

The EU Horizon 2020 project "ProCold"

**A project that boosts supply and
demand for the most energy efficient
professional commercial plug-in
refrigerators and freezers**

Christof Horvath, Austrian Energy Agency

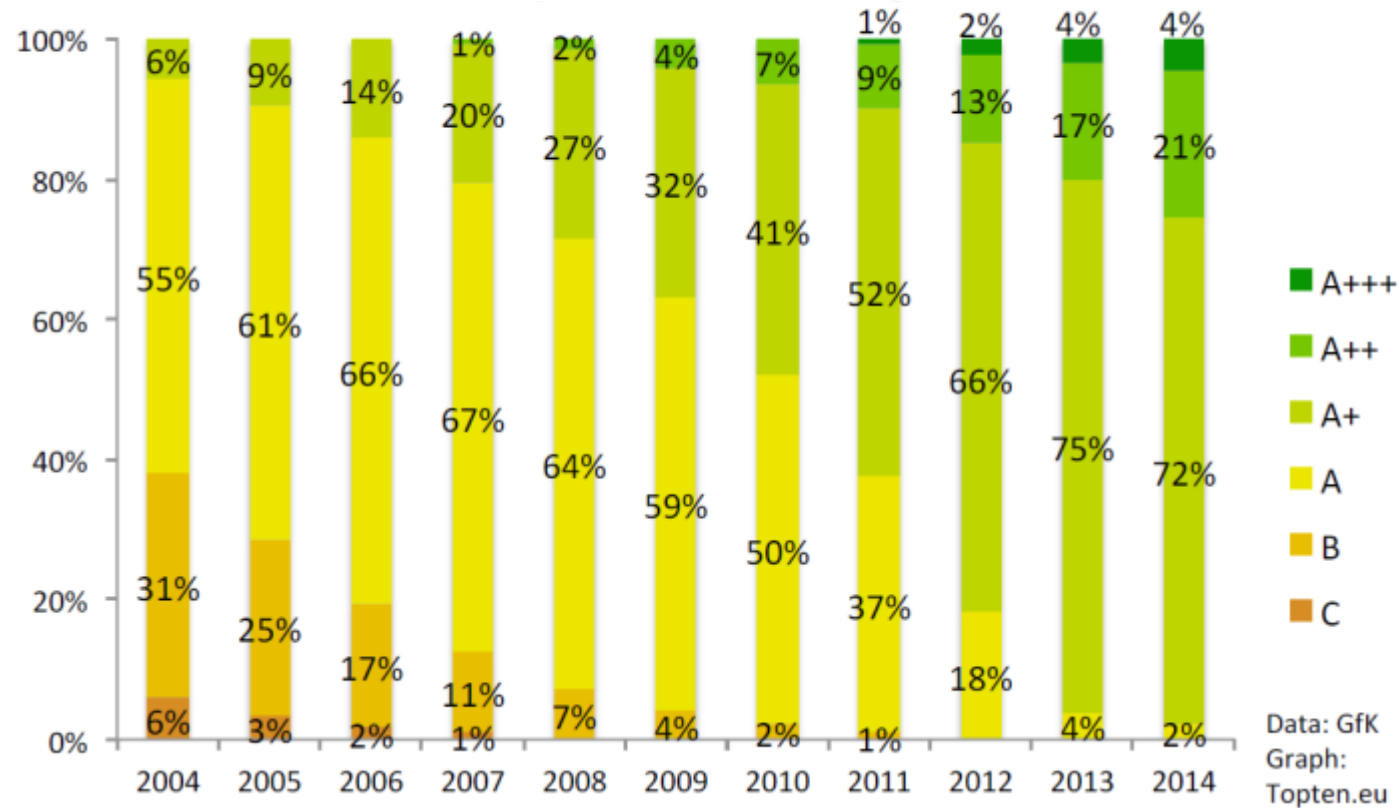
Eva Geilinger, Bush Energie GmbH

Current market situation

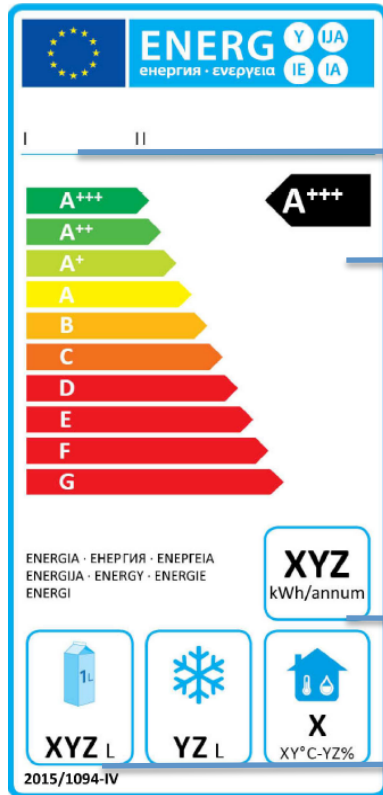
- More than 20 years ago the first EU-regulations for cold products in the household sector came into force → today class A+ are the lowest performing products on the market
- In 2015 regulations for professional cold products came into force
 - Since 1.7.2016 EU-Energy label & Eco-design for storage cabinets
- Professional cold products are inefficient compared to household products
 - EU-wide 12x less plug-in professional cold products than household refrigerators & freezers (~25 mio. units vs. ~300 mio. units)
 - Energy consumption only 2x less (~40 TWh/a vs. ~80 TWh/a)
- Large reduction of CO₂-eq emissions and energy consumption are possible



Positive Effect of Regulations



First EU-Energy label for professional products



Source: European commission



About ProCold

- ProCold is an EU-project aiming to improve energy efficiency of plug-in cabinets and to speed up the switch to climate-friendly refrigerants.
- Product groups: refrigerated storage cabinets, refrigerated display cabinets, beverage coolers, ice cream freezers, vending machines, wine coolers and minibars.

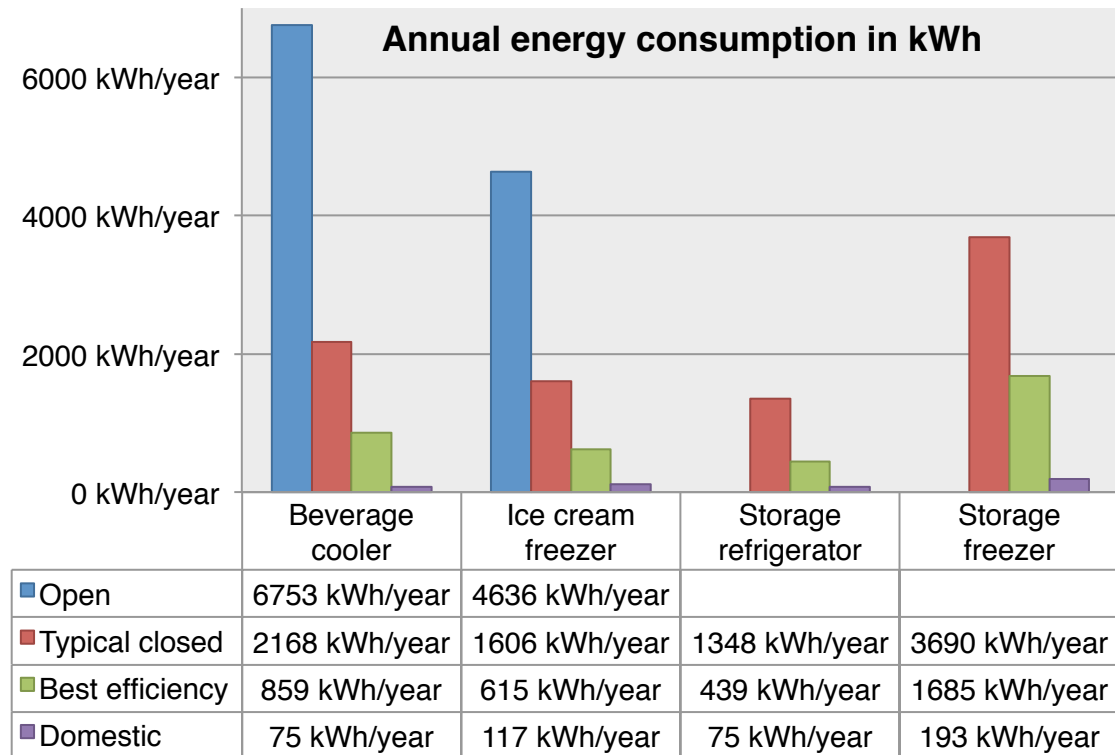


- The project involves manufacturers, suppliers, food & beverage companies, retailers, restaurants, hotels and public authorities on the EU-level and in 8 European countries.
- ProCold publishes online references of the best models and organizes a product competition www.topten.eu/pro-cold

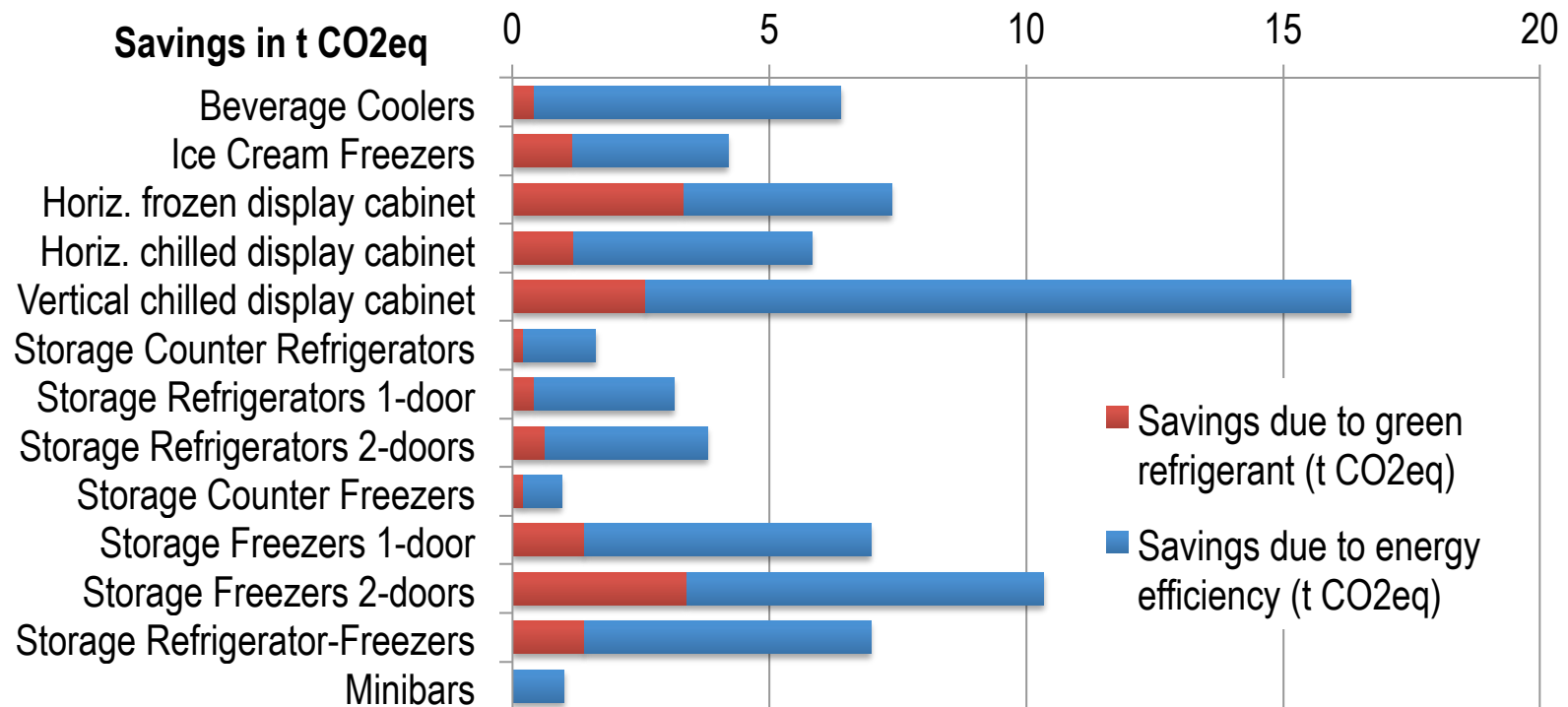


Energy saving potentials

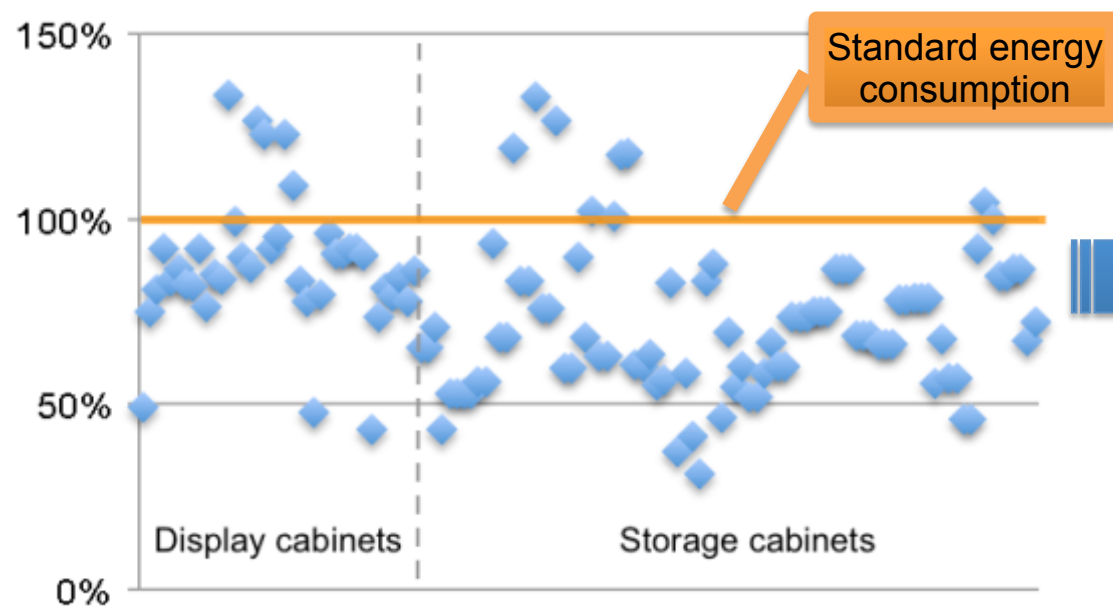
- Efficient models use 2-3 times less energy than typical models
- Open products use the most energy: 8 times more than efficient models



Greenhouse gas emission savings



Looking at kWh values in catalogues...



Energy consumption values in catalogues cannot be compared and are typically lower than standard energy consumption

Topten product lists make it easy to find energy-saving products



Topten product lists

									
Brand	Porkka	Gram	Gram	Gram	Gram	Gram	Porkka	Gram	Gram
Model	Inventus CX7	Superior Plus K 72 G	Superior Twin K 84 G	Superior Euro K 62 G	Eco Plus K 70 G	Eco Midi K 82 G	Inventus C8	Eco Midi M 60 G	Eco Twin K 82 G
Other models		Superior Plus M 72 G	Superior Twin M 84 G	Superior Euro M 62 G	Eco Plus M 70 G	Eco Midi M 82 G		Eco Midi M 60 G	Eco Twin M 82 G
Electricity costs (€ in 8 years)	461	456	493	422	525	524	547	433	550
Net volume (liters)	501	462	462	322	462	459	491	304	462
Storage temperature (°C)	-2...+12	+2...+12	+2...+12	+2...+12	+2...+12	+2...+12	-2...+12	+2...+12	+2...+12
Climate class	4	5 - heavy-duty	5 - heavy-duty	5 - heavy-duty	5 - heavy-duty	5 - heavy-duty	4	5 - heavy-duty	5 - heavy-duty
Energy efficiency class	A	A	A	A	A	A	A	A	B

									
Brand	Gamko	Liebherr	Rhino	Gamko	Gamko	Rhino	Liebherr	Klimasan	Frigoglass
Model	E3/2222GMU84	FKv 3640	Oslo 1350H	E3/2222GMU84	E3/222GMU84	Monaco 900H	FKUv 1610	ECOfrio 372	ICOOL 800 C (R290)
Other models	E3/2222GMU82, E3/2222GMUCS82, E3/2222GMUCS84, E3/2222MU82, E3/2222MU84, E3/2222MUCS82, E3/2222MUCS84			E3/2222GMU82, E3/2222GMUCS82, E3/2222GMUCS84, E3/2222MU82, E3/2222MU84, E3/2222MUCS82, E3/2222MUCS84	E3/222GMU82, E3/222GMUCS82, E3/222GMUCS84, E3/222MU82, E3/222MU84, E3/222MUCS82, E3/222MUCS84		FKUv 1660		
Electricity costs (€ in 8 years)	1642	1045	1051	1542	1098	789	576	1005	1939
Net volume (liters)	665	329	330	495	325	208	130	254.7	510
Storage temperature (°C)	+2...+18	+1...+15	-1...+7	+2...+18	+2...+18	-1...+5	+1...+15	0...+13	0...+10
Temperature class	M1	M2	M2	M1	M1	M1		M2	M2
Draft energy index	29.1	33.9	34.0	35.5	36.0	36.5	36.6	39.9	43.5
Energy (kWh/year)	1'026	653	657	964	686	493	360	628	1'212
Refrigerant	R600a	R600a	R600a	R600a	R600a	R600a	R600a	R600a	R290

- 14 product categories
- Over 135 products listed
- 21 different manufacturers
- Natural refrigerant only
- Highest efficiency



Awareness Rising

The ProCold Project raises awareness on the market's demand and supply sides, targeting:

- Public authorities: Public procurement / Policy making
 - Manufacturers: Getting ready for new regulations and measurement standards, benefit from international platform & specific dissemination activities
 - Food & Beverage Industries: Reduce clients' energy bill, CSR policies
 - Private users e.g. Retailers, Hotels, Restaurants: Reduce operational costs
 - Service providers: Reduce clients' energy bill
-
- In total more than 1200 stakeholders will be contacted and supported with specific information material: brochures, calculation tools, factsheets...



Product competition

Categories:

1. Vertical chilled storage cabinets
2. Beverage coolers
3. Small ice cream freezers
4. Vertical supermarket refrigerator cabinets
5. Refrigerated glass fronted vending machines



Deadline for product submission: **30 September 2016**

www.topten.eu/pro-cold-award

Verification tests according to EN standards (published or drafts)

Award ceremony at EuroShop 5 - 9 March 2017

Promotion of winning products at Host 20 - 24 October 2017

Winning criteria:

- ✧ Plug-in type
- ✧ Natural refrigerant
- ✧ Best energy efficiency index



ProCold details + partners

Coordinator: ADEME, French agency for environment and energy management

Partners:

- Austria: Austrian Energy Agency, AEA
- Czech Republic: The Energy Efficiency Center, SEVEn
- France: Guide Topten
- Germany: Oeko-Institut e.V.
- Italy: Politecnico di Milano
- Portugal: Quercus
- Sweden: Swedish Society for Nature Conservation
- Switzerland: Bush Energie

Website: www.topten.eu/pro-cold

Disclaimer: The ProCold project has received funding from the *European Union's Horizon 2020 research and innovation programme* under grant agreement No 649293. The sole responsibility for the content of this document lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EASME nor the European Commission and the project partners are responsible for any use that may be made of the information contained therein.



Thank you for your attention

Christof Horvath: christof.horvath@energyagency.at

Eva Geilinger: eva.geilinger@bush-energie.ch

