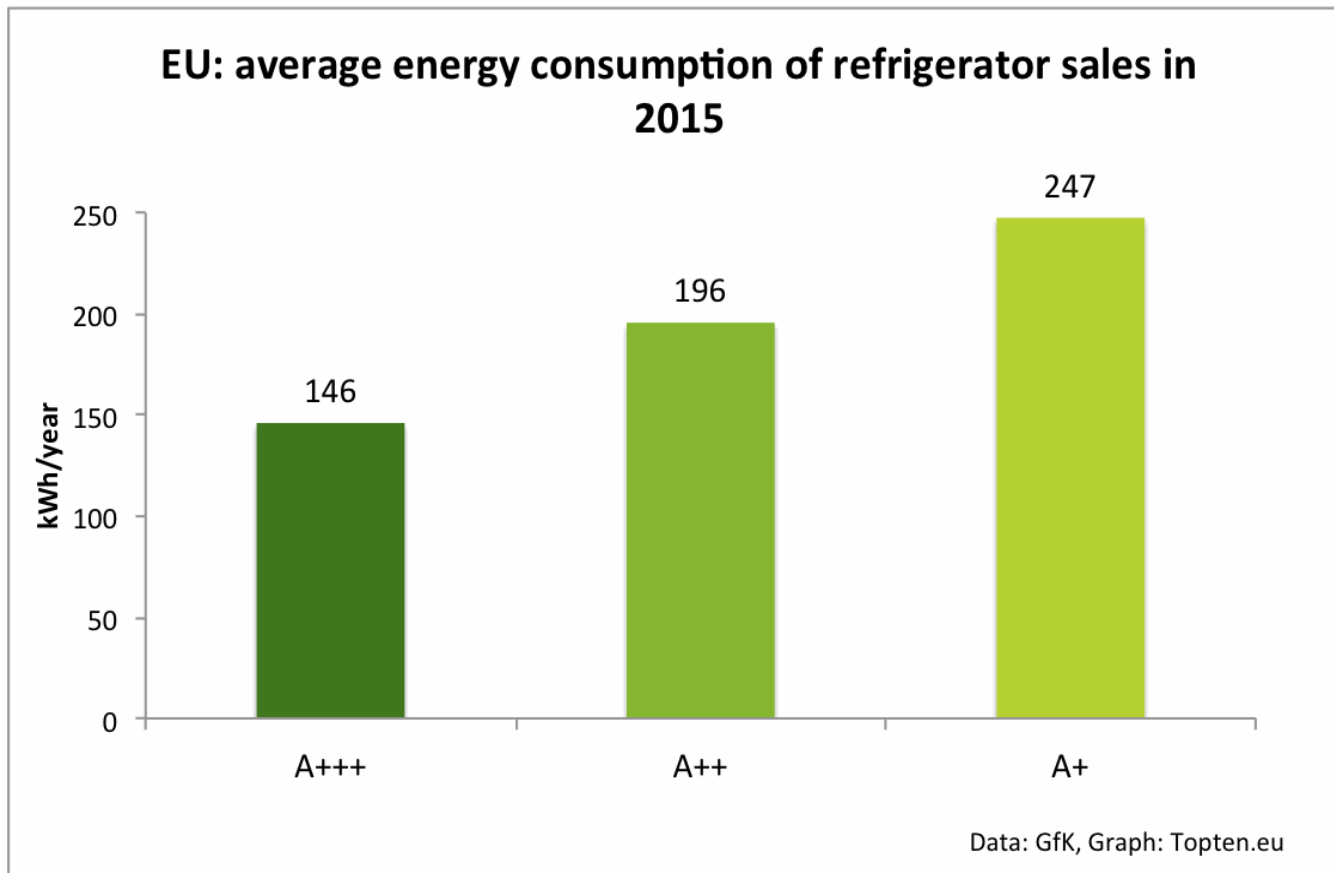
Refrigerators

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

Refrigerators (II)

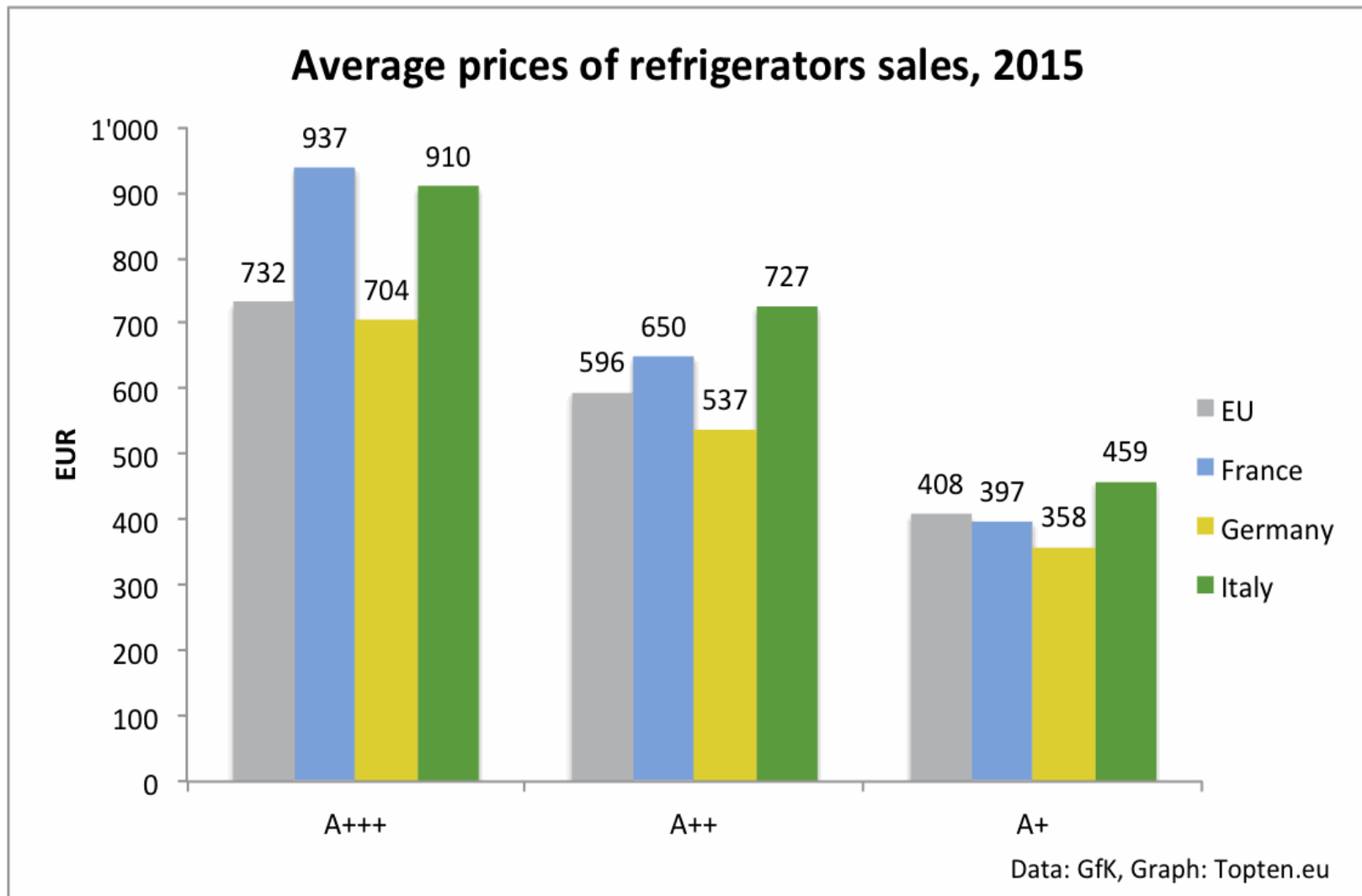
- National differences: Energy consumption higher than EU average in IT (+34 kWh), in FR (+9 kWh), lower in DE (- 59 kWh)
- Reasons: efficiency is lower (FR+IT) / higher (DE), but refrigerators are also smaller in DE

Refrigerators (III)



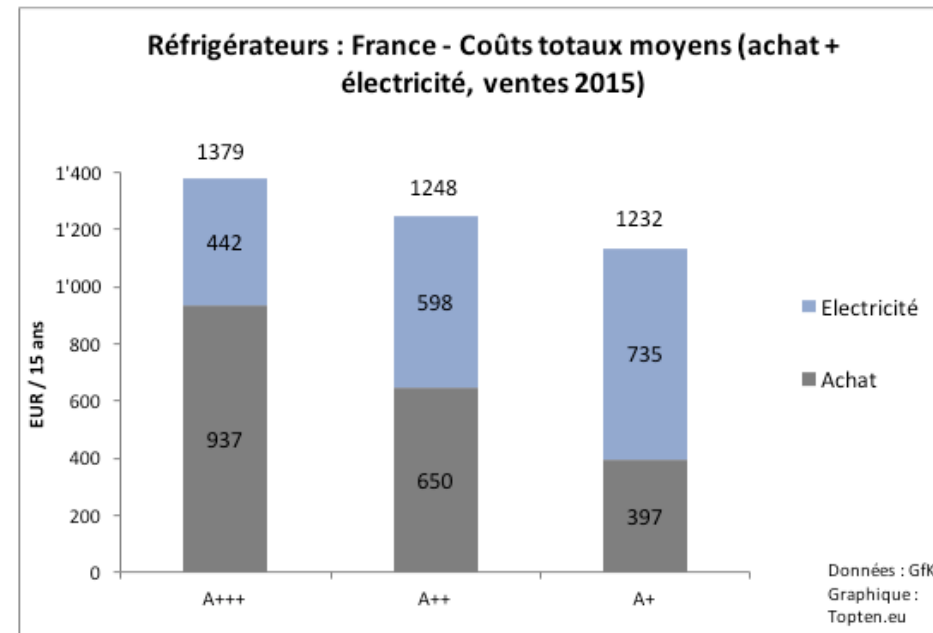
- Despite this size bias, more energy-efficient refrigerators save a lot of energy on average: while A++ refrigerators save 51 kWh/year (21%) over A+ models, A+++ save 101 kWh/year (41%)

Average prices of refrigerators, according to energy class



Refrigerators (V) – Total costs

France



Europe

- Electricity savings (0,20 €/kWh) do not compensate for higher purchase cost in France

Refrigerators: conclusions

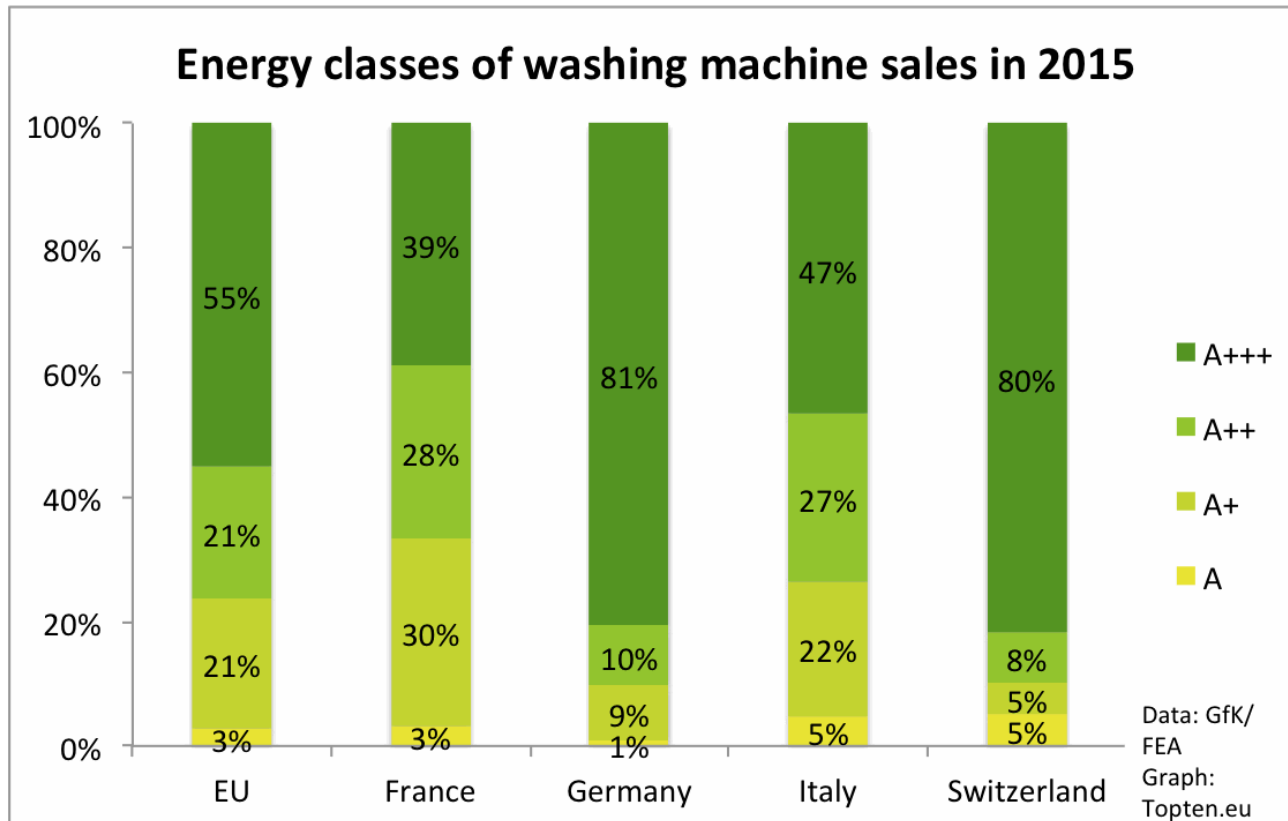
Large energy saving potential:

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 :

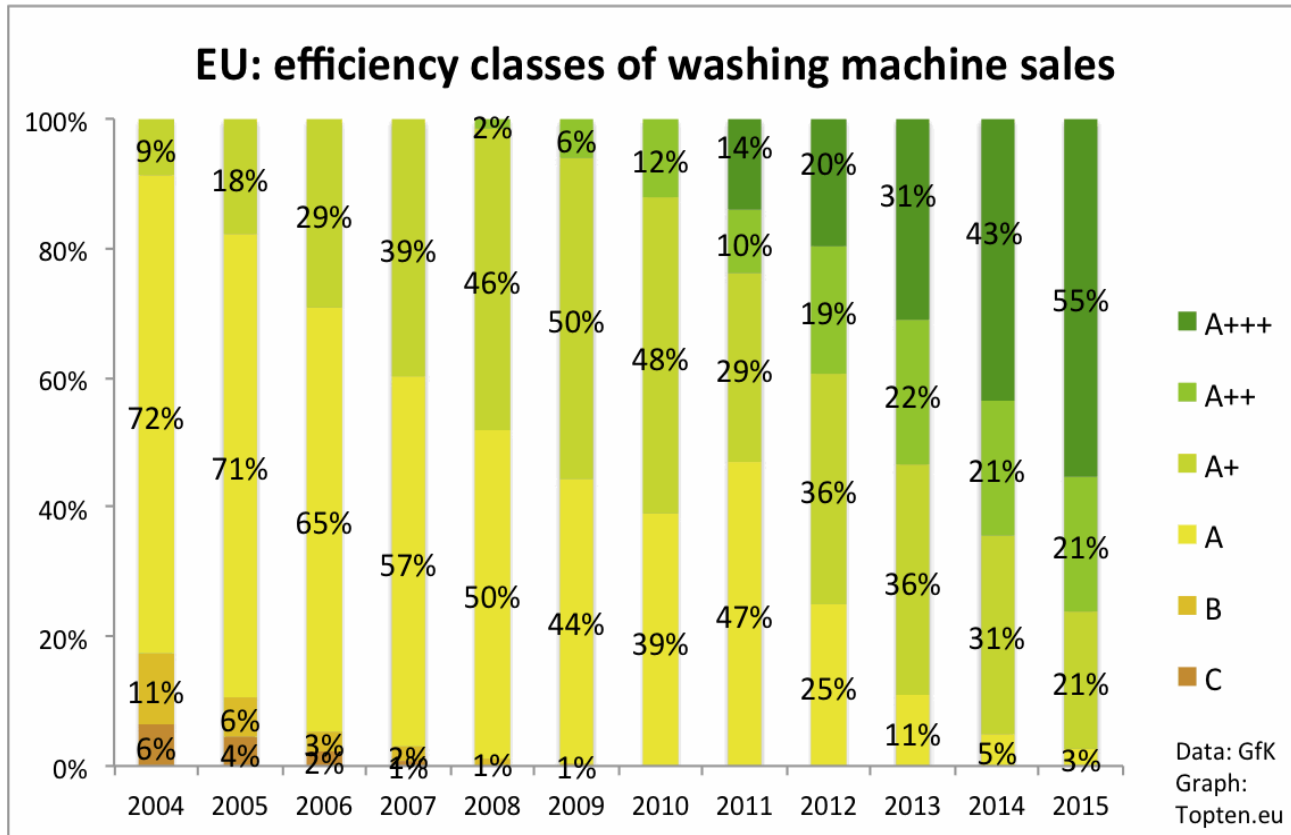
- New Label classes A-G
- Simplified and more transparent EEI formula:
1 reference line is sufficient, no 'correction factors' for energy-consuming extra features
- Future MEPS at A++ level

Washing machines



- 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)

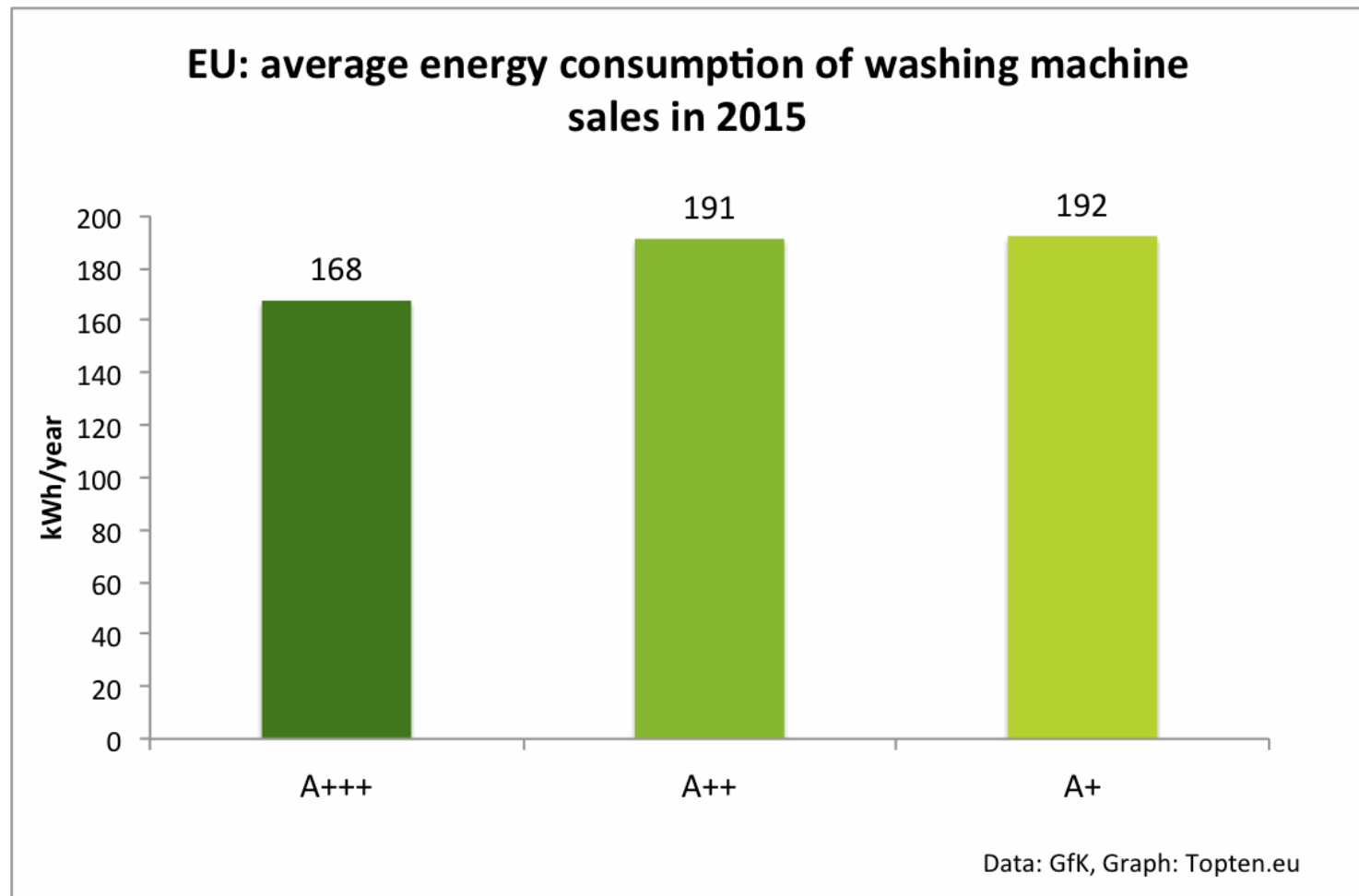


- Tier 1 (2010) banned Classes B; Tier 2 (Dec 2013) banned Classes A
- The most energy-efficient WM model exceeds the A+++ threshold by 50%. Clearly, MEPS and Label classes defined ... the current revision is needed.

Washing machines (III)

- While the exact values have to be read with caution, ... shows trends before 2011 and after.

Washing machines (IV)



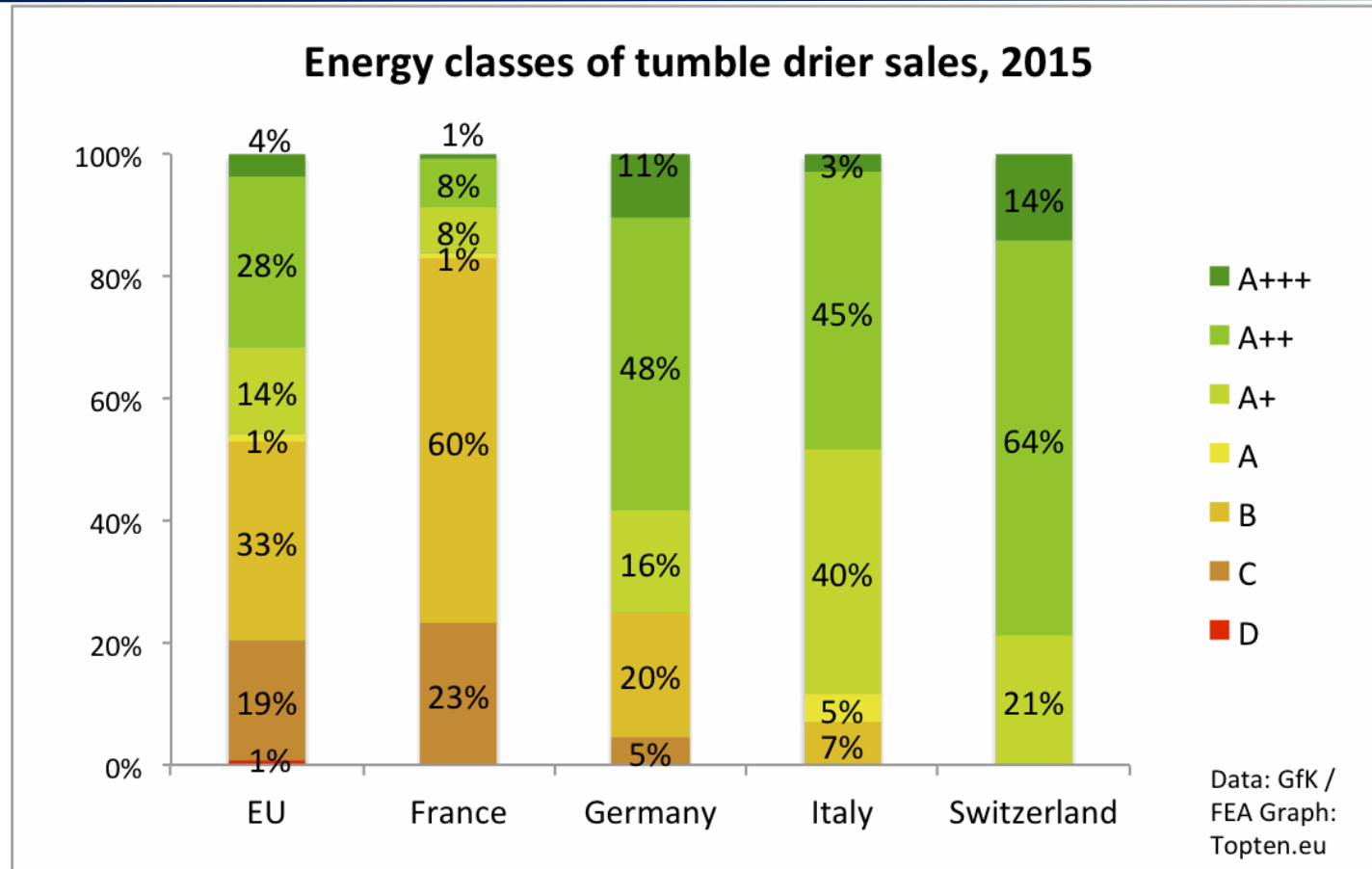
Energy consumption differences between classes are minimal.

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 ($\geq 7\text{kg}$)
- 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

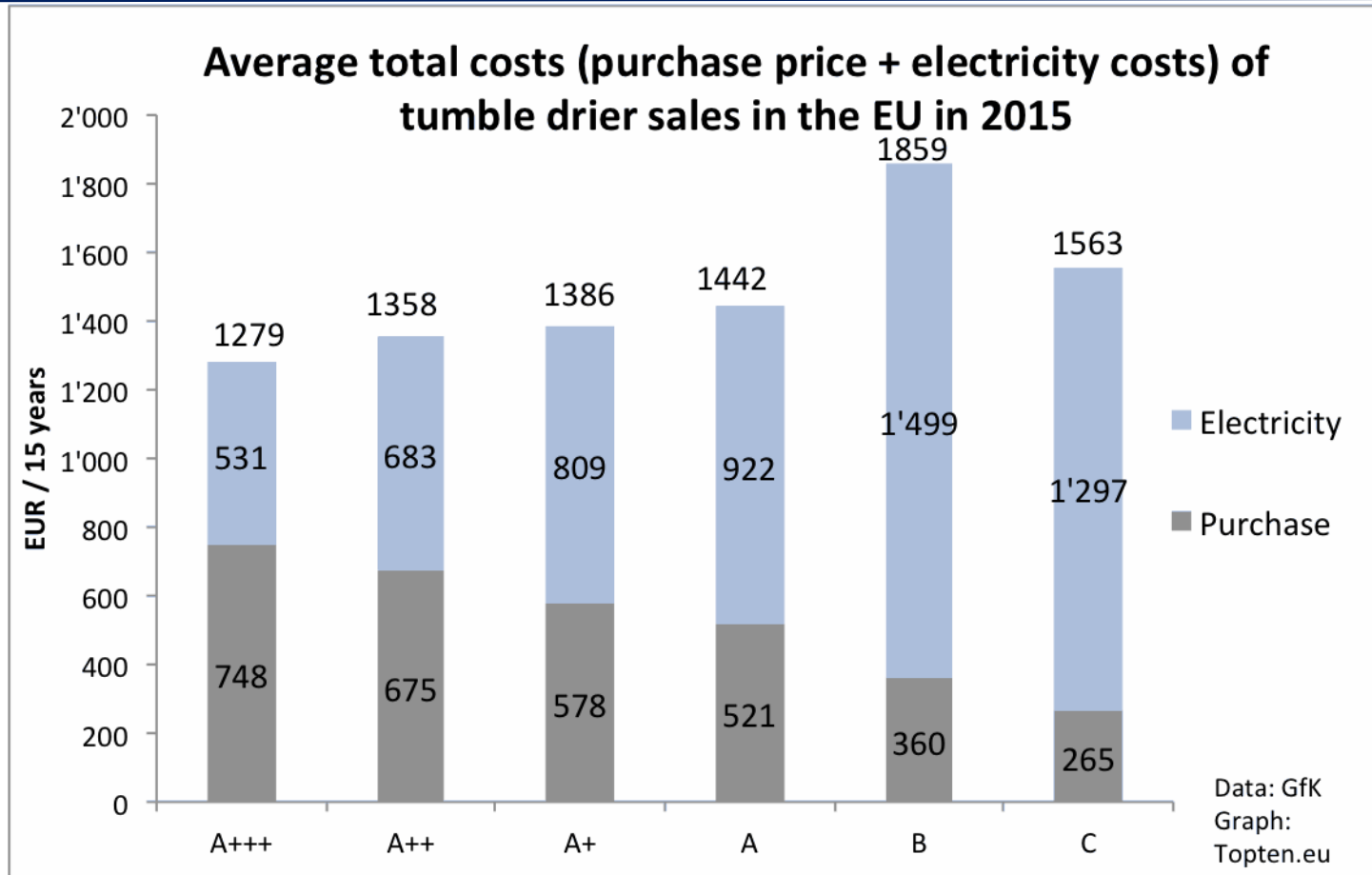


- 47% heat pump driers (classes A and better) sold in EU in 2015
- Large differences between countries: 18% in FR, 75% in DE, 93% in IT
- Swiss MEPS leave only classes A+ and better on the market since 2014

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 !

Tumble driers (III)



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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