

**Evaluating soft measures.
Potential impacts of a web-based information tool about
energy efficient products**

ECEEE Summer Study
Panel 8: Monitoring and Evaluation
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The object of our evaluation is **Topten**, a web-based transformation tool to bring more energy efficiency on the market of products

- Provides selections of **the most efficient products** available on the market.
- Addresses **four focus areas**: Mobility, appliances, electronics and building components
- The selections are displayed on **17 websites** managed at national level.

topten.eu Best Products of Europe

Navigation: About us Partners Info Contact Sitemap

Search: Enter search ...

Categories: Cars Household Lighting Office Equipment Consumer Electronics Building Components Professional Refrigerators

You are here: Home » Household » Refrigerator Freestanding » 1 door without freezer

Recommendations Household refrigeration Selection Criteria Household Refrigerators XLS Download

Best products in your country

News: Our new [market monitoring report](#) shows market trends for refrigerators, washing machines and tumble driers up to 2014, based on sales data. » [full report](#) / [short summary version](#) (June 2015)

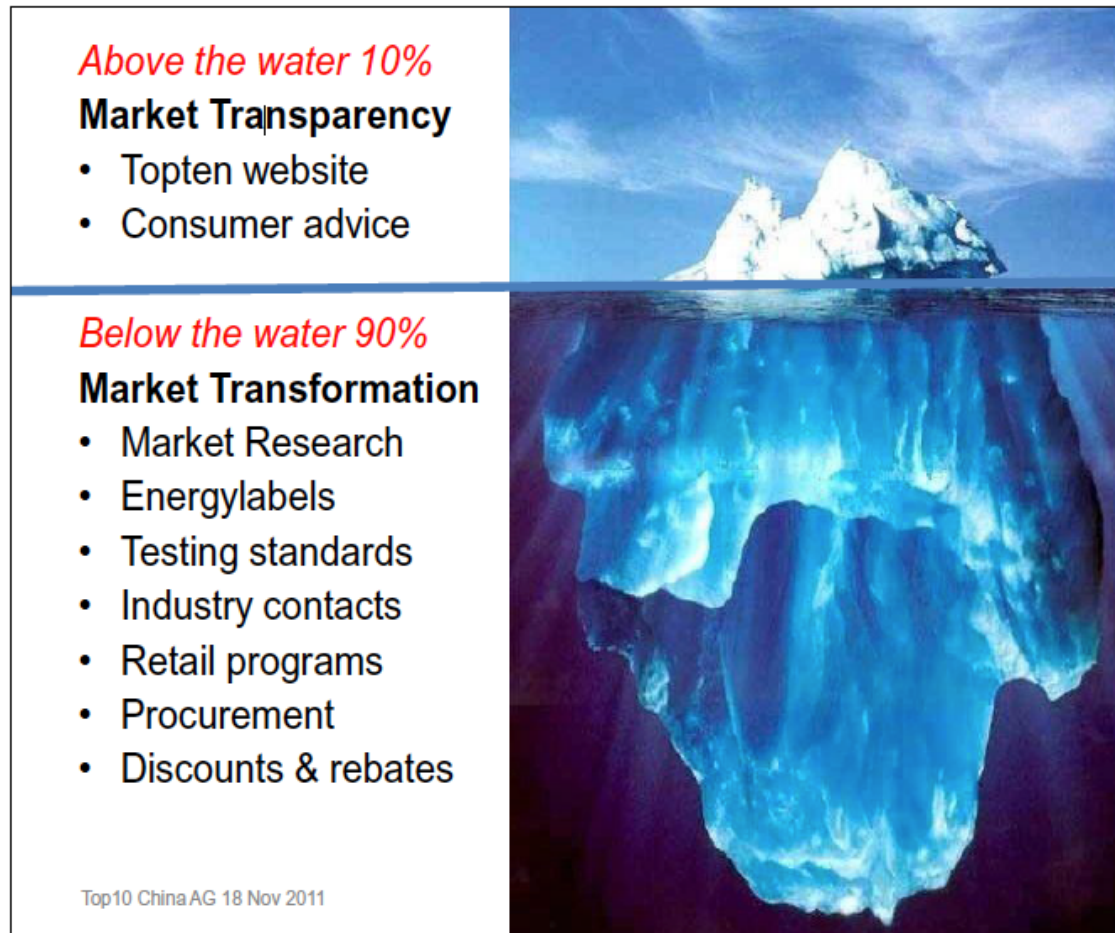
The IEE project YAECl shows: information on the **yearly energy costs of products** at the point of sale can help saving energy. » [more information](#) (May 2015)

The EU postpones the ban of inefficient class C halogen lamps to 2018 and misses energy savings of around 33 TWh

Brand	AEG	Electrolux	Gorenje	Bosch	Siemens	Siemens	Bosch	Liebherr	Liebherr	inefficient model
Model	S73100KDX0	SC 300	R 6093	KSV29VW40	KS29VW40	KS36VW40	KSV36VW40	TP 1720	TP 1760	
Electricity costs (€ 15 years)	160	160	142	160	160	169	169	142	144	344
Total net volume (litres)	297	297	156	290	290	346	346	147	156	148
Zero degree zone (l)	0	0	0	0	0	0	0	0	0	0
Cooling compartment (l)	297	297	156	290	290	346	346	147	156	148
Freezing compartment (l)	0	0	0	0	0	0	0	0	0	0
Height (cm)	180	180	85	161	161	186	186	85	85	85
Width (cm)	59.5	59.5	60	60	60	60	60	60	60	55
Depth (cm)	62.5	62.5	60	65	65	65	65	63	66	61
Ambient temperature (°C)	10-43	10-43	10-43	10-43	10-43	10-43	10-43	10-38	10-43	10-32
Energy class	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+
Energy Efficiency Index	21.6%	21.6%	21.8%	21.8%	21.8%	21.9%	21.9%	22%	22%	36.6%
Energy (kWh/year)	71	71	63	71	71	75	75	63	64	153
Available in countries	DE / on demand	CH / on demand	DE / on demand	DE / on demand	DE / on demand	CH / DE / on demand	DE / on demand	AT BE CH DE DK FI FR LU NL NO SE UK	AT BE CH DE DK NL	

Impact of Topten

Iceberg Model



To learn more about visitors and the direct potential impacts of Topten we carried out an **online survey in two rounds**

The first round of the survey

- On all Topten websites we installed a **pop-up window**, which was linked to a **questionnaire** with 17 questions.
- The survey was active from **Oct. to Dec. 2012**.
- **1791 visitors** completed the survey (0,5 % of all 400.000 visitors during this period).
- The objective of the first round was to get a better **impression of the different user groups**
- The main questions of the first round were
 - **Which user groups** visit Topten with **which motivation**?
 - How do the users evaluate the certain features of the websites?
 - What are **opportunities for improvement**?

To learn more about visitors and the direct potential impacts of Topten we carried out an **online survey in two rounds**

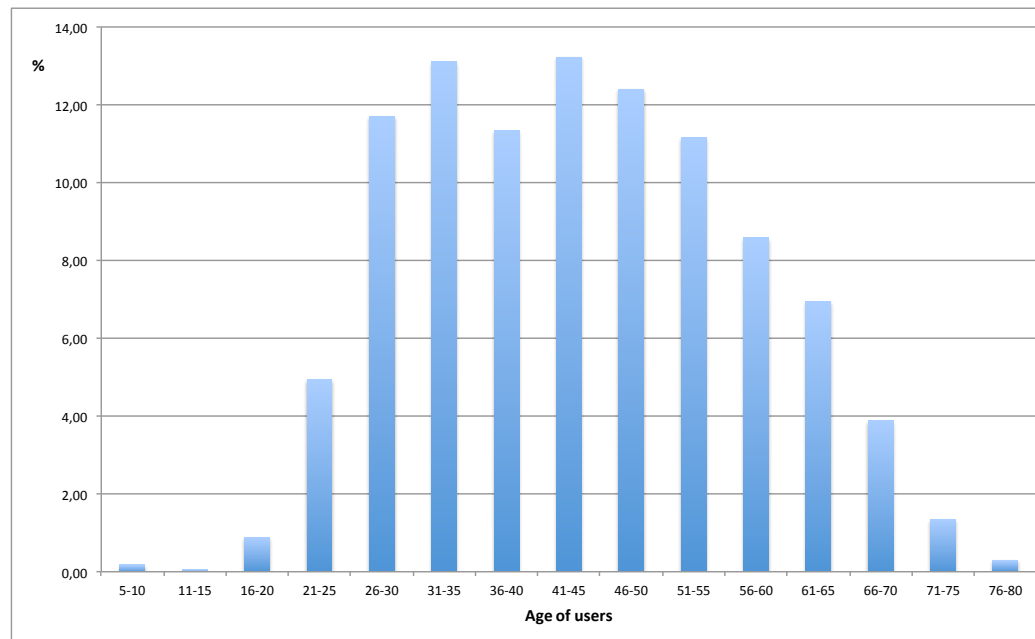
The second round of the survey

- A subset of the **first surveys' participants** was surveyed again.
- The survey was carried out from **Feb. to Apr. 2012**.
- **1043 visitors were contacted**, and **383** completed the survey.
- The objective of the second round was to provide further insights into the concrete use of the information and its **influence on the users' purchasing behaviour**.
- The main questions of the second round were
 - Which **specific properties of a product** are important for you?
 - Did you **buy a product**, which is listed on the **Topten websites**?
- In a final step, the **reductions in energy demand and CO₂-emissions** have been estimated.

A selection of results of the first round of the **online survey**

The typical users

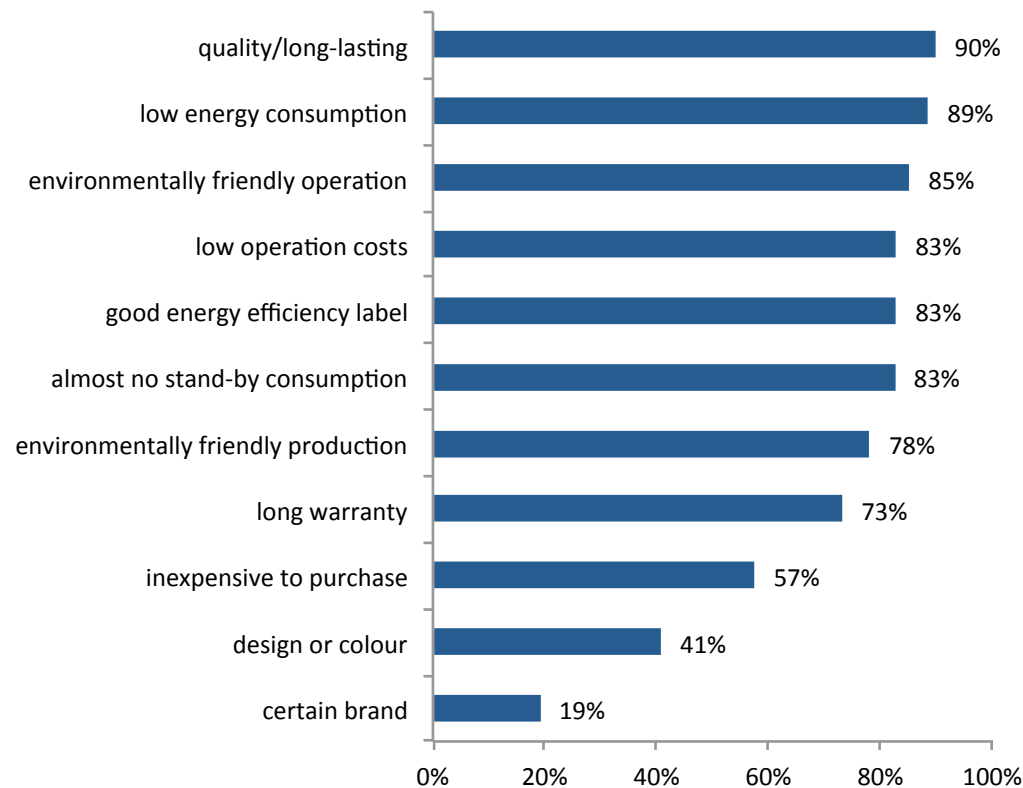
- **72 %** are between **30 and 60 years old** (relatively high for web-based information, this group is usually associated with **a relatively high purchasing power**).
- **90 % private users, 10 % professional users** (energy consultants, local authorities, retailers etc.)
- The share of **male users** is higher (58 %) than the share of **female users** (42 %)



A selection of results of the second round of the **online survey**

Most frequently considered appliances characteristics

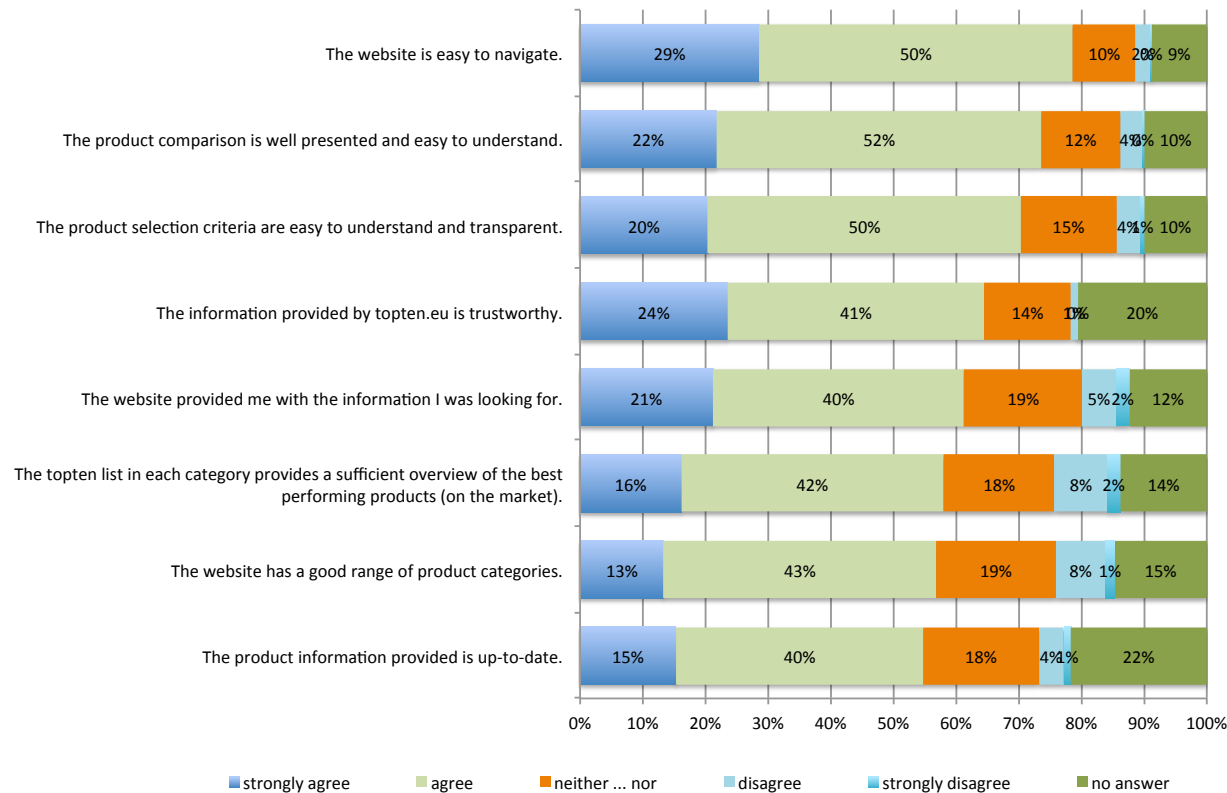
- A majority of participants prefers **quality and long-lasting products with low energy consumption**



A selection of results of the first round of the online survey

Assessment of the Topten websites

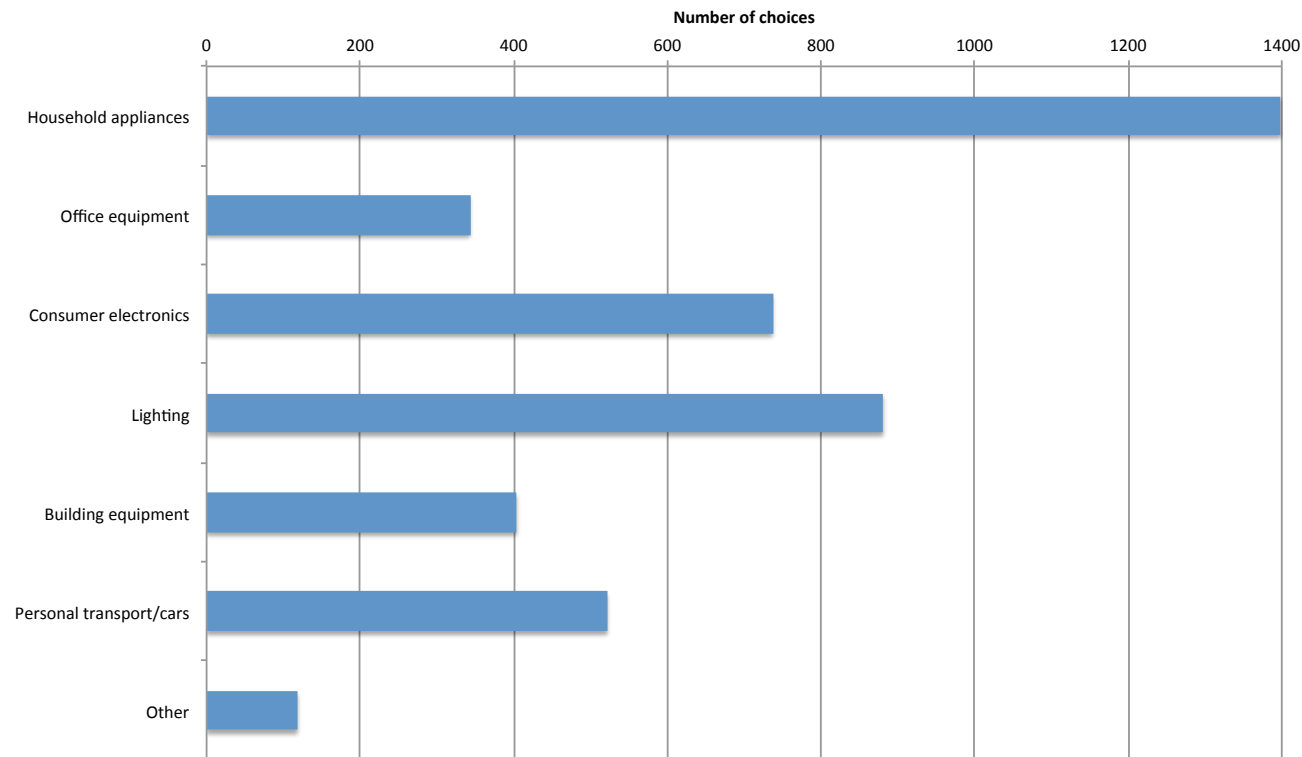
- The visitors assess the websites **easy to navigate** and **easy to understand**.
- But there is also **space for improvements** regarding **range of product** categories and **regular updating**.



A selection of results of the first round of the **online survey**

Reasons for visiting the Topten websites

- 54 % of visitors expect help with **concrete purchasing decisions**.
- **Household appliances, lighting and consumer electronics** are most interesting for visitors.



A selection of results of the second round of the **online survey**

Purchased “Topten” products and achieved savings

- **383 survey participants** changed their purchase decision and altogether bought **399 “Topten” products**
- Over the **lifetime of products** they have saved
 - **931 MWh end energy**
 - **1.728 MWh primary energy**
 - **345 t CO₂**

Categories	Bought Topten appliances	End energy reduction for an average Topten model [kWh/a]	Lifetime of savings [a]	End energy reduction for all given purchases over lifetime [kWh]	Primary energy reduction for all given purchases over lifetime [kWh]	CO ₂ reduction for all given purchases over lifetime [t CO ₂]
Fridge / Fridge Freezer	35	150	15	78 750	196 875	36,23
Freezer	23	120	15	41 400	103 500	19,04
Dishwasher	21	50	15	15 750	39 375	7,25
Washing Machine	27	80	15	32 400	81 000	14,9
Tumble Drier	16	320	15	76 800	192 000	35,33
Vacuum Cleaner	15	80	10	12 000	30 000	5,52
Coffee Machine	6	133	10	7 980	19 950	3,67
Other Household Appliances ¹	12	100	10	12 000	30 000	5,52
Monitors - Flat Screen	3	28	5	420	1 050	0,19
Laser Printers/Multifunctional	9	400	5	18 000	45 000	8,28
Other Office Equipment ²	1	200	5	1 000	2 500	0,46
TV	23	120	10	27 600	69 000	12,7
Other Consumer Electronics ³	6	100	5	3 000	7 500	1,38
Energy saving lamp (CFL)	72	40	15	43 200	108 000	19,87
LED	111	30	15	49 950	124 875	22,98
Halogen	2	15	2	60	150	0,03
Heat Pump	3	1 850	15	83 250	208 125	38,3
Circulation Pump	5	320	15	24 000	60 000	11,04
Air Condition	2	115	15	3 450	8 625	1,59
Car	6	5 560	12	400 334	400 334	100,8
Other Mobility ⁴	1	-	12	-	-	-
Total	399	9 811		931 344	1 727 859	345,06

A selection of results of the second round of the **online survey**

Assessment of savings of all Topten users of one year

The challenge

- We have to deal with **the self-selection-bias**, which arises when a sample is not randomly drawn from the population, which is the case here.
- In comparison to the annual **visitors of all Topten sites of 1,4 million**, the sample size of 383 is rather small.

What Google Statistics says

- The **bounce rate** is about 50 % across all websites.
- The **average access time** is 2 to 5 minutes.
=> half of all visitors are looking for information

What an evaluation of the Swedish Topten Website says (not exactly the same methodology)

- About 10 % of all users buy a “Topten” product

A selection of results of the second round of the **online survey**

Assessment of savings of all Topten users of one year

Our proposal for the overall mitigation calculation (for discussion)

- If we assume also that 10 % of all users behave like the control group, we get the **total Energy and CO₂ savings caused by changed product choices of Topten visitors.**

	Savings over the lifetime of products per Unique Visitor	Savings over the lifetime of products for 1 year of opera- tion of Topten	Savings per year for 1 year of oper- ation of Topten
End energy savings	243 kWh	340 GWh	26,5 GWh/a
Primary energy savings	451 kWh	631 GWh	49,1 GWh/a
CO ₂ mitigation	90,1 kg	126.133 t	9.815 t/a

Thank you!



Impact of Topten

Topten Logic Model

