

Topten Global Annual Report 2012



Photo: Bella Roscher

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April 2013

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List of Abbreviations

ADEME	French Environment and Energy Management Agency
BAT	Best Available Technology
BEEC	Beijing Energy Saving and Environment Protection Center
CEI	China National Electric Apparatus Research Institute
CHEARI	China Household Electric Appliance Research Institute
CLASP	Collaborative Labeling & Appliance Standards Program
CL&P	Connecticut Light & Power
CNG	Connecticut Natural Gas
CNIS	China National Institute of Standardization
CSC	China Standard Certification Center
CVC	Certification and testing base of CEI
EACI	European Commission Executive Agency for Competitiveness and Innovation
EEB	European Environment Bureau
EC	European Commission
ECEEE	European Council for an Energy Efficient Economy
ECF	European Climate Foundation
ECOS	European Environmental Citizens Organization for Standardization
EEDAL	Conference on Energy Efficiency in Domestic Appliances and Lighting
EFI	Energy Federation Incorporated
ERI	Energy Research Institute
EU	European Union
GfK	Market research company
GWh	Giga watt hours
ICLEI	Local Governments for Sustainability
IEA	International Energy Agency
IIEC	International Institute for Energy Conservation
IISD	International Institute for Sustainable Development
IT	Information Technology
LED	Light-emitting diode
MACEEP	Market Analysis of China Energy Efficient Products
MEPS	Minimum Energy Performance Standards
MIIT	Ministry of Industry and Information Technology
MOF	Ministry of Finance
NDRC	National Development and Reform Commission
NECC	China National Energy Conservation Center
NIM	China National Institute of Metrology
PG&E	Pacific Gas & Electric Company
SCE	Southern California Edison
SDC	Swiss Development Cooperation
SEAD	Super-efficient Equipment and Appliance Deployment program
SECO	Swiss State Secretariat for Economic Affairs
SEDI	Super-Efficient Dryer Initiative
SMUD	Sacramento Municipal Utility District
TIG	Topten International Group
TWh	Terra watt hours
UNDP	United Nations Development Program
VDE	Association for Electrical, Electronic & Information Technologies
VECC	Vehicle Emission Control Center of the Chinese Ministry of Environmental Protection
WWF	Worldwide Fund for Nature

Executive Summary

According to the *World Energy Outlook 2012* by the International Energy Agency, “The profile of energy efficiency needs to be raised, so that efficiency concerns are integrated into decision making throughout government, industry and society.” This is exactly what Topten is about. Energy efficiency is key to sustainable development. Hence, the mission of Topten is to mitigate climate change through market transformation towards energy efficiency.

Topten provides policy-makers, consumers, producers, retailers, and procurers with reliable, up-to-date information on the most efficient products currently available. The national Topten websites present product information in a consumer-friendly way by using pictures, listing functions, availability and prices, and comparing the total costs of a top product (i.e. purchasing price plus energy and water costs accumulating over the product's whole life cycle) with those of a non-recommended similar model that is also available on the market.

The selection is much narrower than within existing energy label systems, as only the best-performing products are listed. This makes it easier for consumers to choose from among the thousands of products on the market. The selection is based on existing national regulations and international energy measurement standards, and the selection methodology is available online. Topten is independent of manufacturers and retailers. It is neutral, rigorous and transparent.

In 2012, Topten was successfully pursued in China with funding from SECO; in the United States, Topten carried on its program thanks to funding from a foundation and numerous utilities; and in Europe, the activities of „Euro-Topten Max” were continued with funding from European Commission Intelligent Energy Europe and “Best of Europe” was made possible by the European Climate Foundation.

Topten also started active cooperation on market research with CLASP in China. In the United States, Topten began collaborating with Connecticut Light & Power, including 40 retailers. Topten also entered into a partnership with VDE, the Association for Electrical, Electronic & Information Technologies, one of the largest associations in Europe with more than 35,000 members.

Highlights in 2012:

- Topten research supported the threshold setting for the EU energy label and the Ecodesign regulations for coffee machines, professional storage refrigerators, and televisions.
- In September, a study tour for seven European energy efficiency experts to China took place.
- TopTen USA launched efficiency programs with utilities in 12 states.

Topten in figures:

1. Overall budget for 2012 for the 20 countries: €2.46 million
2. 20 national websites and two overview websites
3. 351 product categories
4. Internet outreach worldwide: 3,669,200 visits in 2012. This is a decrease from last year, and efforts will be made to increase these numbers.¹
5. Media outreach: 225 million media contacts²
6. Around two billion consumers live in countries which have a national Topten website.
7. The 20 Topten countries are responsible for 55 per cent of global CO₂ emissions.
8. Topten has 246 partners worldwide: governments, NGOs, power utilities, and retailers. The partners support Topten in its research activities and with communications. They also assist in keeping the information on the Topten websites up-to-date and accurate.

¹ The decline is partly due to one of the two partners in Germany not participating in Euro Topten Max.

² Like last year, the USA is not included. These are indicative numbers only, which may partly explain the difference in numbers from 2011.

Message from the President

Topten made major progress around the world in 2012. Topten continues to work with policy makers to improve energy labels and MEPS. Through extensive research, Topten is able to identify the current BAT and inform relevant decision makers of the latest market developments.

In 2012, special investigations were conducted for three product categories: as for coffee machines, Topten contributed to an improved measurement standard; for professional storage refrigerators, detailed research allowed Topten to define the BAT; and for televisions, an international conformity test compared the European and the Chinese energy labels and measurement standards. The results supported the European Commission in the threshold setting for the EU energy label and the Ecodesign regulations for these products.

Furthermore, a Topten analysis of comprehensive sales data from Switzerland showed that appropriate policy instruments are key to drive the technical development of products. In order to regularly redefine energy labels and minimum efficiency requirements alongside product development, it is clear that the EU needs systematic market monitoring, based on recent and exhaustive sales data.

In May, the Chinese government launched its new RMB 26.5 billion (€3.18 billion) subsidy program to promote energy efficient household appliances. Topten's recommendations for this new policy received a lot of attention by the media. Moreover, Haier, one of the world's largest manufacturers of household appliances, announced in a press release that its products were listed on the Topten China website, which was picked up by the media throughout the country.

In September, seven European energy and laboratory testing experts went on a study tour to China. On the agenda were visits to Chinese top labs, a policy workshop with BEEC, and an industry event in the trading mecca of Guangzhou. In November, Topten made it onto national television with the program "Searching for the most energy efficient family in China." Four million people watched the show.

In the United States, TopTen USA has set up efficiency programs in 12 states. Nine utilities have incorporated Topten into their energy efficiency programs. The interest among additional states and utilities is growing rapidly, especially in the TopTen USA focus regions with the largest savings potential: the Northeast, the Northwest, and California.

For example, the entire state of Connecticut is using a Topten incentive program with attractive point of sales material. Roughly 40 retailers are now participating in the Connecticut program, including large ones such as Sears. This program serves as a model for other states in the country.

For 2013, we are planning our first ever Topten workshop in Latin America, to be held in São Paulo in March. In April, the third global Topten meeting will take place in Beijing. We are also pleased to announce that Topten will soon be launched in India, one of the world's largest markets.

Our mission is climate change mitigation, our goal market transformation through energy efficiency. Our efforts are joint and they are global. I look forward to keep developing Topten with you, wherever you are in the world.

Eric Bush
President,
Topten International Group

Combating climate change by catalyzing market transformation

We are living beyond the carrying capacity of the Earth, with a global ecological footprint currently requiring 1.6 planets. We are exploiting 50 per cent more resources than the Earth can sustain, and, if we continue at this pace, by 2030, not even two planets will be enough. The good news is that we can do something about it. We can create a prosperous place to live, providing sufficient food, water, and energy for the 9-10 billion people who will be living here in 2050.³

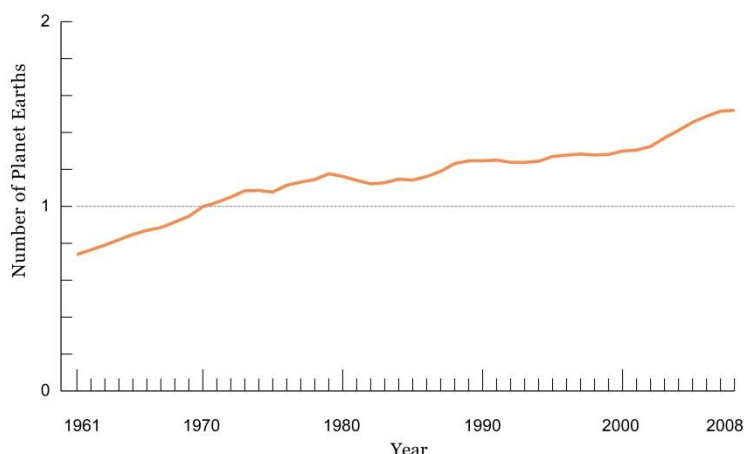


Figure 1. Global ecological footprint, source: Global Footprint Network, 2011

Nicholas Stern, the renowned British economist and climate change expert, recently said that he had been wrong about climate change in his report *Stern Review on the Economics of Climate Change* back in 2006, as the situation is actually much worse. We are likely to spew out 50 billion tons of CO₂ per year for the next couple of decades.⁴ However, in a new policy paper, he also states that “Accelerating the pace of change towards a low-carbon, resource efficient economy is both feasible and crucial; with the right incentives rapid transformative change is possible, even in capital intensive sectors such as energy.”⁵

WWF agrees. Jim Leape, the WWF Director General, makes it clear that “The first imperative is to get much more out of the energy we use – increasing the efficiency of our buildings, cars, and factories can cut our total energy use in half.”⁶ If we can do this, we will also be able to meet all our remaining energy needs by relying on renewable sources, such as wind and solar power – assuming that we keep developing these technologies and stop the €520 billion worth of subsidies for coal and oil worldwide.⁷

“Energy efficiency is widely recognised as a key option in the hands of policy makers but current efforts fall well short of tapping its full economic potential,” according to the IEA.⁸ Starting to realize this potential, some of the largest energy consumers committed themselves to reducing their energy use in 2012: China is aiming to reduce its energy intensity by 16 per cent by 2015; the United States has new fuel economy standards in place; the EU intends to use 20 per cent less energy in 2020; and Japan is targeting to cut down its electricity consumption by 10 per cent by 2030.⁹

Energy efficiency is a constructive way to address the challenges of climate change. One third of the global power production is used for lighting, household appliances, and electronics. The energy savings potential

³ http://wwf.panda.org/about_our_earth/all_publications/living_planet_report/2012_lpr/

⁴ <http://www2.lse.ac.uk/GranthamInstitute/publications/Policy/docs/transition-low-carbon-economy.pdf>

⁵ <http://www2.lse.ac.uk/GranthamInstitute/publications/Policy/docs/transition-low-carbon-economy.pdf> on page 3

⁶ http://wwf.panda.org/about_our_earth/all_publications/living_planet_report/2012_lpr/ on page 6

⁷ Ibid

⁸ <http://www.iea.org/publications/freepublications/publication/English.pdf>

⁹ Ibid

for these products is roughly two thirds, if we compare conventional products with the most energy efficient ones.

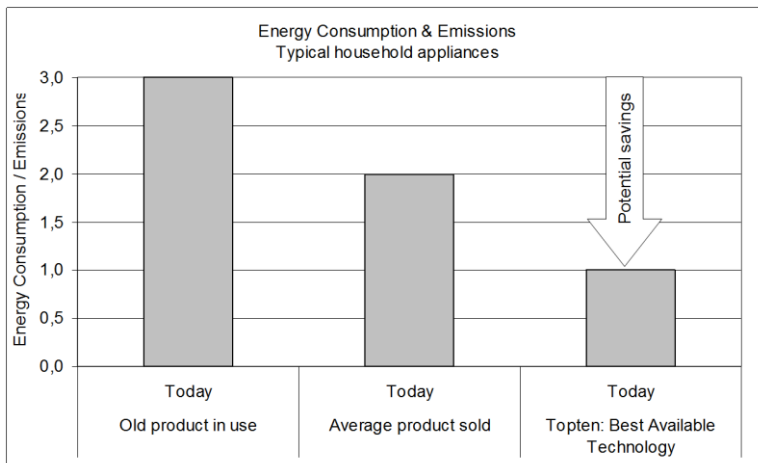


Figure 2. Average energy consumption for typical household appliances, source: Topten

Topten International, www.topten.info, is a global, independent, not-for-profit network of national organizations promoting the most energy efficient appliances, electronics, building components, and motor vehicles online in their respective markets. The network was founded in Switzerland in 2000 and its mission is to mitigate climate change by catalyzing market transformation.

In order to transform the market, push and pull factors come into play. MEPS set by governments push inefficient products off the market. Mandatory energy labels rank products from most efficient to least efficient. At the same time, Topten pulls the market towards BAT.

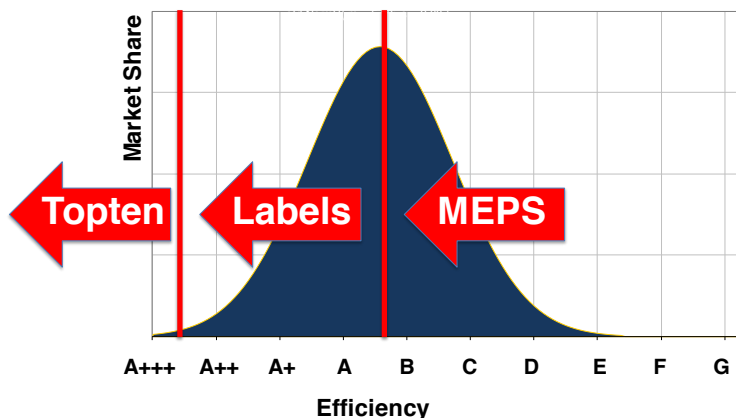


Figure 3. Push and pull factors of market transformation, source: Topten

Thanks to these push and pull efforts, bad products will be phased out over time, and BAT will transform the market towards more energy efficient products. The more energy efficient a product is, the more CO₂ and money are saved. This is Topten in a nutshell.

So far, 20 countries have Topten websites with country-specific information, ranking the most energy efficient products currently available. Topten tracks market development and the websites are continuously updated accordingly. The network is funded by the European Commission, The European Climate Foundation, numerous EU governments, the Swiss government, various power utilities, and NGOs.

What others say about Topten: statements by key stakeholders



"Becoming the first U.S. sponsor of TopTenUSA.org has provided the Connecticut Energy Efficiency Fund in partnership with the electric utility companies an exciting opportunity to further engage our customers. This online outlet provides up-to-date product availability, local retail locations and pricing to assist consumers in making educated choices about energy-efficient appliances and products. Additionally, a number of these products come with rebates to make the upgrade or transition to high-efficiency products easier and more attainable. One of the primary objectives of the Energy Efficiency Fund partners is to empower ratepayers to make smart energy choices."

Elizabeth Olney, Program Administrator, Retail Products, The United Illuminating Company, a Connecticut Energy Efficiency Fund partner, USA



"There is no question that energy efficiency will continue to play an increasingly important role in our economic future. The proliferation of brands and models each touting the efficiency of their products threatens to overwhelm consumers with competing claims and information. TopTen USA has stepped up to help us address the daunting challenge of identifying the most energy efficient solutions for various appliances and CL&P, on behalf of the Connecticut Energy Efficiency Fund, is pleased to provide its customers with an online guide to retail locations in Connecticut where they can find and purchase the energy-efficient appliances and electronics they need."

Ronald Araujo, Manager, Conservation and Load Management, the Connecticut Light and Power Company, USA



"I know the Top10 China Programme since 2009, and at that time I thought it was a good idea, but I was not sure it could become successful in the China context. Today, I am convinced and I am impressed by the great achievements it has made so far."

YU Cong, Research Professor, Energy Research Institute, National Development and Reform Commission, China



"Top10 China has done a remarkable job providing independent and up-to-date information on the top energy efficient products currently available on the China market. The online Top10 list has become an ideal source of information for consumers and it has helped in creating a competitive environment for manufacturers to produce more efficient products. In 2012, CLASP and Top10 China jointly conducted a market analysis of energy efficient products, which successfully revealed issues related to energy efficiency of appliances in China, and provided policy recommendations for Chinese policy makers to improve energy efficiency policies. We expect greater impacts to be seen in 2013, as a result of this study."

ZENG, Steven, China Program Director, Collaborative Labeling & Appliance Standards Program (CLASP)



"Top10 is a valuable program. In China, WWF is willing to explore more cooperation with Top10 in areas such as exported consumer product energy efficiency study and low-carbon city, etc."

Donald Pols, Programme Director, China for a Global Shift Initiative, WWF



"Topten contributes substantively to achieving higher standards of energy efficiency of consumer goods worldwide. Topten also helps consumers, retailers and producers in emerging countries to take informed decisions, supported by independent quality testing. Based on its mandate to promote and support sustainable economic development, SECO is willing to further invest – through market based energy efficiency programs - in such an effective instrument to contribute to improved climate change mitigation."

Hans-Peter Egler, Head Trade Promotion within the Economic Cooperation and Development Division, Federal Department of Economic Affairs, Education and Research, Swiss State Secretariat for Economic Affairs (SECO)



"By 2015, at least one third of electrical appliances offered in Migros' stores will be within the highest class of the energy label. Migros is committed to Topten, which ranks the most energy efficient appliances available. In the next couple of years, we will greatly expand our range of energy efficient products."

Sandro Glanzmann, Environmental Expert, Swiss retailer Migros



"I'm very happy about the established cooperation between VDE and Topten. Our test and certification institute is equipped with the most modern globally recognized test systems. Together, we will work to continuously improve the energy efficiency and usability of appliances."

Wilfried Jäger, Chairman of the Board of Directors of VDE Testing and Certification Institute, Germany



"There is a great need for reliable product data in Europe, so that market actors and policy makers can make climate smart choices. This is part of the market transformation required for a more sustainable and resilient Europe. Therefore, ADEME is supporting and coordinating the Euro Topten project. Since its initiation at the European level in 2006, Topten has established itself as the provider of reliable product information and a constant promoter of best available technology, standards development, and label improvement."

Johan Ransquin, Deputy Head of the Building Department at the French Environment and Energy Management Agency (ADEME)

No photo

"As the person overseeing the regulation on domestic tumble driers, I used the information found on www.topten.eu and the related Topten Focus publication. Market data and product performance background information are key to the success of a good regulation accepted by all stakeholders and ensuring energy savings."

Juan Moreno Acedo, Policy Officer, Unit C.3 - Energy efficiency, European Commission - Directorate-General for Energy

Strategic direction, mission, objectives, outlook and future challenges

The overall mission of Topten is to mitigate climate change through market transformation towards energy efficient consumer products. Energy consumption in the construction, transport, domestic household and office equipment sectors will be reduced by making efficient products both the norm and the best choice, for consumers as well as for policy makers, large buyers, retailers, and manufacturers. Thus, the market share of these products will increase.

The strategic components to reach these objectives are:

- The creation and maintenance of national Topten websites. They provide up-to-date information about the most energy efficient products currently available and present it in a user-friendly way. The products are selected and ranked on the basis of sound market research and impartial tests, also considering criteria specific to the respective national legislation and relevant conditions.

In all countries where Topten is active, the focus lies on four main areas: building components, mobility, electronics, and home appliances. The product categories within these four areas can differ. In China, for example, rice cookers are relevant, whereas in Switzerland, coffee machines are listed.

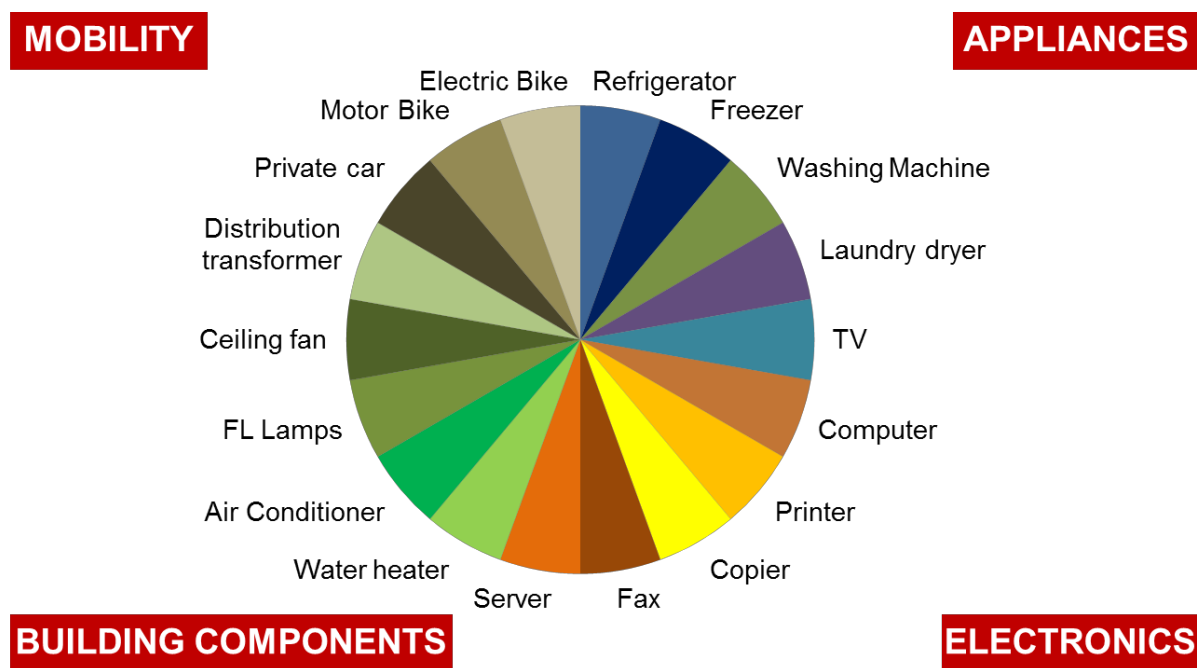


Figure 4. The four Topten focus areas, source: Topten

- Cooperation with large public and private buyers, including retailers, who make energy savings one of their priorities;
- Advice to public procurers, including the development of concrete procurement tools, such as templates for tender documents (see the "Topten Pro" section on www.topten.eu);
- Cooperation with the media and other multipliers, such as environmental and consumer NGOs, relaying the Topten message as part of their work;
- Communication activities targeting end consumers;
- A dialog with the manufacturing industry of consumer goods, especially on upcoming technological innovations with a focus on the demand and interest for energy saving products;

- The development of partnerships with key stakeholders, such as research institutes and global programs like CLASP and SEAD;
- International cooperation across the Topten network to facilitate the understanding of the global appliance market and to enable the comparison, benchmarking, and the eventual harmonization of standards.

Within each of these components, Topten is engaged in a whole range of various activities. Only a small part of this work is visible in the shape of the Topten national websites. Much of the market transformation efforts include ongoing market research, energy label updates, standards improvement, rebate and discount options for energy efficient products in cooperation with utilities, strengthening of procurement programs, and BAT promotion with the industry.

Upcoming challenges include securing funding for Top10 China beyond 2013, as well as for Topten in Europe and in the United States. As Topten keeps growing, there is also the organizational challenge of running and managing the network in the most effective way possible. With regard to expansion, focus markets are India and Latin America.

Topten activities around the globe

Top10 China



Figure 5. The Top10 China team from left to right: YI Shui, DONG Mingyan, SHEN Longhai, ZHAO Zhonghua, Conrad U. Brunner (international team), HUANG Luting, Sophie Attali (international team), Eric Bush (international team), ZHAO Feiyan, Bella Roscher (international team), and HU Bo. Photo: HU Bo (autotimer)

During the year 2012, Top10 China raised its status in the Chinese energy community, developing its reputation as an independent expert group for energy efficiency and low-carbon policy. For example, Top10 China formulated five principles concerning the €3.18 billion government subsidy program for energy efficient products. ZHAO Zhonghua, Top10 China Director, presented them at the China Electronic Products Energy Saving Forum, which was held by the Ministry of Industry and Information Technology (MIIT) on July 20. The five principles were published widely by the media.

In September, the second Study Tour brought seven European experts to China to visit Chinese research and testing institutes. (The first Study Tour in 2011 had brought Chinese experts to Europe.) A well-planned

agenda included, among others, a policy workshop and two industry events held in collaboration with CHEARI in Beijing and CEI in Guangzhou.



Figure 6. Study tour lab visit at CHEARI. Photo: HU Bo



Figure 7. President MA Jian of CEI speaking at the industry event in Guangzhou. Photo: HU Bo

Partnerships

Existing partnerships were consolidated and new partnerships developed during 2012. Top10 China signed Memoranda of Understanding with CVC, NIM, CHEARI, and CSC of CNIS. So far, Top10 China has secured collaboration with VECC, CHEARI, CNIS, NIM, CSC and CEI/CVC for conformity testing and reliable product performance data.

In addition, Top10 China has established regular communication with the China National Energy Conservation Center (NECC) and Energy Research Institute (ERI) of the NDRC, China Electronics News of the MIIT, the China Consumer Association of the National Bureau of Industry and Commerce, the Government Procurement News of MOF, the IISD, and UNDP. Top10 China continues to work closely with CLASP on market research.

To conclude an activity filled year, a high level government delegation led by CEI President MA Jian visited Topten in Zurich and met Hans-Peter Egler at SECO in Berne on December 14. The purpose of the visit was to intensify collaboration.

Communications

In 2012, around 90,000 visitors per month went onto the Top10 China website, www.top10.cn, showing a positive development trend. Apart from website visitor numbers, the Top10 China Weibo account (the Chinese equivalent of Twitter) has almost 20,000 followers now. The largest number of Top10 China related news is found on the Baidu and Sina portals.

Manufacturers are starting to see Top10 as a strong third party endorsement of best quality and efficiency products. On June 11, Haier published a press release to inform people that their air conditioners were recommended by Top10. More than 30 media bodies spread the news.

腾讯数码 数码 > 滚动新闻 > 正文

稳居TOP10榜首 海尔成节能变频领跑者

2012年06月11日18:52 IT168 字号: T | T



继荣登变频空调类“节能产品企业榜”第一名之后，海尔空调作为行业领袖品牌的强大创新能力再次得到彰显。日前，根据瑞士“Top10-节能上品”公布的榜单显示，海尔空调多款定频和变频产品凭借行业领先的节能优势一路领先，稳居空调Topten榜首，成为越来越多消费者的首选品牌，而这也成为海尔空调持续领跑节能变频时代的有力证明。

绝对领先是“翻译”消费需求的结果

据了解，瑞士“Top10-节能上品”是致力于推动超高效能产品基准的国际公益组织，通过第三方独立调研，甄别家电等行业能效最高的前十种产品，从而达到推动全球节能减排工程进步的目的。而根据最新的榜单显示，海尔变频空调在大1匹、1.5匹、2匹等五大匹数段的节能上品评选中全部位居第一名，同时其上榜产品数量也问鼎行业第一。

Figure 8 : The Haier press release of June 11, source: <http://digi.tech.qq.com/a/20120611/001542.htm>

In September, Top10 China was invited by Hunan TV to provide expert guidance for their "Search for the most energy efficient household in China" program. Two 20 minutes episodes were broadcast on November 3 and 4, featuring HU Bo, ZHENG Tan, HUANG Luting, Eric Bush and Rita Werle as competent Top10 China energy efficiency experts. Over 4 million people watched the show. On November 1, the Swiss TV channel RSI broadcast a statement by ZHAO Zhonghua on the importance of energy efficient appliances in "Telegiornale".



Figure 9: Hunan TV show 'Search for the most energy efficient family in China' with Rita Werle (left), Eric Bush and Hu Bo (right), Top10 energy efficiency experts

NGO Platform

Top10 China is becoming an active player among NGOs in China. As a follow-up action to a meeting in May about ongoing Low Carbon City initiatives, the Swiss Development Cooperation (SDC) invited the Top10 China team to explore how Top10 can help incorporate new strategies into SDC's Low Carbon Cities program. Together with Cleantech Switzerland and WWF China, a project proposal has been presented to SDC.

Additional funds

Throughout the year, Top10 China attracted additional funds to maximize its impact. In addition to the Energy Foundation's contribution to the Market Analysis of China Energy Efficient Products (MACEEP, in cooperation with CLASP), the bigEE program, which focuses on energy efficiency in buildings, invited Top10 to provide BAT market data for the Chinese household appliances market. The French ADEME pledged €50,000 for a study on procurement. CLASP contributed €3,800 to the Top10 round-robin test in cooperation with VDE, NIM and CVC.

Furthermore, Top10 China and the Topten International Services team actively and systematically approached potential donors with specific concept notes for projects in order to secure funding beyond 2013.

Staff

The Top10 China office in Beijing employs seven competent members of staff and thrives under the leadership of director ZHAO Zhonghua. Two new staff members completed the team in 2012:

- ZHENG Tan, engineer, previously at CNIS, began on July 1;
- WANG Tingting joined as administrator at the end of December, replacing DONG Mingyan.

Last but not least, the Top10 China office reduced its energy consumption by 50 per cent in 2012.

TopTen USA

TopTen USA is focusing on regions within the country with the greatest opportunities for energy savings:

- The Northeast - This is where TopTen made its most significant progress during 2012. The entire State of Connecticut is applying a TopTen incentive program with point of purchase materials. The Connecticut utilities use TopTen lists and, for the first time, the TopTen USA logo appears on products in retail stores. Web traffic from Connecticut has doubled on www.toptenusa.org since the program was launched in July. Vermont is about to roll out a similar program.

In the course of the year, TopTen also signed an agreement with seven energy providers in the states of Massachusetts and Rhode Island. Those regions will launch demand-side management programs using TopTen lists in 2013. All in all, TopTen programs will target more than 80 per cent of the residents of the New England states. The next goal is to encourage a program in the State of New York.



Figure 10: A TopTen on-product label for retail use in Connecticut.

- California – During the year, TopTen forged a strong relationship with PG&E, which has taken the lead in establishing the TopTen LED Lighting Project (see below). The next steps are to strengthen ongoing relationships with Southern California Edison (SCE) and Sacramento Municipal Utility District (SMUD), the capital of California.

One of the short-term goals of TopTen USA has been to establish TopTen in ten states. This was achieved in 2012. Thus far, TopTen cooperates with utilities serving customers in California, Connecticut, Florida*, Illinois*, Iowa*, Michigan*, Nebraska*, North Carolina*, Oregon, South Carolina*, South Dakota*, and Vermont. The states of Rhode Island and Massachusetts will soon be involved as well.¹⁰

¹⁰ * through the LED Lighting Project

In addition, TopTen works with nine utilities to be incorporated into their energy efficiency programs. The utilities are PG&E, SCE*, CL&P, United Illuminating, CNG, Yankee Gas, Progress Energy*, MidAmerican Energy*, DTE Energy*, National Grid MA, and National Grid RI.

Throughout the year, TopTen worked to expand its product scope to include solid state lighting. The TopTen LED Lighting Project is part of this effort. In partnership with the Institute for Electrical Efficiency (IEE) and Ecova, TopTen plans to release a list of the best LED reflector lamps in January 2013. TopTen assembled an advisory panel of 22 experts and held three meetings with the panel with the sole goal of identifying – through testing – not merely the most efficient lamps, but the best-performing and most cost-effective ones.

Communications

As another short-term goal, TopTen aims to increase web traffic from 150,000 to 450,000 annual visitors; in the long run, it ought to eventually reach over one million visitors yearly. In 2012, 306,000 visitors were recorded. TopTen is increasing that number through improved Search Engine Optimization and changes to the website.

A consultant, Monique Hartl, will help TopTen to devise and execute a broad web traffic strategy and marketing plan, having done so already for RecycleBank and the Oxygen network, among others. Board Member Cindy Drucker also has a strong marketing background. She is the Executive Vice President of the global communications firm Weber Shandwick.

As reported last year, TopTen USA is also running a highly successful Google AdWords campaign to drive traffic to the web site. Google donates €7,625 in advertising per month and TopTen has been able to spend all of it. For 2013, the goal is to increase the number of click-through to the website by reducing the cost per click.

Partnerships

A third short-term goal is to increase retailer participation, either in number of retailers or stores. TopTen has been particularly successful with utility support. Roughly 40 retailers are now participating in the Connecticut program, including large retailers like Sears as well as smaller ones. This has become the model program for other states. If the state of Massachusetts joins in as expected, numerous additional retailers are likely to take part in the program.

The EFI will add TopTen information to its custom utility store offerings (see <http://www.energyfederation.org/consumer/default.php>). EFI works with over two dozen utilities to sell energy efficient products and offer rebates. Also, the Lucid Design Group will begin to place TopTen content on their building energy consumption panels, see <http://www.luciddesigngroup.com/network/features.php>.

With regard to collaboration with other ranking institutions, TopTen built a good relationship with Energy Star Most Efficient. During 2012, they decided to work closely together and to inform all stakeholders about this partnership. An agreement was also reached with the Department of Energy regarding cooperation on SEAD. TopTen was hired to prepare the materials for the Third Clean Energy Ministerial Super-Efficient Appliance Retailer Roundtable held in London in April, <http://www.ase.org/efficiencynews/advancing-energy-efficiency-2012-clean-energy-ministerial-london>.

In addition, the SEAD program and TopTen have linked to each other online and TopTen promoted the results of the SEAD television award program.



Figure 11: Samsung UN26EH4000F, Small size category (less than 29 inches). Photo: <http://www.superefficient.org/TVAwards>

Staff and Board

For next year, TopTen intends to develop a strategy for how to measure, or develop a proxy for, market penetration of TopTen listed products. In August, TopTen therefore elected three new Board members with extensive quantitative evaluation experience. The Board has created a committee to assist with and oversee the development of the plan. So far, a preliminary list of metrics has been developed, which includes:

- Data on National Sales in TopTen product categories (from IDC, etc) in order to track the market share of highly efficient products and to watch trends over time;
- EMV (evaluation, monitoring, verification) studies in the states where TopTen is active and which claim savings from TopTen to regulators;
- Website traffic;
- Manufacturer advertising using TopTen;
- Sales data from pilots involving retailers;
- Rebate data from pilots involving TopTen;
- Press clippings;
- Consumer surveys to track awareness.

Topten in Europe (Euro-Topten Max)

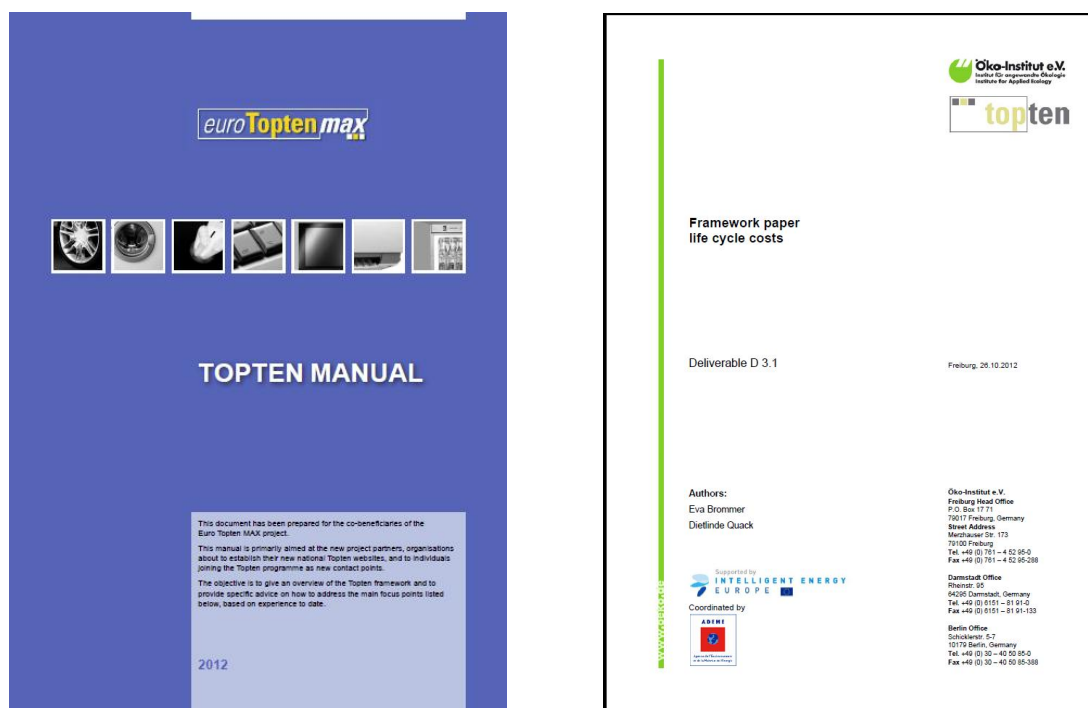
2012 was the first year of “Euro-Topten Max,” the continuation of “Euro-Topten Plus,” both funded by the European Commission. It is coordinated by ADEME and involves 21 partners with a total budget of €2,150,000, of which the EC contributes 75 per cent. The project is divided into work packages, where the various partners have different responsibilities.

One of the major successes for Topten in Europe in 2012 was that Topten testing results supported the threshold setting for the EU energy label and the Ecodesign regulations for coffee machines, professional storage refrigerators, and televisions.

During the year, Topten developed an Etop Manual, which outlines all the issues to be considered in order to set up Topten in a country and gives advice how to address problems. There is a long and short version of the document. Please find the short version online on www.topten.info and attached as annex 1.

Moreover, Life Cycle Costs Guidelines were produced during the year. These guidelines enable Topten to calculate life cycle costs in a consistent way. According to these Guidelines, it is highly relevant to consider all the costs accumulating during a product's life cycle: “Particularly innovative, resource-efficient products, for example household appliances with low power consumption, tend to have a higher purchase price than the equivalent conventional products. However, at the same time, operating costs, like costs for energy and other resources during the use phase, are lower than for conventional products. This means that the life cycle costs of innovative products are often equal or even lower than those of conventional products

(Rüdenauer 2011). For that reason, life cycle costs at the consumer level play an important role for the comparison of energy efficient products with conventional, inefficient products.”



Figures 12 and 13: The Etop Manual (long version) and the Life Cycle Costs Guidelines

Euro-Topten Max participated in a meeting at the EACI (Executive Agency for Competitiveness and Innovation) last November to see how several SAVE projects (IEE projects exploring the potential for energy savings, particularly in the buildings and industry sector) dealing with products may support national market surveillance authorities. There was reason enough for endeavor, because when they recalculated the Energy Efficiency Indexes, most Topten national teams found that 5 to 15 per cent of these indexes contained wrong declarations or incomplete information.

Partnerships

Topten continued to work in cooperation with ICLEI (Local Governments for Sustainability) to support energy efficient choices in public procurement. Together they provide guidance for public procurers and other professional buyers. This guidance includes tender criteria and sample tender documents. Further information is available on <http://www.topten.eu/professional.html>.

The overarching homepage, www.topten.eu, “Best of Europe,” was regularly updated in 2012, above all the “Topten Pro” section dedicated to public procurers. Supported by The European Climate Foundation, Topten also targets researchers and decision makers with this website, by displaying the best products available in Europe and allowing for benchmarking between different countries or brands. The “Best of Europe” portal is the only steadily updated review of energy efficient appliances within the EU market and covers 27 countries.

Cooperation with retailers is also a key component of the Topten activities in Europe. In order to facilitate collaboration, Topten developed a template for partnership agreements with retailers. An example of an activity with retailers is a free on-product Topten sticker that makes the most energy efficient products more visible in shops. So far this has been done in Portugal, Luxemburg, and Lithuania. A lesson learned from Topten Portugal shows that it is important to specify the product model in question and the validity period of the sticker right from the start, as product models may change quickly.



Figures 14 and 15: Template for partnership agreements and on-product sticker by Topten Luxembourg

WWF is Topten's global partner. In Europe, WWF Switzerland developed a free consumer guide app including Topten products. The app is downloaded around 30,000 times per year. Also, Felix Meier, Head of the Business & Consumption Department at WWF Switzerland, was awarded an honorary membership of Topten International Group for his valuable contributions to the launch and expansion of Topten worldwide. He will leave WWF in January 2013, after 17 years.



Figure 16: Felix Meier receives the Honorary Membership from Bella Roscher, both WWF Switzerland. Photo: Philip Gehri

Communications

Examples of activities at the national level:

- Topten Norway launched a consumer competition via SMS. The winner of the first ever A+++ freezer in Norway, Ms Hansen, was excited: “How wonderful! I have never won anything before, and great to win something I really need.” She had bought her old energy devouring freezer on a flea market many years ago.



Figure 17: Ms Hansen, winner of Norway's first A+++ freezer, source: <http://www.besteprodukter.no/>

- Topten Portugal kept being successful in getting media attention thanks to relevant broadcasts in the environmental television program “Minuto Verde.” Topten Spain has produced a funny one-minute online video: www.eurotopten.es
- Topten launched a competition among retailers to hand in photos of customers purchasing a Topten product.

Topten in other countries

The feasibility study for Russia, mentioned in the 2011 global report, was finalized. It concluded that the establishment of “Topten in Russia is very needed and feasible.” The next step is now to identify possible funding sources.

As for India, not only was the feasibility study finalized, but the International Institute for Energy Conservation (IIEC) is now in charge of setting up Topten in that country. SECO has provided funding, and the website is expected to be launched in 2014. Moreover, the first ever Topten meeting in Latin America is planned to take place in São Paulo, Brazil, in March 2013.

Topten International Group (TIG) is the global umbrella organization encompassing the Topten network. Its objectives are to increase knowledge on energy efficiency standards, to safeguard the Topten brand and the high quality of Topten activities worldwide, and to maintain independence from vested interests. The Topten International Group is a not-for-profit association created in 2007. In 2012, it moved from France to Switzerland.

Donors and partners

For Top10 China, funding to the total amount of €1.9 million comes from SECO over a three year period, 2011-2013. In kind contributions include electronic media space, government research data, and WWF staff time.

TopTen USA is funded by a large foundation, utilities, NGOs, and an anonymous private donor. In kind contributions consist of €91,000 in advertising from Google.

In Europe, Euro Topten Max is funded to 75 per cent by the EC to the amount of €1.12 million over a three year period, 2012-2014. In addition, various entities such as ministries, energy agencies, utilities, NGOs, and an insurance company provided funding at the national level. “Best of Europe” is supported by the European Climate Foundation with €100,000.

Topten has 246 partnerships with various entities, such as research institutions, power utilities, and NGOs. They support Topten in its basic research activities and with communications. The partners also assist in keeping the information on the Topten websites up-to-date and accurate.

Facts and figures

The rough overall budget for 2012 for the 20 countries was €2.46 million, shared among China, USA, and Europe:

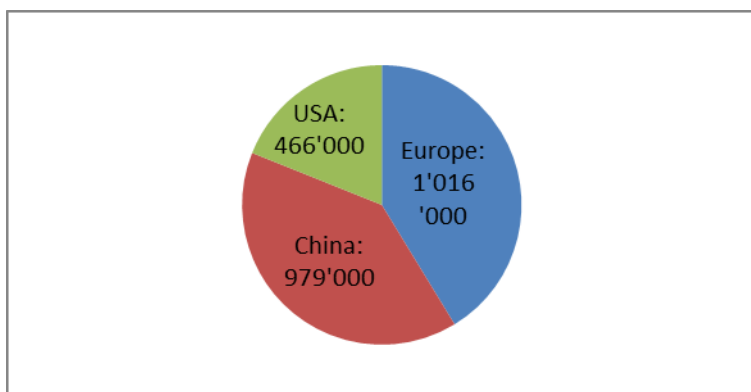


Figure 18: Overall budget for 2012 by region (in €)

In addition, various stakeholders and partners made considerable in kind contributions.

The total number of Topten websites grew to 22 in 2012 – 20 national websites plus two overview websites (<http://www.topten.info/> and “Best of Europe” <http://www.topten.eu/>).

Together, these websites list 351 product categories (sub-categories not included). They recorded around 3.7 million visits throughout the year.

With Topten online in the leading markets China, USA, and Europe, roughly two billion consumers have access to information about the most energy efficient products currently available in these markets. The 20 countries together are responsible for 55 per cent of global CO₂ emissions.

One of the key activities of Topten is communications. The media outreach in 2012 amounted to a total of 225 million media contacts. These are indicative numbers only, which may partly explain the difference in numbers from last year. Also, this may have to do with the fact that not all countries may have provided this information and how the total was calculated.

List of board members and Topten addresses

Board Members:

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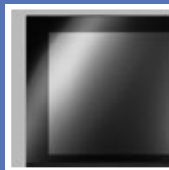
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Management Agency
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Annexes

Annex 1. Etop Manual



SELECTING THE MOST ENERGY EFFICIENT PRODUCTS



Promoting energy efficiency and environmentally friendly solutions is now a fashionable marketing activity in many countries over a wide range of product types.

Many organisations, such as manufacturers, retailers, energy utility companies, and the media, organise programmes, selecting and highlighting specific products, which are supposed to be better, e.g. more energy efficient, than the average products on the market.

But how do consumers know that the products selected are really the most energy efficient or environmentally friendly – i.e. the best the market has to offer?

Often, the most common way of declaring such claims, is by using the energy class of the product, stated on its energy label. But how many consumers know, for example, that class A refrigerators cannot be brought to the EU market since July 2012, or that B, C and D classes are no longer allowed for new washing machines and dishwashers? Class A is simply not the best class on the market any more, on the contrary, they are often the worst, or just average – depending on the product group.

In addition, many of the existing programmes do not even publish the selection criteria, which they use to select individual products. Some programmes also offer a discount or a subsidy scheme for products on their lists.

In order to gain consumer confidence for programmes highlighting the best products, several conditions have to be fulfilled.

This document has been prepared by the Euro-Topten MAX project, which has a long-lasting and international tradition of selecting and highlighting the most energy efficient products on the market in an independent and transparent manner, based on specific expertise.

■ Topten in brief

Topten is a market-transformation tool used to bring more energy efficient products and equipment on to the market. Topten:

- Provides a selection of the most efficient products available on the market. These items are displayed on user-friendly websites managed at national level, aligned to consumers' markets,
- Supports consumers and large-scale buyers, via communication and guidance for professional procurers,
- Encourages improved performance from manufacturers and retailers via regular contacts, information and promotion of their most efficient products,
- Contributes to market transformation and policy design thanks to its analyses of product energy efficiency,
- Consists of 19 national websites around Europe, one in China and another in the USA, covering a total of over 85 product categories.

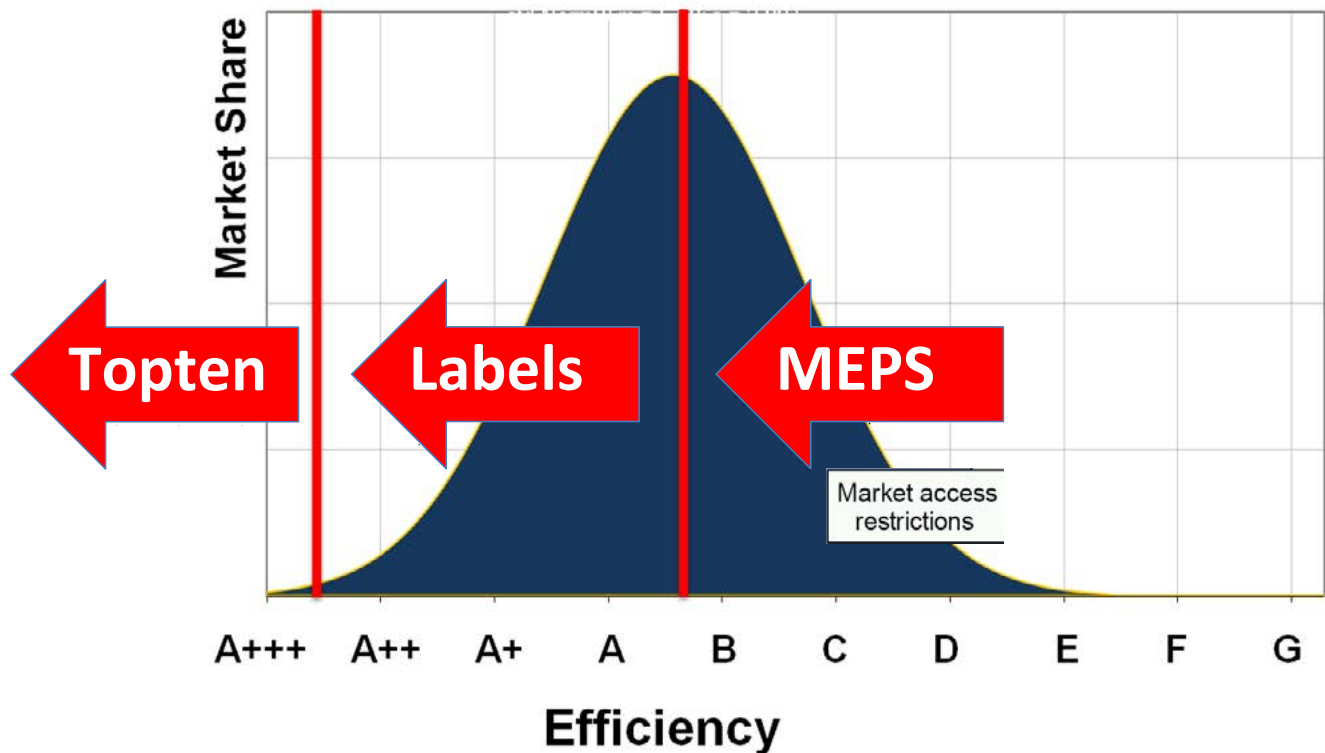
■ Topten's basic rules

- **Transparency:** The whole Topten approach is published online: manufacturers and consumers know, for each product category, the criteria for selecting the "best appliances". The methodology is available online, with a simple additional click.
- **Flexibility:** The Topten product lists are updated frequently, at least twice a year. The criteria are easy to revise and are strengthened according to the markets' progress.
- **Simplicity:** Priority is given to existing classifications and criteria. Where an energy label exists, it is used to determine the best appliances (in Europe, A+++ class for wet and cold appliances, A class for tumble driers, etc.). Where it does not exist, other labels are used (such as Energy Star, the Blue Angel label, or ATE¹). When there is a lack of harmonised norms to measure energy efficiency, Topten may carry out tests and develop its own methodology.
- **Neutrality:** Topten is fully independent from appliance manufacturers, importers, retailers and commercial trends. It provides impartial information on energy efficient brands and therefore enables consumers to choose environment-friendly products in a reliable way, and provides an incentive for manufacturers and retailers to favour them as well.

¹ Switzerland-based association in charge of evaluating car's environmental impacts, www.ate.ch

The graph below shows the general distribution of products on the market, ranked by their energy efficiency, where the least efficient ones are prohibited from sales by a specific legislation, such as Minimum energy performance standards (MEPS). The products available on the market (i.e. energy efficiency class D and better), are ranked in shops by the energy labels. Only the best of these products (e.g. class A and better), can also be listed on the Topten site, highlighting the most energy efficient products on the market.

Market transformation: push and pull



Main impacts of Topten

■ Increasing market transparency

Topten uses only official and comparable product characteristics, such as the ones measured according to international protocols and measurements in the system of energy labels. In this way, and by specifying selection criteria for the most efficient products from the market, the programme contributes to highlighting the genuinely most effective products on the market – both in individual participating countries and internationally. This is a service which neither the energy labels alone (comparing the whole range of the product), nor the principle of ecodesign (restricting only the least efficient products) can achieve. In addition, it is a flexible tool which is easy to update.

■ Providing a market situation overview

By specifying selection criteria for individual product groups, and by revising these criteria on a regular and long-term basis, the programme helps to make explicit the current *status quo* of the most energy-efficient products on the market.

■ Creating a market pull effect by stimulating demand

By specifically identifying the most energy efficient products, consumers are provided with a list of good examples from which to choose. This can help save time and when energy use is considered, can also save significant amounts of money.

■ Creating a market push effect by stimulating supply

By means of neutral and impartial publicity and promotion, Topten highlights the most efficient products through various communication activities. It does not promote brand names as a whole, but instead the specific products that meet stringent selection criteria.

■ Providing stringent criteria for public/private procurement and incentive programmes

Topten provide strict but transparent selection criteria for individual consumers as well as larger institutions, such as municipalities and authorities. These institutions purchase vast quantities of energy-consuming products and should therefore have a strong interest in selecting their products according to energy efficiency criteria as well.

■ Supporting ambitious government standards by providing real-time data and feedback

Energy labelling and ecodesign measures, as examples of legal requirements for all producers of specific product types, are sometimes criticised for being too slow to react to market development. Gaining a clear indication of the overall situation is often not easy for many decision-makers. The programme helps by providing a clear overview of the supply of products from the standpoint of energy efficiency. In doing so, it contributes to moving product standards towards higher energy-efficiency requirements or, in some cases, making the process faster.

Main organisational issues that must be ensured within a programme that selects and promotes energy efficient products:

Communicating via a website

Crucial aspects for the programme website:

- The user only needs to click once to get to the products list
- The selection criteria are always published on-line (with one more click)
- It contains a recommendation page (with one more click) for each product category
- The website has an attractive graphic design to attract everyday consumers
- It has to look professional: a website with sufficient information, well written, well presented, and updated.
- Pictures and price information for all the displayed products are key.

- **Updating of content** – regularly and thoroughly! – mainly products available on the market, news about programme activities
- **Maximising website traffic** – to increase the number of visitors, promotion activities and media partnerships are fundamental.

Which product categories to focus on?

One of the main conditions for the success of the programme is that it should have several categories running from the start-up of the campaign, to attract visitors and ensure that many of them will find the products of interest. Visitors should also feel the need to visit the website again, when they buy a product from a different category or a new product. They should also want to recommend it to other internet users.

- **How to decide which categories to work on:**
 - The product is considered important or relevant for consumers
 - It has a significant share on the average consumer end-use energy consumption and significant potential savings
 - KEY: it is possible to define fully transparent, open and accessible selection criteria

How to define product selection criteria?

Accurate selection criteria are fundamental for the overall success of the programme. Among the most important characteristics are the following: public, transparent, up-to-date, parameter-specific, technically correct.

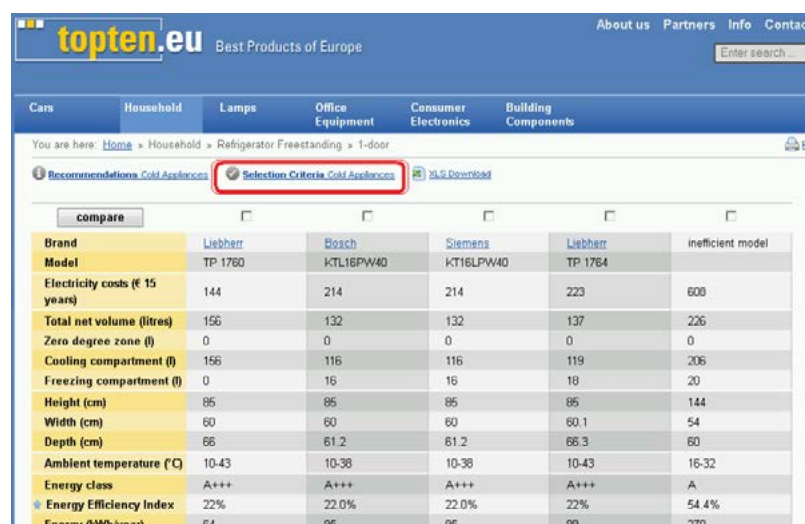
■ Availability of data sources

In order to be able to select the individual models, it is important that the manufacturers have equal opportunities to submit their data, and the data has to be based on equal technical characteristics and testing procedures.

■ Product selection criteria:

□ Transparent and open (public) selection criteria

The model selection criteria have to be transparent and public. In practice, every specific product table published on the web advertises a “selection criteria page” with a direct link from the same page



	Liebherr	Bosch	Siemens	Liebherr	inefficient model
Brand	Liebherr	Bosch	Siemens	Liebherr	inefficient model
Model	TP 1760	KT16LPW40	KT16LPW40	TP 1764	
Electricity costs (€ 15 years)	144	214	214	223	608
Total net volume (litres)	156	132	132	137	226
Zero degree zone (l)	0	0	0	0	0
Cooling compartment (l)	156	116	116	119	206
Freezing compartment (l)	0	16	16	18	20
Height (cm)	85	85	85	85	144
Width (cm)	60	60	60	60.1	54
Depth (cm)	66	61.2	61.2	66.3	60
Ambient temperature (°C)	10-43	10-38	10-38	10-43	16-32
Energy class	A+++	A+++	A+++	A+++	A
Energy Efficiency Index	22%	22.0%	22.0%	22%	54.4%
Energy (kWh/year)	64	95	95	99	270

The criteria have to be very specific, and enable direct comparison of the individual products. Criteria should relate mainly to energy consumption features, in individual relevant cases as well to water consumption, noise, and other environment-, or performance - related product features, if they make sense to consumers and allow for transparent product selection.

■ Criteria definition:

□ By energy labels / ecodesign legislation

The easiest and most practical option for selecting a category to be covered is to have those categories that are covered by energy labelling – mainly household appliances and more recently, TVs. The other possible categories are office equipment on the basis of the Energy Star, as well as cars and the ATE database.

Selecting the product by its energy class is the most straightforward approach.

Selecting products which are for example energy class A+++ (e.g. cooling appliances) or A class (dryers) is straightforward, easy to understand, easy to obtain information from, and easy to present. It is necessary to make sure, however, that the class selected represents the real top level of the market, not only the average.

Partners and target groups

It is very important that the programme organisers team-up with representatives of all relevant stakeholders, so that they help increasing the awareness about the programme and its potential impacts:

■ **Consumers**, *as the final target group, need:*

- A user-friendly interface to identify the most efficient products
- Information on total life-cycle cost (purchase price plus energy bill minus incentives) based on realistic use of the products
- To understand the benefits of efficient products for the family budget and for climate protection

Cooperation with the partners and target groups:

■ **Manufacturers**

- Support market transformation by introducing new products
- Provide independent, objective marketing of products
- Effectively communicate incentives in order to increase demand for innovative products

■ **Retailers**

- Visibly promote energy efficient products
- Build trust in the importance of mitigating climate change

■ **Large Buyers and Procurement Officers**

- Support formulation of procurement specifications and award criteria
- Ensure that very efficient products are able to be selected from brands that provide all associated services
- Calculate reduced operating costs to enhance value-for-money

■ **Policy-makers**

- Access real-time market data on the “best” products, with energy efficiency as a key criterion
- Pave the way for new and more stringent standard & label specifications

■ **Utilities**

- Continuously identify the highest-efficiency products
- Serve as a basis for rebate programmes
- Serve as a source of advisory information for their clients

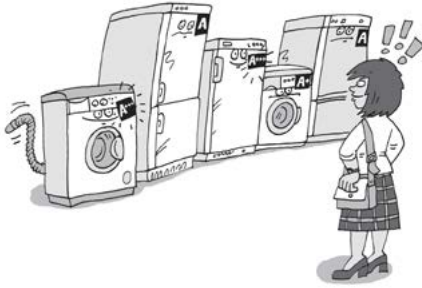
■ **Media**

- Serve as credible, independent source of information
- Issue regular updates and news on energy efficient products

- Provide information about the one-stop shop for broad range of product categories

■ **NGOs & Institutions**

- Organise specific actions within their campaigns on sustainable consumption and climate change
- Develop and distribute materials and information on energy efficient products as part of their campaigns



Promotion

After the programme's website has been prepared and products are online, wide-scale dissemination is important for making as many consumers as possible select more (the most!) energy efficient appliances. There are numerous ways of undertaking this efficiently:

■ **Continuous PR activities!**

- **Use web links everywhere** (documents, partner websites...)

Mention the Topten programme's website address on every possible occasion, in every contact with media etc.

- **Press conference**

Organise a press conference when launching the programme and other major events.

- **Press releases** (e.g. new categories, updates)

Publish and circulate press releases describing changes of selection criteria, additions to categories, or any other major changes as widely as possible. Prepare a list of relevant journalists.

- **Articles** (upon request / initiated)

Initiate articles focused primarily on product efficiency. Lifestyle magazines and magazines focusing on design, lifestyle and household equipment are ideal target groups, as their readers are actively interested and are probably searching for new products for their households.

A special article for selected media may be written on the occasion of publishing a press release.

- **Media partners**

Media and publishing houses involving a network of media channels may be selected for more regular cooperation. Such cooperation can help form partnerships to organise a consumer competition, a regular series of articles, the inclusion of printed leaflets into magazines, etc.

- **Competitions**

Organising a consumer competition may result in a substantial increase in the website traffic, with the investment of only limited resources.



Communicate the programme's benefits to consumers

Within the communication activities, the following main messages may be stressed:

Purchasing advice and consumer orientation

The programme provides concrete advice: which products to select according to specific product criteria, and which products actually fulfil such criteria at any given moment

It also offers simple guidance on selecting the most efficient products and has prepared the list of concrete products, which makes consumer-orientation much easier.

An easy and practical guide to save money

By selecting specific criteria and listing products fulfilling such criteria, consumers do not have to look anywhere else to search for the most efficient products!

Overview of the price / performance ratio

By purchasing the most efficient products, consumers will save money throughout the lifetime of the product. The product lists with associated energy use costs will enable them to access this information easily.

Convenience and good service

The service is up-to-date, independent, comprehensive, expert-based, and easy to understand and follow.

Contribution to saving the climate / environment

By selecting the most energy-efficient products, consumers directly contribute towards reduce environmental pollution through lowering the amount of electricity that power plants need to produce.

Monitoring

Brief suggestions for the monitoring of the programme activities and achievements:

- **Web access** – analytics of the number of visitors, etc.
- **Articles** – number of readers / ad value of the space of articles
- **Publications** – number of print outs, sizes, pages, distribution
- **Press releases** – dates, topics, impacts
- **Web links and media partnerships**
- **Competitions and other promotional activities** – numbers, feedback

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Best products in your country



	Austria		Luxembourg
	Belgium		Norway
	Croatia		Poland
	Czech Rep.		Portugal
	Finland		Romania
	France		Spain
	Germany		Sweden
	Greece		Switzerland
	Italy		United Kingdom
	Lithuania		

 Global Topten network

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Annex 2. Case study: Chinese AC BAT upgrades EU threshold for ACs

Introduction and approach

More than 5 million room air conditioners (ACs) are sold per year in Europe, 35 million in China. Most air conditioners combine heating and cooling, and sales are expected to grow further. Total annual electricity consumption by air conditioners in Europe is estimated at more than 40 TWh, in China at 200 TWh. The most efficient ACs are split models with a variable frequency drive (VFD). Market shares of variable speed ACs are on the rise both in Europe and in China. They are more efficient at part load conditions than fixed speed (on/off) appliances and can keep the requested room temperature more constant.

In China, the efficiency indicator for variable speed ACs (Cooling efficiency: Seasonal Energy Efficiency Index SEER / Heating efficiency: Heating Seasonal Performance Factor HSPF) does include part load conditions, while in Europe a part load measurement standard is actually in preparation. The implementation of seasonal efficiency indicators, strict minimum efficiency requirements and an effective energy label is key for the promotion of high efficiency air conditioners. In China, the implementation of MEPS and an energy label for variable speed air conditioners triggered a significant increase in market share and efficiency.

A Chinese high efficiency AC was selected from the Topten China product list and tested according to four different measurement standards (European current and future, Chinese and US) in January 2011. The results were compared with regional levels of the BAT and allowed to derive conclusions on the efficiency of air conditioners in the different regions. Regarding the new measurement standard and Energy Label being developed in Europe, the results allowed to conclude on which energy class was going to be reached on the proposed labeling scale.

Results and impact

Most interesting for the EU policy work was the result according to the future European measurement standard. The tested AC model reached very high efficiency indices when measured according to this draft standard: a SEER of 8.56 for the cooling function efficiency and a SCOP of 5.55 for the heating function efficiency (SCOP= Seasonal Coefficient Of Performance; seasonal heating efficiency indicator). The tested model would be in A+++ class according to the proposed labeling scale for both cooling and heating function. Combined with the result according to the current EU measurement standard, which showed that the tested model was of high efficiency while not reaching the BAT on the European market, this result also implied that several good models on the EU-market would already reach the A+++ class of the new energy label.

After sharing and discussing the results with the European Commission, the limit of the A+++ class was increased from SEER=7.0 to 8.5 in order to avoid to have more than only the very best air conditioners in the top class, a short time before the adoption of the regulation in early May 2011.

Lessons learnt

In the case of air conditioners Topten's global network proved to be very helpful: thanks to Topten China and its contacts with the testing lab, the efficient Chinese air conditioner model could be selected and tested. The test provided information on differences between the measurement standards and Topten was able to provide crucial input without having special expertise on air conditioners.

Topten definitely contributed to an improved energy label. However, the success is a partial as neither the energy label nor the Ecodesign requirements were adopted the way suggested by Topten. As always, the final decisions were compromises.

Quick achievements thanks to tests

In most cases Topten has been able to achieve successes by accompanying the development of an efficient technology and the political process across many stages on a constant, long-term basis (see case study on heat pump driers). The example of air conditioners shows that sometimes also quick results can be achieved with comparably little effort. This was possible thanks to the results achieved in the measurement test initiated by Topten, which also delivered new information.

Contacts and network

With the expanding global Topten network, such tests and international comparison projects will be possible on a larger scale in the future. Additionally, the new partnership with the VDE institute will allow for more and quicker testing projects.

Good contacts with different stakeholders have proven to be crucial for Topten. To build up the product lists and technical know-how, contacts with manufacturers are cultivated and important. When being active on a certain product group it is crucial that as many stakeholders as possible are too. For this, especially the coordination with ECOS, EEB, CLASP, and ECEEE, is key. The ECF has decisively helped Topten and its allies to strengthen their coordination and their impact by coordinating their activities.

For more information

Best products of Europe: www.topten.eu

Platform for Topten worldwide: www.topten.info

Paper on the air conditioner test, presented at EEDAL 2011 (Copenhagen):

www.topten.eu/uploads/File/023_Anette_Michel_final_paper_S.pdf

Annex 3. Case study: Making the competition case: heat pump driers

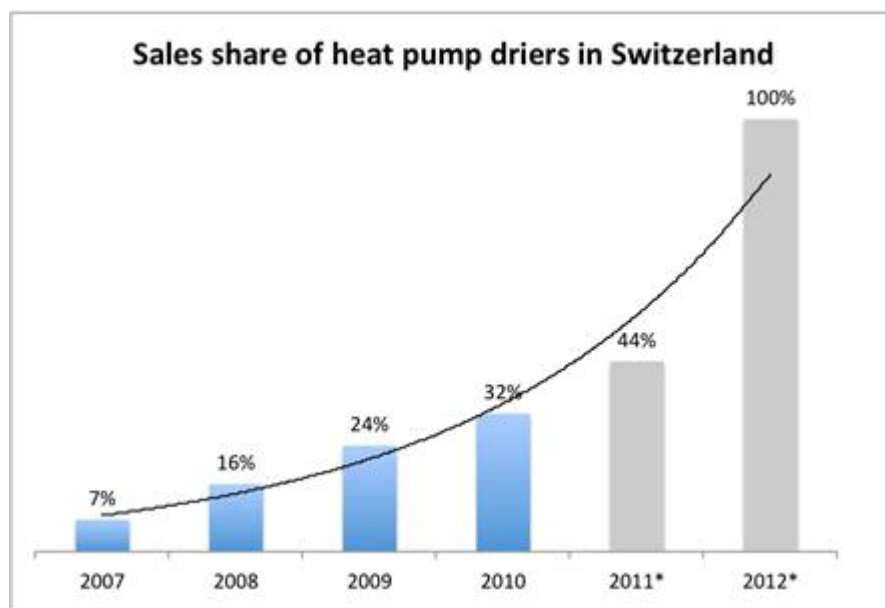
Introduction and approach

Topten is closely following the emergence of new, more energy efficient technologies. Clothes driers with heat pump technology consume about half the energy necessary for clothes driers with conventional technology. Topten was instrumental in the market penetration of heat pump driers in Switzerland, which since 1 January 2012, is the minimum requirement there. Topten transferred the Swiss experience to the EU. The successful market transformation in Switzerland and the EU inspired developments also in the USA.

Results and impact

The first heat pump drier appeared on the Swiss market in 2001. Topten tested heat pump driers in Switzerland in 2003 and formulated recommendations for users. In the same year, Topten convinced the city of Zurich, which owns about 10,000 residential flats, to procure only heat pump driers for its housing projects (in Switzerland, multi-family houses often use one common washing machine and clothes drier, installed by the property owner). In 2006, Topten convinced the power utility of Zurich (EWZ Elektrizitätswerk der Stadt Zürich) to offer consumers a rebate when purchasing a heat pump drier. Since 2007, several other Swiss utilities and communities have followed this example and launched rebate programs for heat pump driers.

These efforts led to a constant rise in the market share of heat pump driers in Switzerland, reaching 24.5 per cent by 2009. These market developments and the savings potential of 400 GWh/year (were all driers in Switzerland to be replaced by heat pump driers) led Topten, and other Swiss environmental and consumer organizations, to advocate setting MEPS for heat pump driers. In 2009, Swiss policy makers decided to do so. Since 1 January 2012, only heat pump driers can be sold in Switzerland.



Data source: Swiss Association of the Domestic Electrical Appliances Industry (FEA)

EU: accompanying and advising the policy process

Where heat pump driers were available on the national European markets, Topten started to list them. In addition, all heat pump driers on the European market are listed on www.topten.eu – with the lists getting longer. Topten experts (Jürg Nipkow, Anette Michel) were directly involved in the European Ecodesign process for driers (preparatory study stakeholder meetings, comments to working papers and draft regulations). Topten brought the Swiss experience to the attention of the European policy makers and

advocated also through its policy recommendations and through its newsletter “Focus” in favor of ambitious minimum efficiency requirements for driers.

Under the previous EU energy label, all heat pump driers were simply class “A”. The revised energy label (taking effect from June 2013) distinguishes between more and less efficient heat pump driers (from classes “A” to “A+++”). Topten recommended a more ambitious labeling scale, based on the original ‘A to G’-scale instead of a scale ranging from D to A+++ , but this recommendation was not followed.

The laundry appliance industry was strongly opposed to any revision of the EU energy label that would result in downgrading the energy class of driers. Although the energy label was not revised along Topten's suggestion, its introduction now allows to distinguish more and less efficient heat pump driers and will have a market transformation effect towards more efficient driers. First manufacturers declare the efficiency of their driers now according to the new label, and the drier lists on www.topten.eu show that the best models already reach the top class A+++.

In November 2013, new minimum energy performance requirements will take effect in the EU, banning the least efficient driers from the market. Topten was advocating more stringent requirements such that only heat pump driers could be sold in Europe. However, the Commission declined to follow this advice, due to general concern (particularly from consumer associations) that it would drive up prices. Nevertheless, as initially the Commission had not proposed any Ecodesign measures for driers, this result is a success.

USA: applying European market transformation experience

As a result of the growing awareness of this European experience, the Super-Efficient Dryer Initiative (SEDI) was created in 2009. SEDI It is a collaboration among manufacturers, government agencies, utilities, and appliance retailers in the United States and Canada. SEDI recently tested and compared European and North American heat pump driers, confirming that European heat pump driers use only 40-50 per cent as much energy as North American conventional driers.

In 2012, SEDI supported the US Environmental Protection Agency decision to offer an Energy Star Emerging Technology Award (ETA) for efficient driers. The ETA for Advanced Clothes Dryers is designed to support the introduction of efficient technology through recognition and promotion. Several manufacturers are now ready to introduce a significantly more energy efficient clothes dryer into the North American market, and the announcement of an ETA recipient is expected soon.

Lessons learnt

Topten was active in all phases of the drier market evolution, together with different stakeholders to promote standards, subsidies, and procurement schemes. Topten’s overview on the heat pump drier market, its technical expertise, credibility and the constant market “pull effect” of the Topten websites listing the new heat pump driers were certainly key factors for the success. Topten’s network, reaching from manufacturers to public administration and utilities, NGOs and energy agencies, on national and EU level, was also absolutely crucial.

For more information

Heat pump driers on the European and Swiss market: www.topten.eu , www.topten.ch

Topten policy recommendations: www.topten.eu/recommendations/dryers_rg

Annex 4. Topten Charter

September 2006

1. Topten is a concept with tools for end-users to speed up sales, focus quality and lower barriers for market access of energy efficient equipment and respective information in households, offices, buildings, industry, transportation, etc.
2. Topten is internationally coordinated by the Topten International Group in order to increase influence on energy efficiency standards, to safeguard high quality of operations, to maintain independence, to speed exchange of experiences and data and to provide access to tools and web-systems for national Topten organizations. TIG safeguards the use of the Topten concept worldwide. It will protect international property rights of Topten.info, its name, logo and web content.
3. Topten wants to move national and international markets, individual manufacturers and retailers, organizations of trade and manufacturers, international standard organizations, etc. to contribute to the efficient use of energy by providing, designing, building, marketing and operating more energy efficient equipment.
4. In order to achieve this goal Topten has led by TIG the following tasks: a. Research in national and international markets for the best products. b. Building and updating databases for energy efficient equipment. c. Design of criteria catalogues for the Topten-qualification (cut-off line). d. Providing independent testing facilities. e. Support of procurement programs for energy efficient equipment. f. Design and hosting of a series of national and international websites. g. Support of design and distribution of print products with information on energy efficient equipment, etc. h. Training for personnel working in national Topten projects. i. Contacts to national and international organizations to influence the sale of more energy efficient equipment.
5. Topten works in cooperation with, but is independent of, equipment manufacturers and retailers and their respective associations.
6. Topten is not engaged in the sales of equipment that is mentioned on any Topten site.
7. Topten is organized nationally in order to better understand and guide market conditions.
8. Topten is financed and supported by national, regional, local and international governmental agencies, consumer and environmental NGO's and other partners (utilities, media, etc.). No sponsor shall be directly linked to the manufacturing and selling of energy using equipment displayed in Topten.
9. TIG does not normally support national Topten projects with funds except in developing countries under special agreement.
10. TIG chooses, gives accreditation and supports national organizations that want to use and distribute Topten in their country according to the Topten Charter. For the process of accreditation the prospective national Topten organization has to setup its national partners, funding, operation managers etc. and provide the relevant information to TIG. The accreditation procedure is a transparent process with a peer review.
11. TIG tries to avoid having more than one national Topten organization in a given country/or in a given market.
12. All national organizations accredited by TIG are members of the Topten International Group and are linked to www.topten.info. They pay an annual membership fee. They can use the Topten logo, operate their national Topten system and have access to the Topten database and international market research.