



Energy efficiency of major household appliances in Europe

16th Session of the Energy Efficiency 21 Project (EE 21)
Geneva, 29 June - 1 July 2005

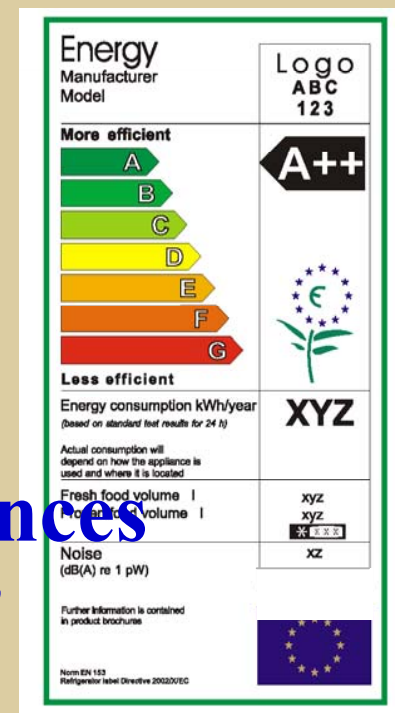
ENEA - *Milena Presutto*
- *Unit for Sustainable Development - Advisor*

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- **Energy efficiency policies & measures for cold & wash appliances in Europe**
- **Effects of EU standards and labels on cold & wash appliances in the EU15, new Member States and ACs**
- **Price of efficient appliances in CEECs and energy savings**

P&M for cold & wash appliances in the EU25 and ACs

- Directives 94/2/EC & 2003/66/EC, 95/12/EC & 97/17/EC on “energy labelling”
- Directive 96/57/EC for cold appliances on “energy efficiency requirements”
- Voluntary Commitment with manufacturers for refrigerators & freezers, washing machines and dishwashers



Voluntary Commitments with industry with energy efficiency targets

❑ Refrigerators & freezers (EU25):

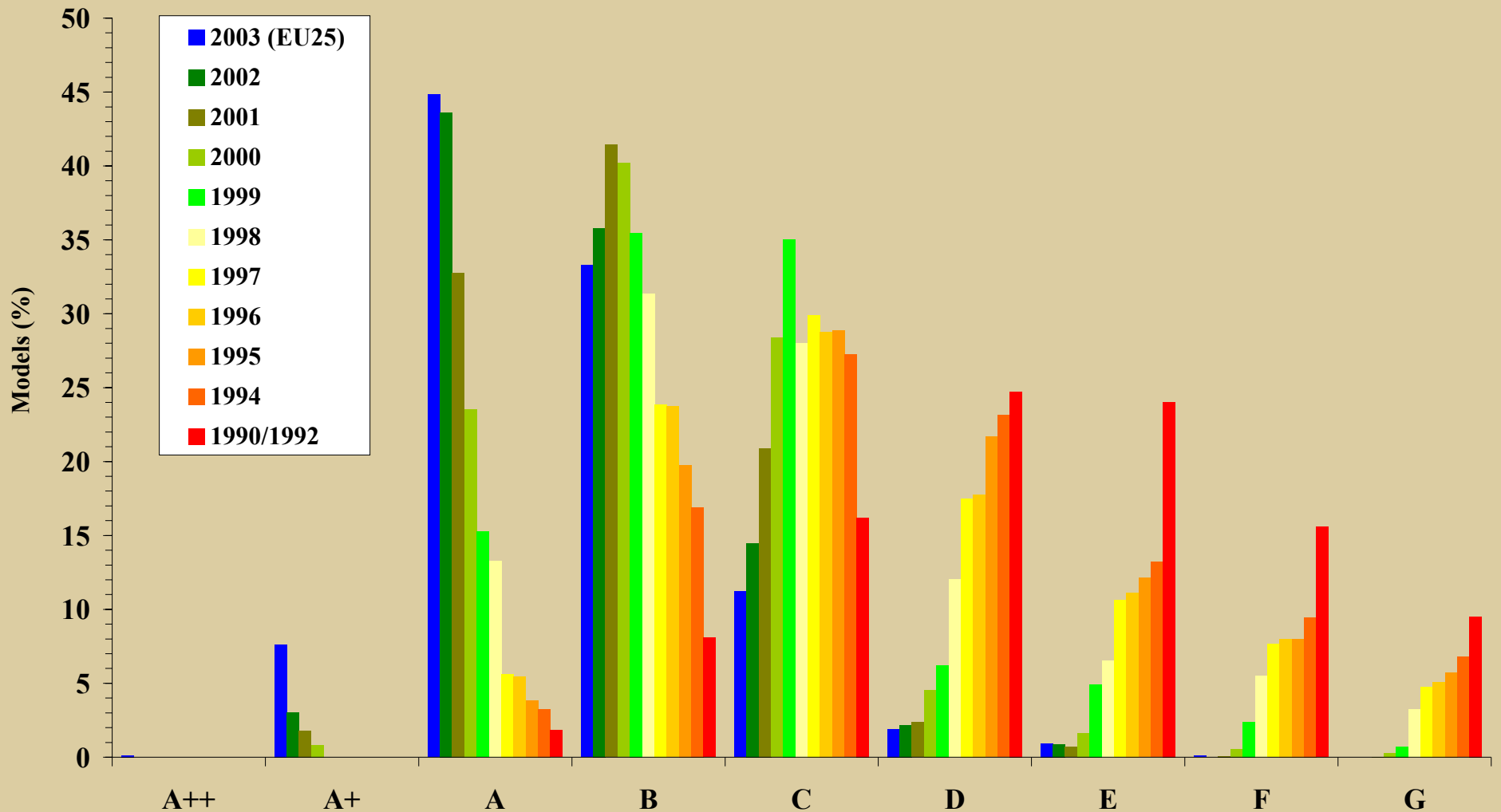
- phase out of *class C* models (*class D* for horizontal freezers) by 31.12.2004
- *fleet target* at EEI = 55 (57) in 2006

❑ Washing machines (EU25):

- phase out of *class D* models by 31.12.2004
- “*fleet target*” at 0,20 kWh/kg in 2008
- introduction of A+ class (voluntary)

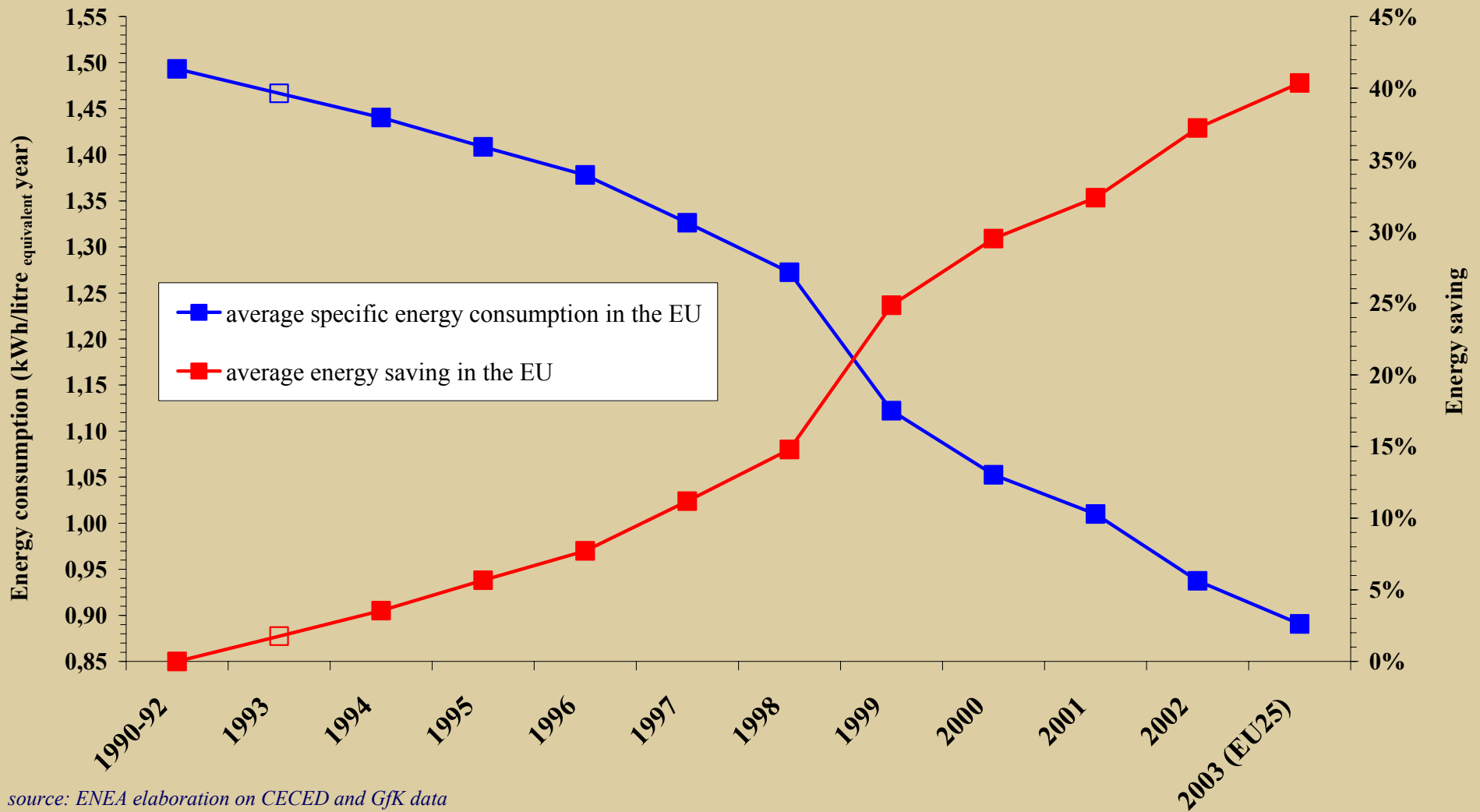
❑ Dishwashers: phase out of *class D* (for ≥ 10 place settings) or *class E* (for < 10 place settings) model by 01.01.2004 (second phase of a former VA)

Impact of the EU S&L on cold appliance production in 1992-2003



source: ENEA elaboration on CECED data

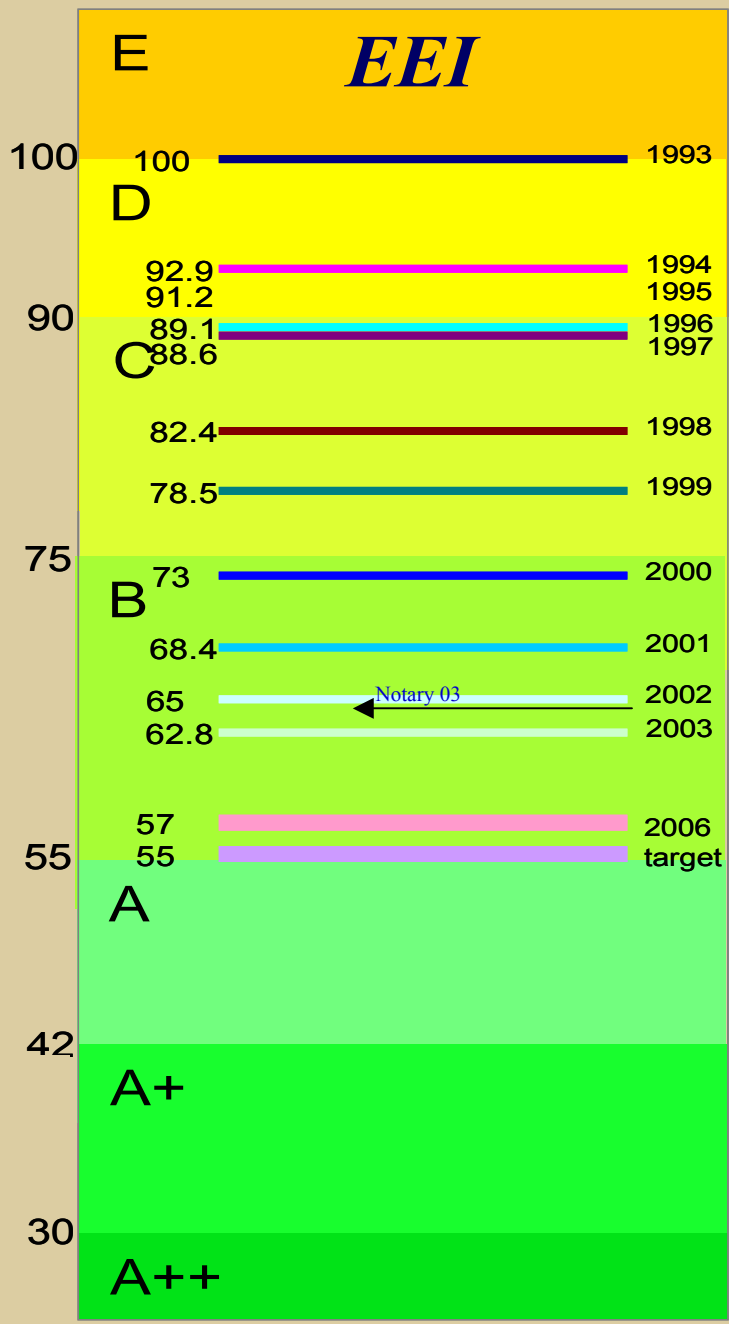
Impact of the EU S&L on cold appliance energy consumption (1992-2003)



source: *ENEA elaboration on CECED and GfK data*

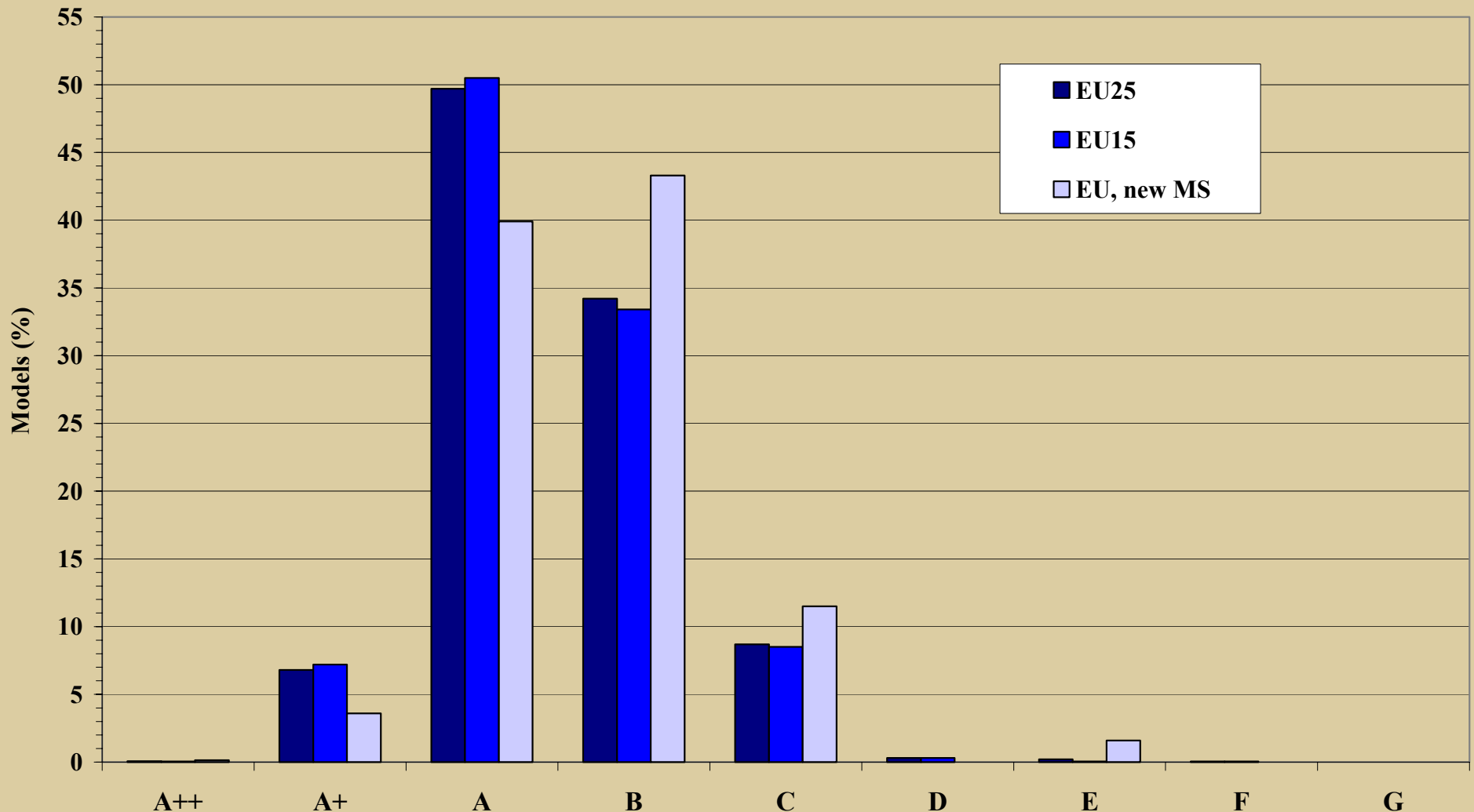
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**Energy Efficiency Index
of cold appliances
in 1993-2006**



source: CECED

Impact of the EU S&L on refrigerator production in EU15 and new MS in 2003

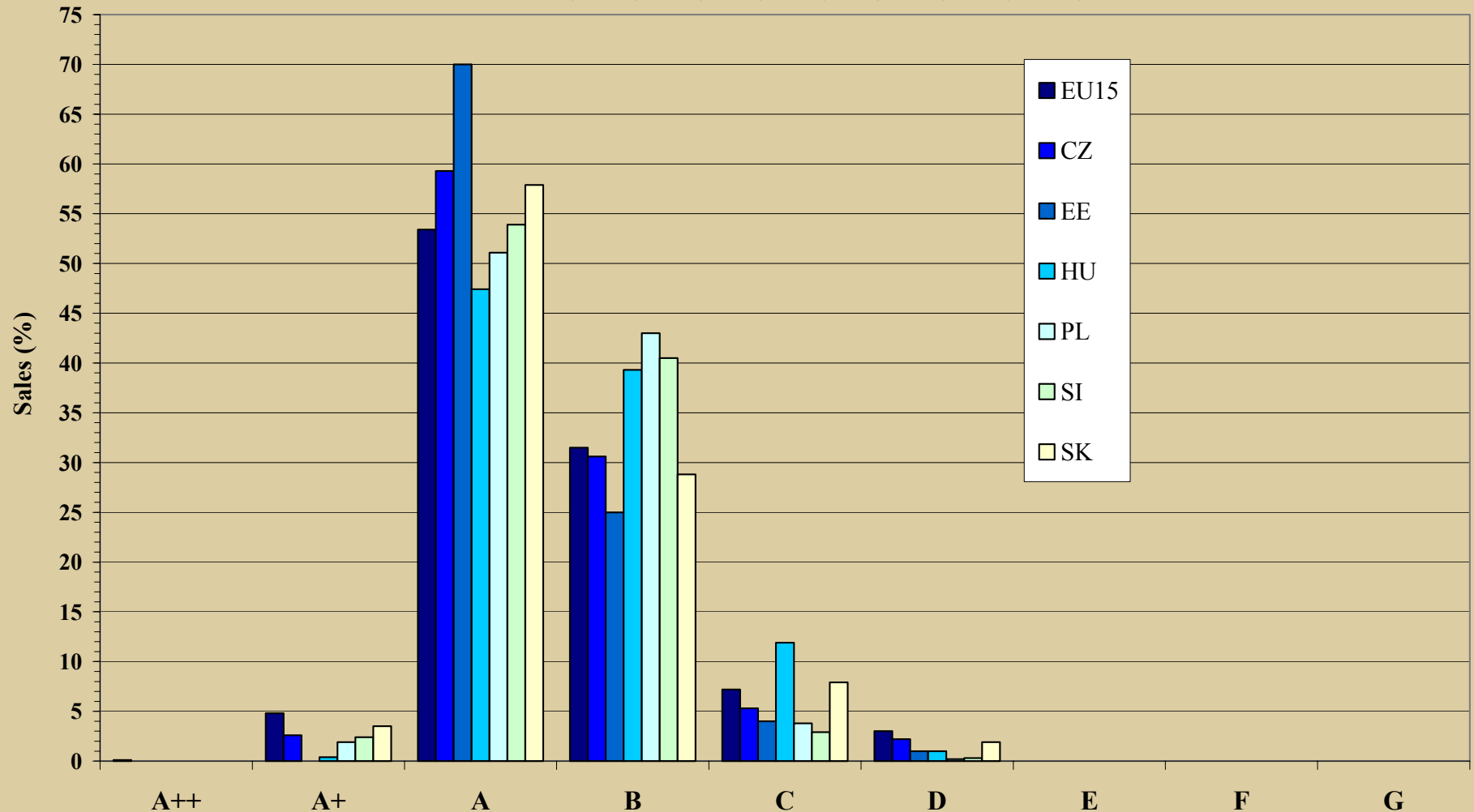


source: ENEA elaboration on CECED data

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Impact of the EU S&L on refrigerator sales in EU15 and new MS in 2004

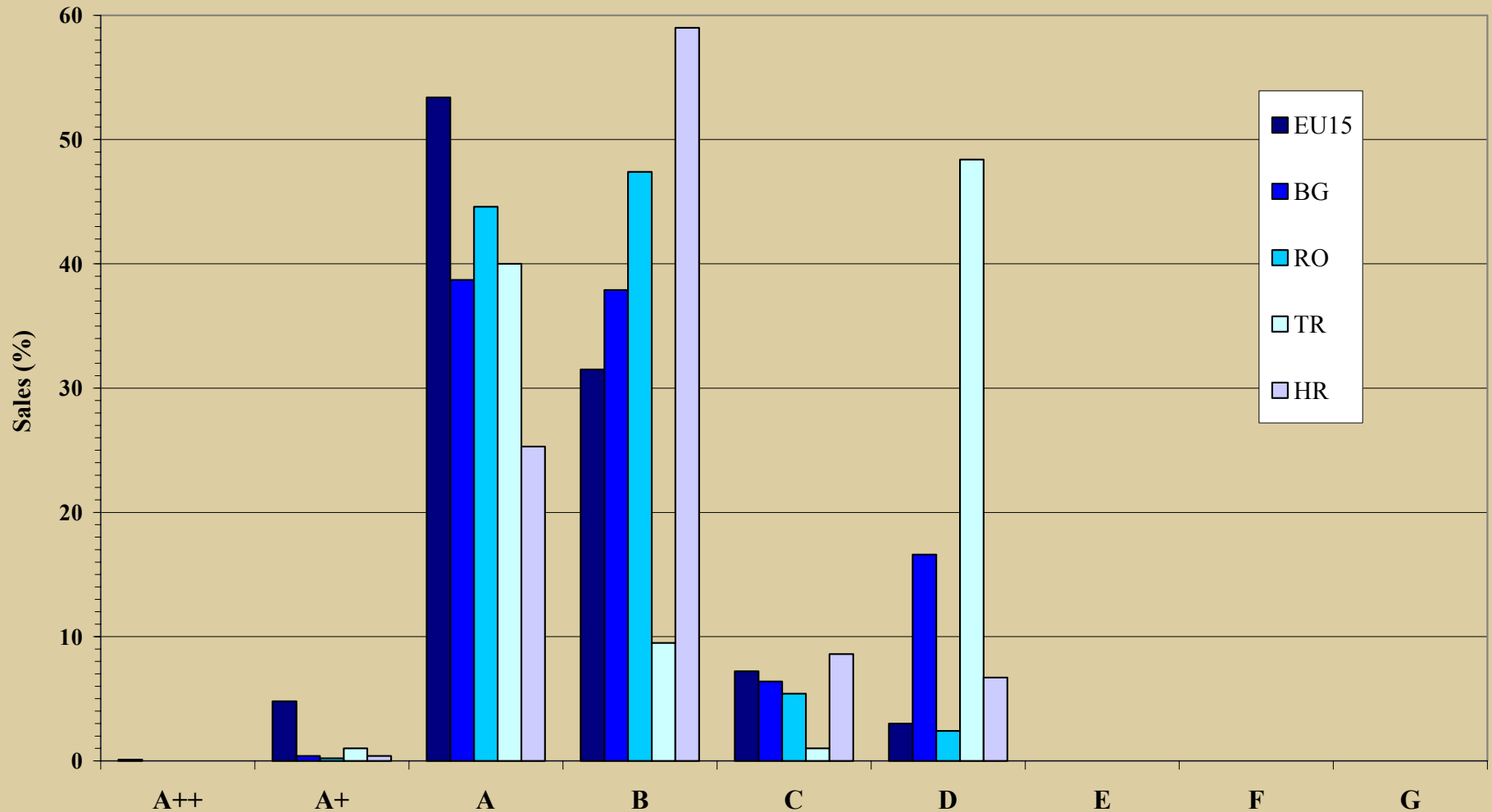
EU15: AU, BE, DE, ES, FR, IT, NL, PO, SW, UK



source: ENEA elaboration on GfK and national data

Impact of the EU S&L on refrigerator sales in EU15, AC and Croatia in 2004

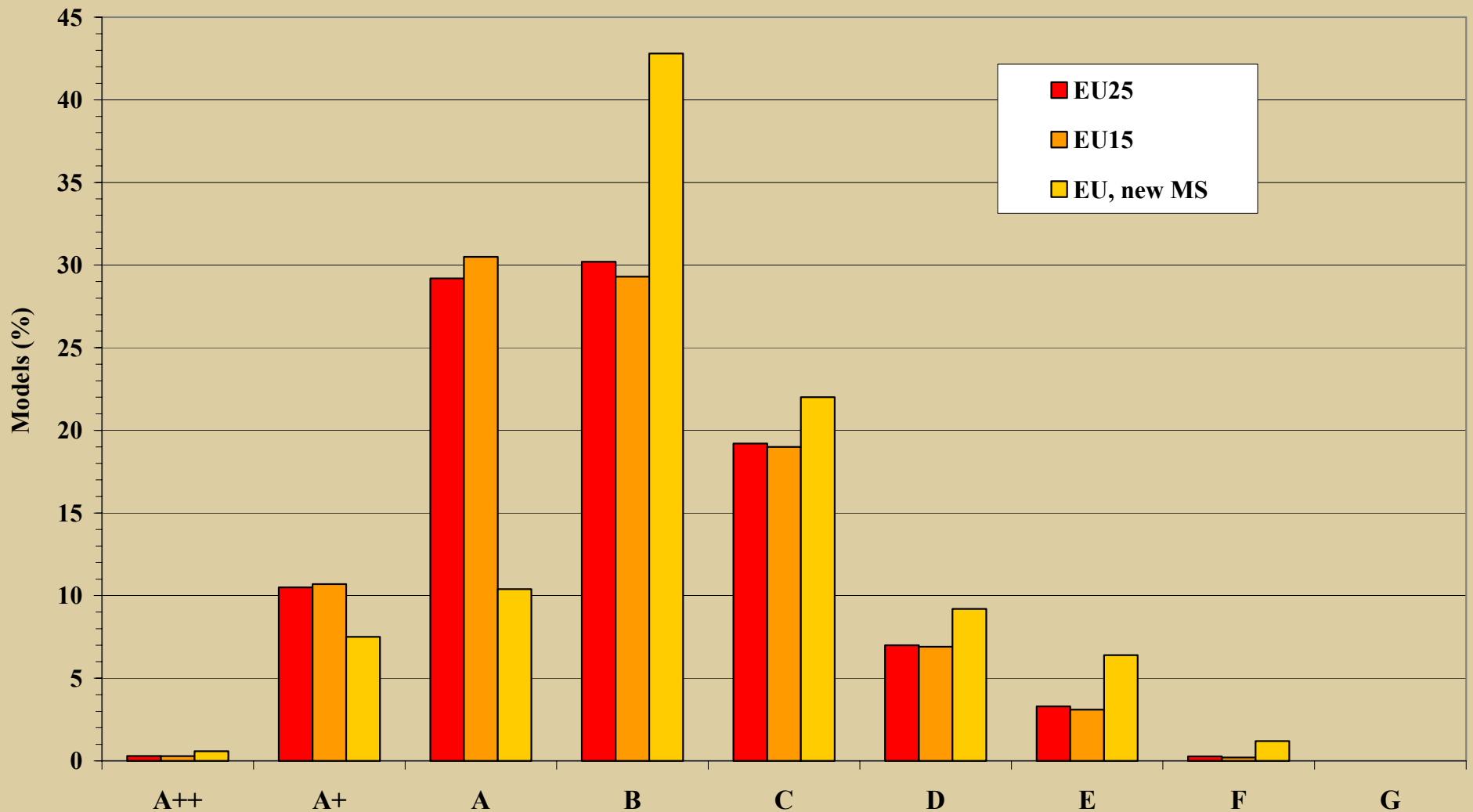
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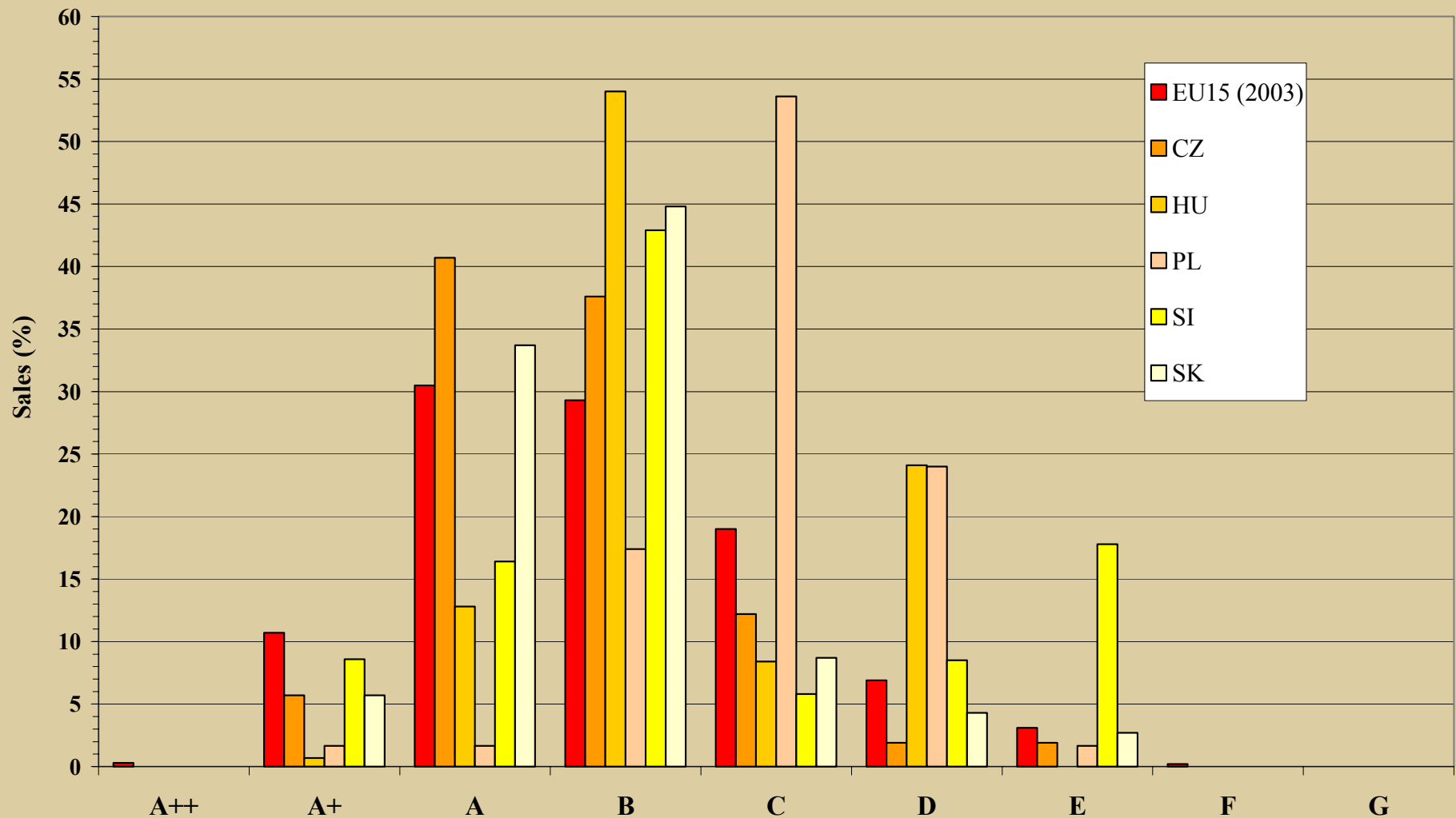
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Impact of the EU S&L on freezer production in EU15 and new MS in 2003



source: ENEA elaboration on CECED

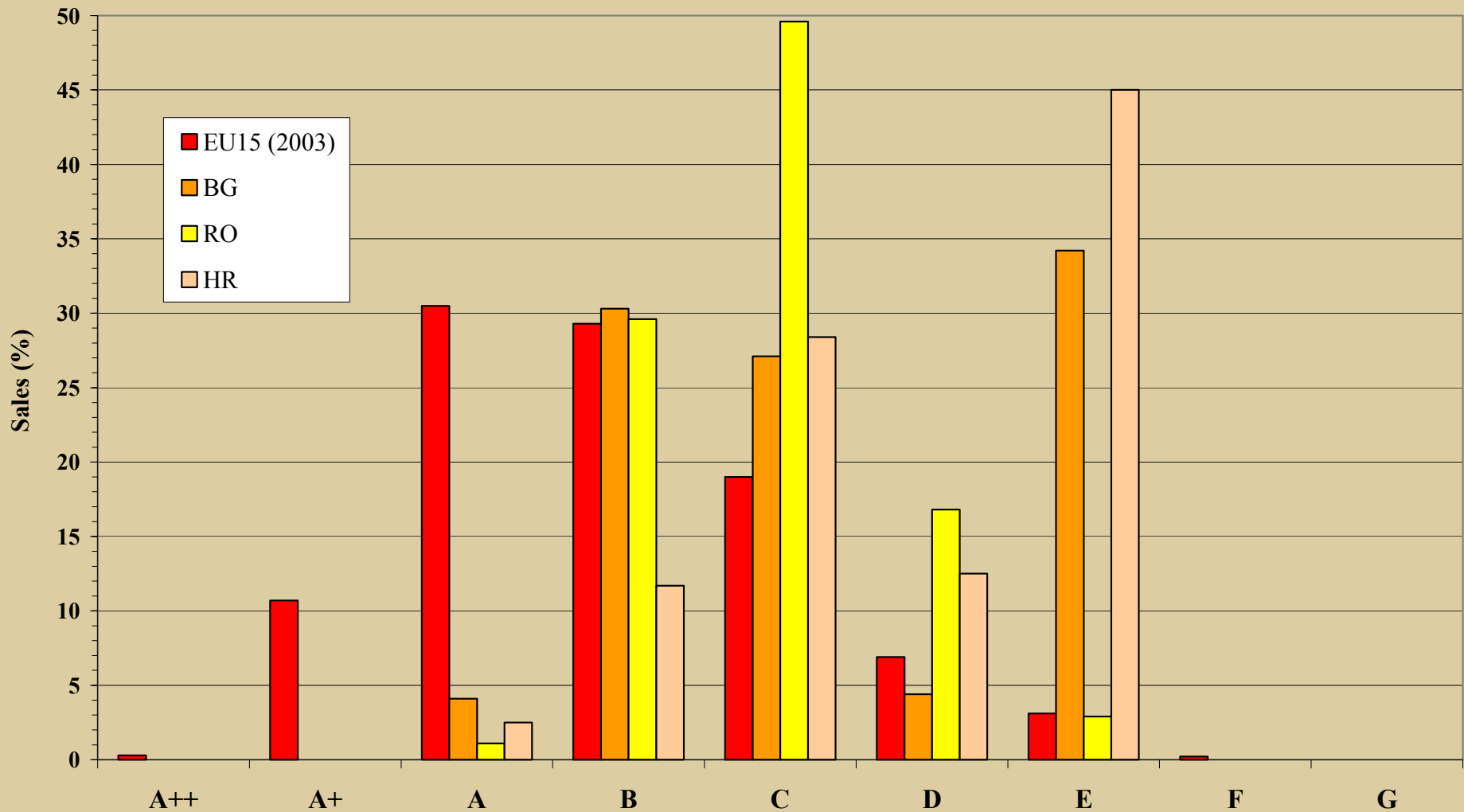
Impact of the EU S&L on freezer sales in EU15 and new MS in 2004



source: ENEA elaboration on CECED and GfK data

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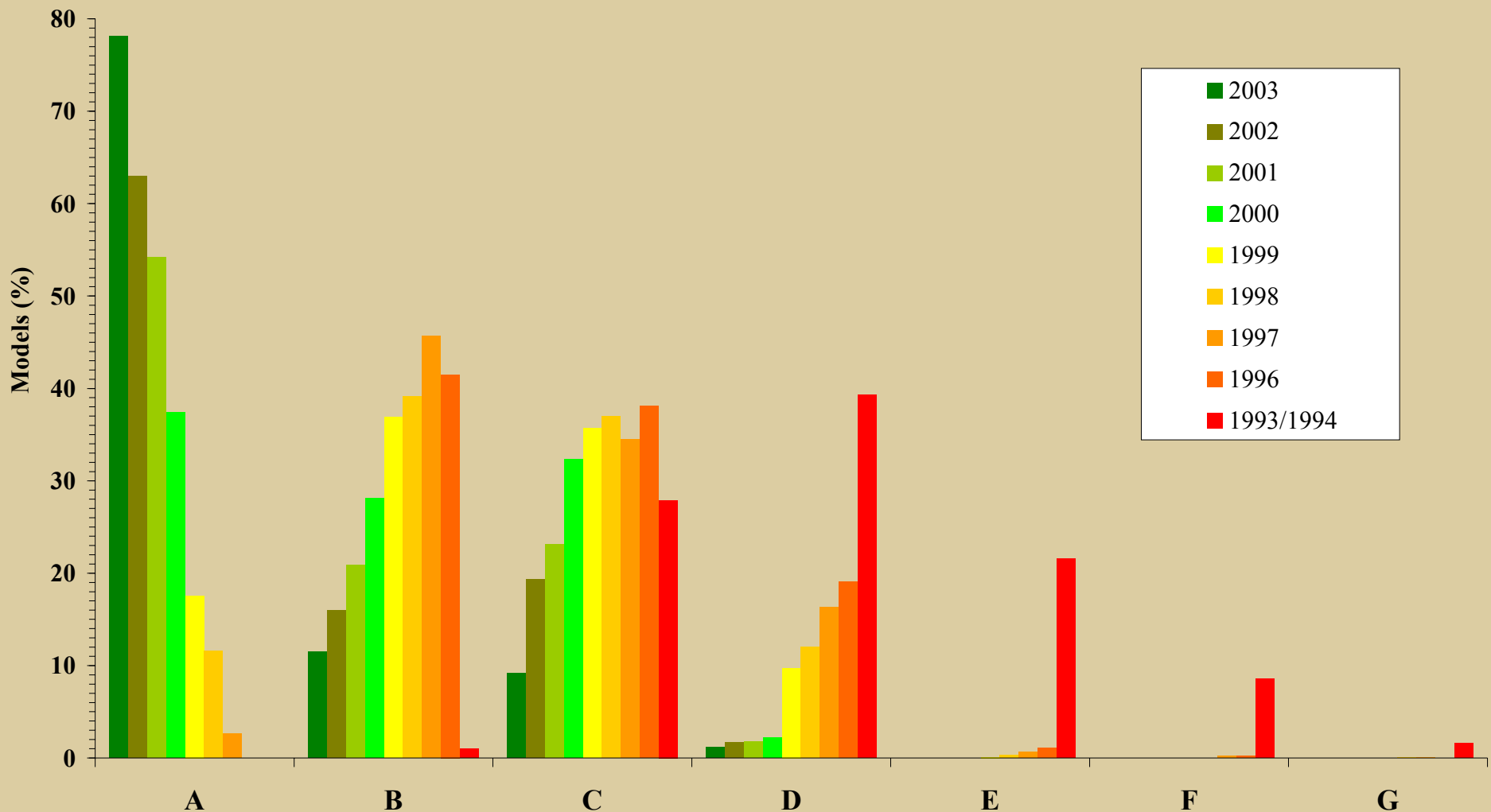
Impact of the EU S&L on freezer sales in EU15, AC and Croatia in 2004



source: ENEA elaboration on CECED and GfK data

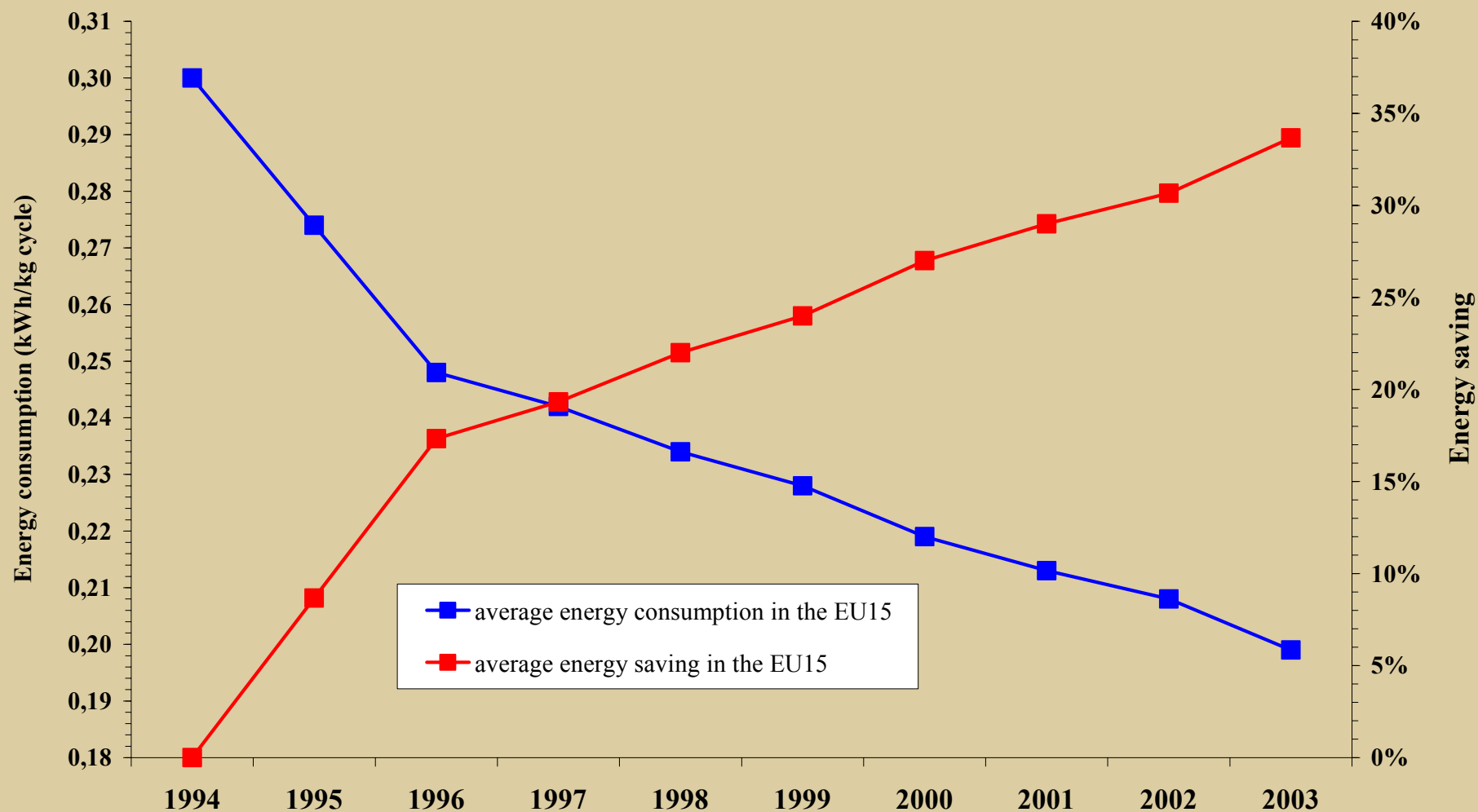
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Impact of the EU S&I on washing machine production in EU15 in 1994-2003



source: ENEA elaboration on CECED data

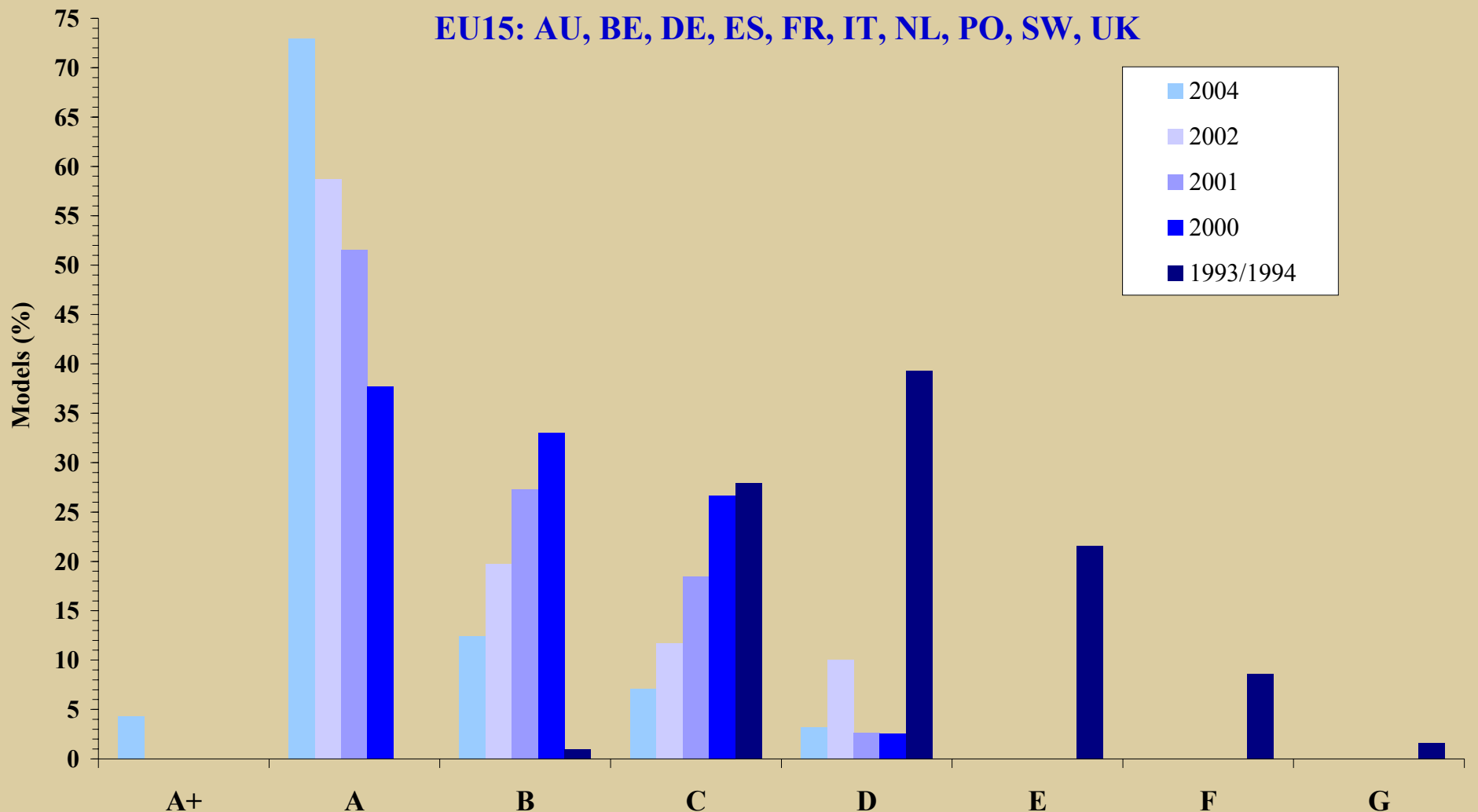
Impact of the EU S&L on washing machines energy consumption (1994-2003)



source: ENEA elaboration on CECED and GfK data

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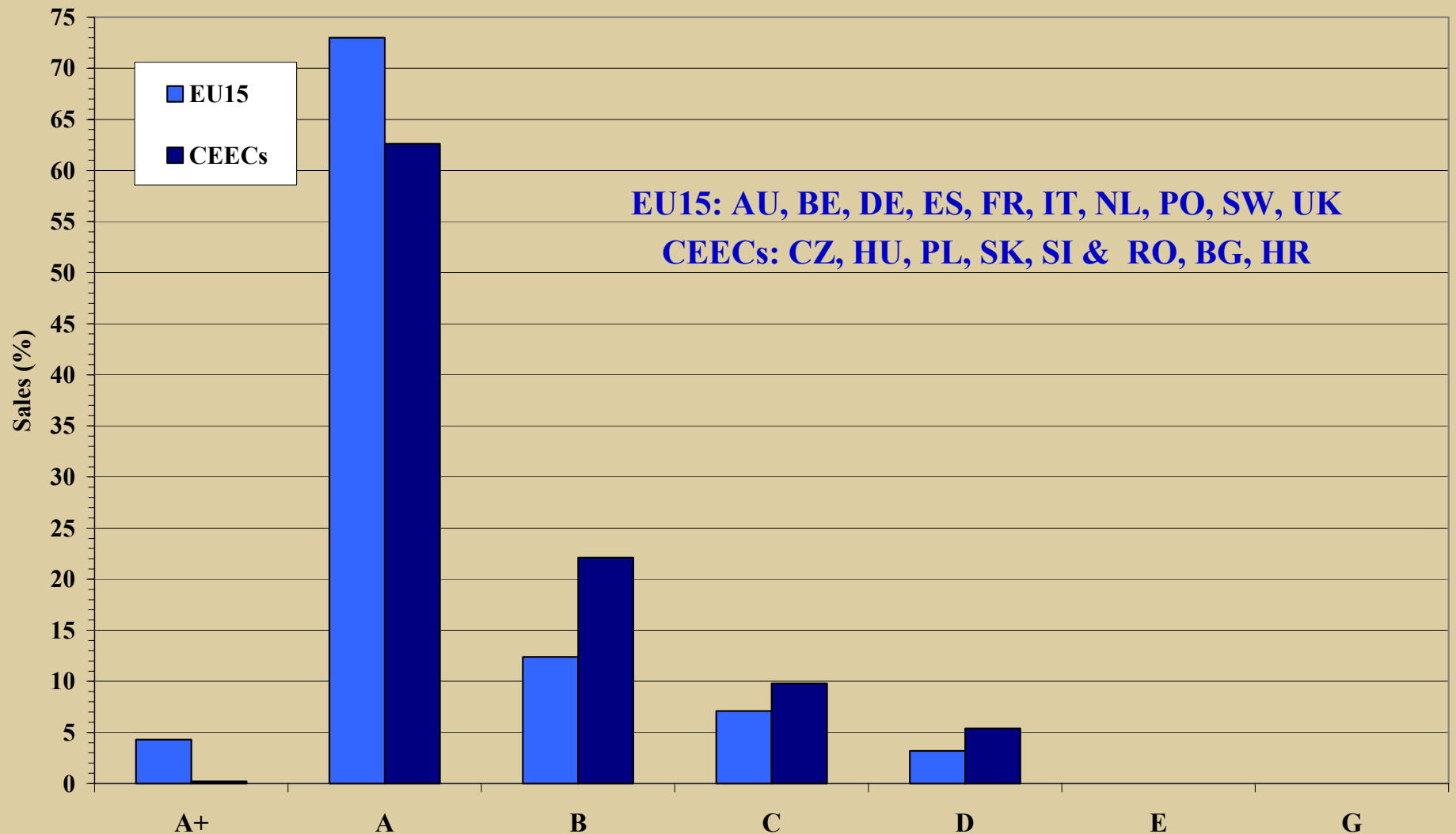
Impact of the EU S&L on washing machine sales in EU15 in 1994-2004



source: ENEA elaboration on GfK and CECED data

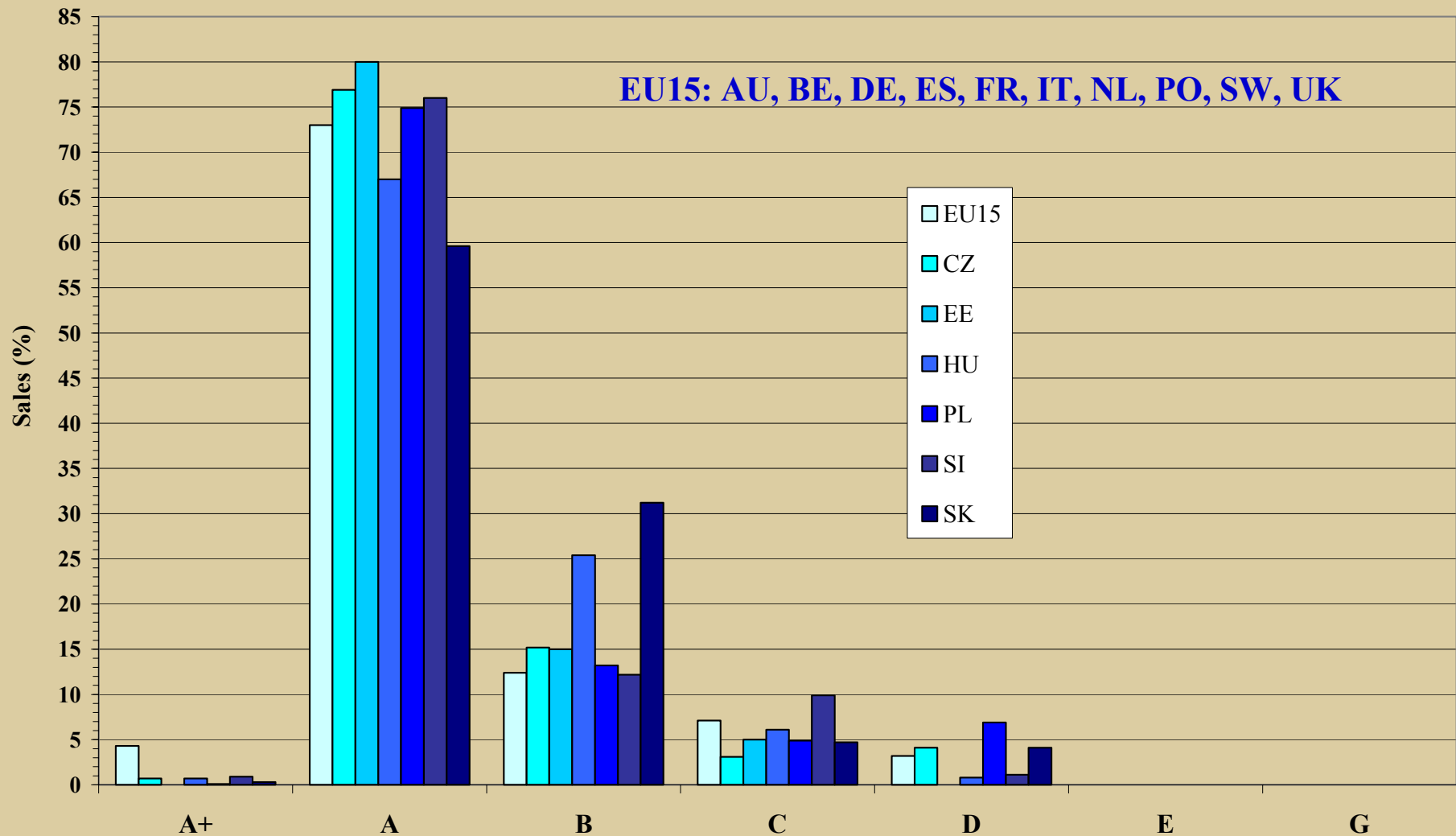
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Impact of the EU S&L on washing machine sales in EU15 and CEECs in 2004



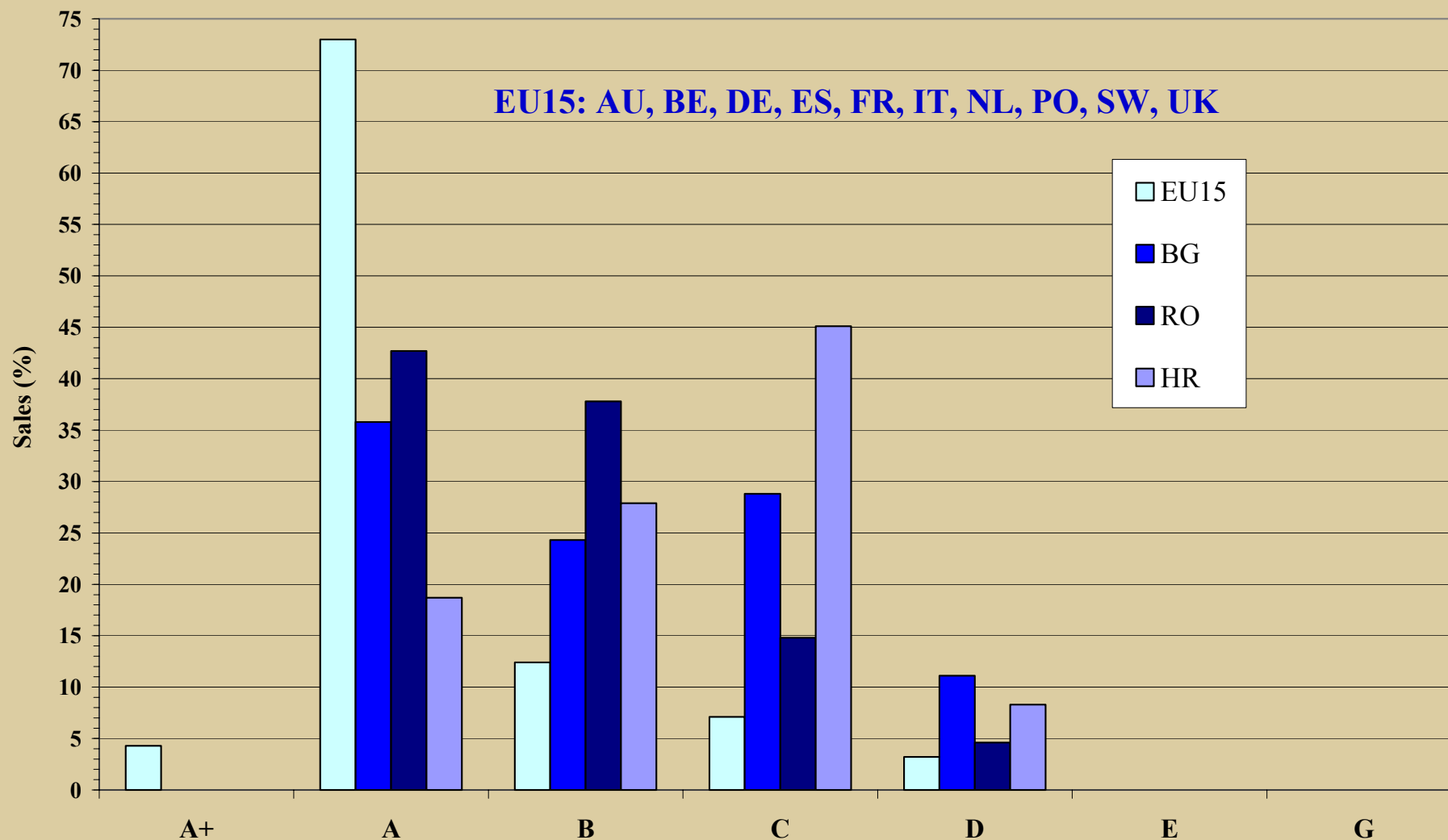
source: ENEA elaboration on GfK data

Impact of the EU S&L on washing machine sales in EU15 and new MS in 2004



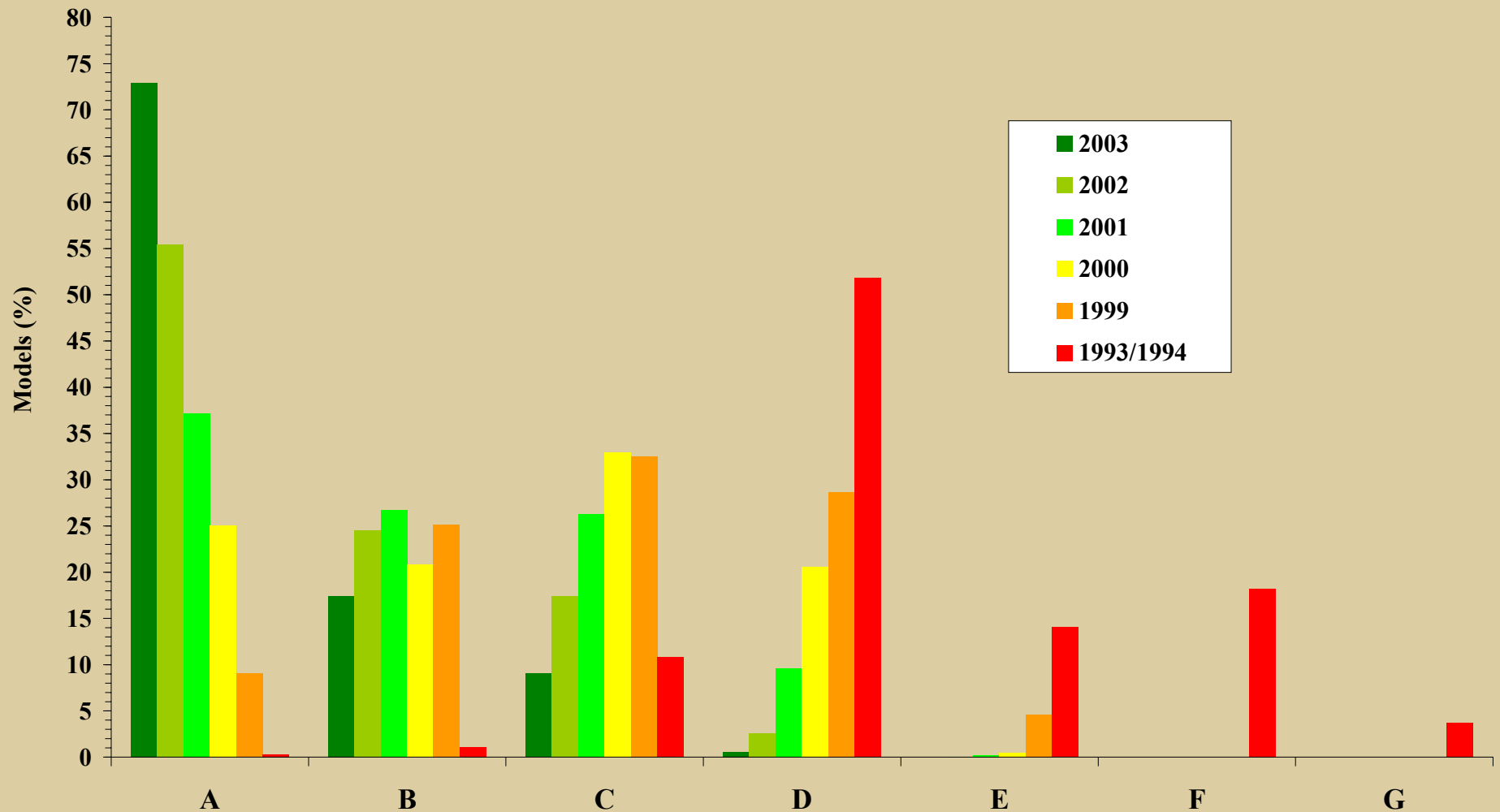
source: ENEA elaboration on GfK and national data (EE)

Impact of the EU S&L on washing machine sales in EU15, AC and Croatia in 2004



source: ENEA elaboration on GfK data

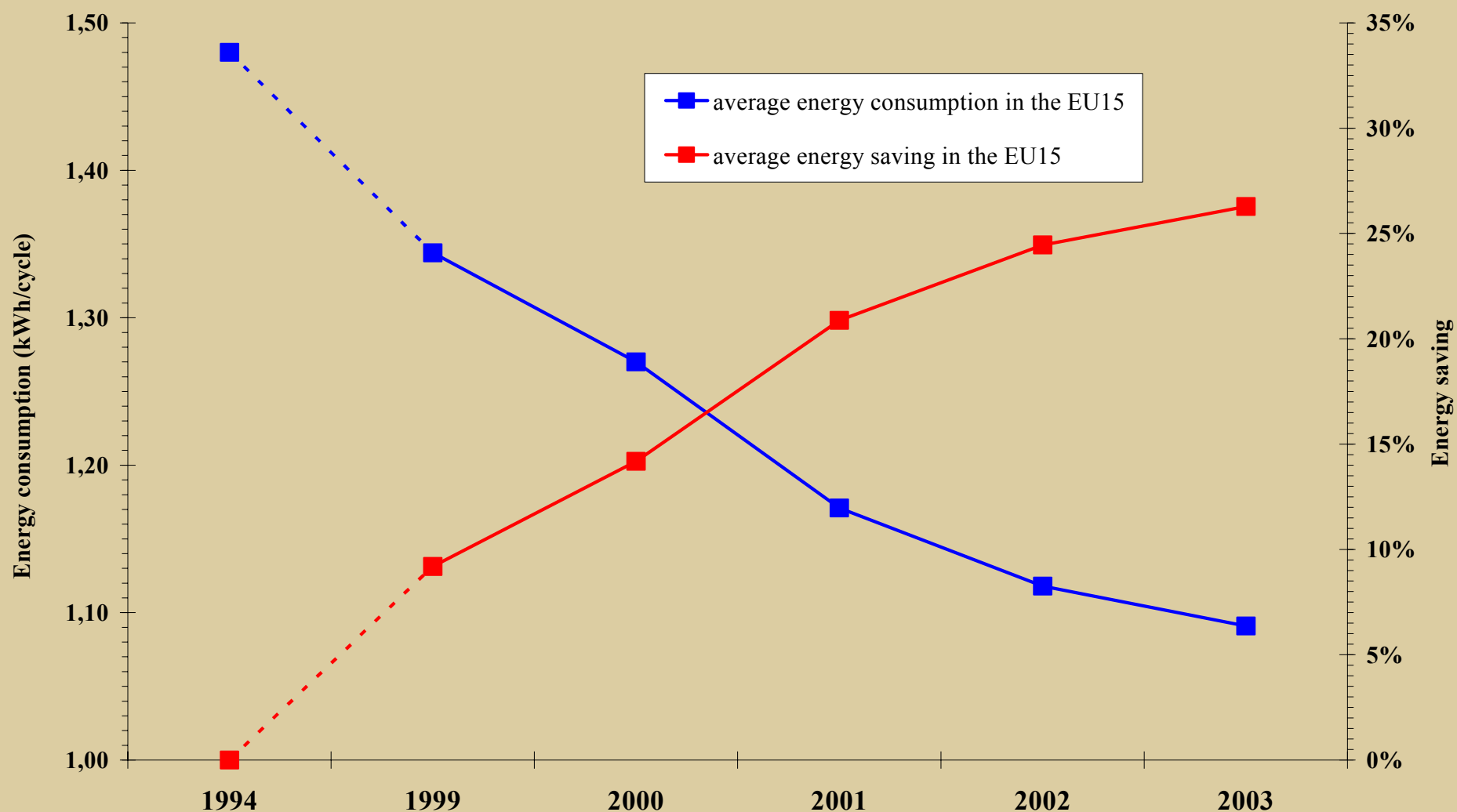
Impact of the EU S&L on dishwasher production in 1994-2003



source: ENEA elaboration on CECED data

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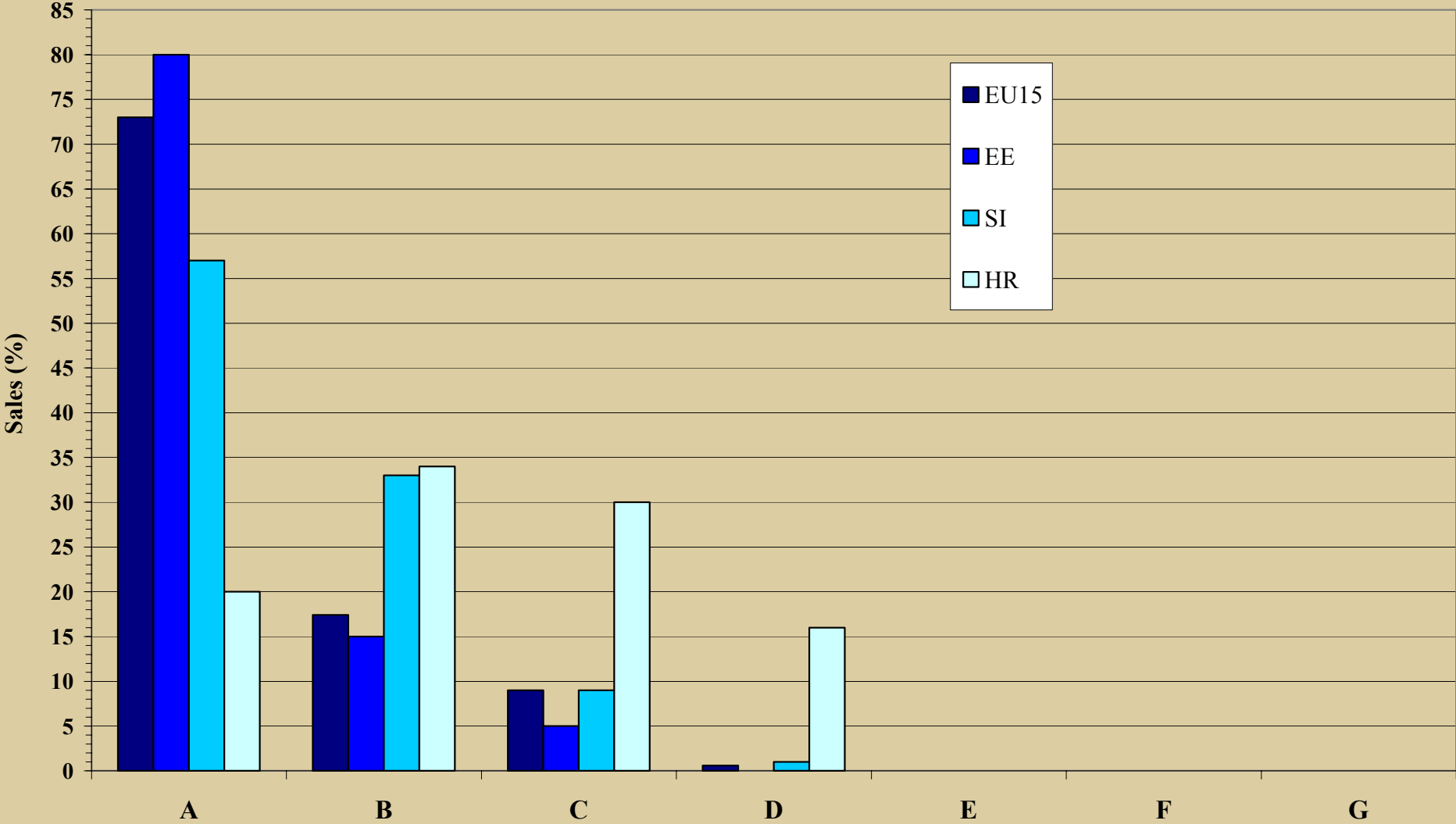
Impact of the EU S&L on dishwasher energy consumption (1994-2003)



source: ENEA elaboration on CECED data

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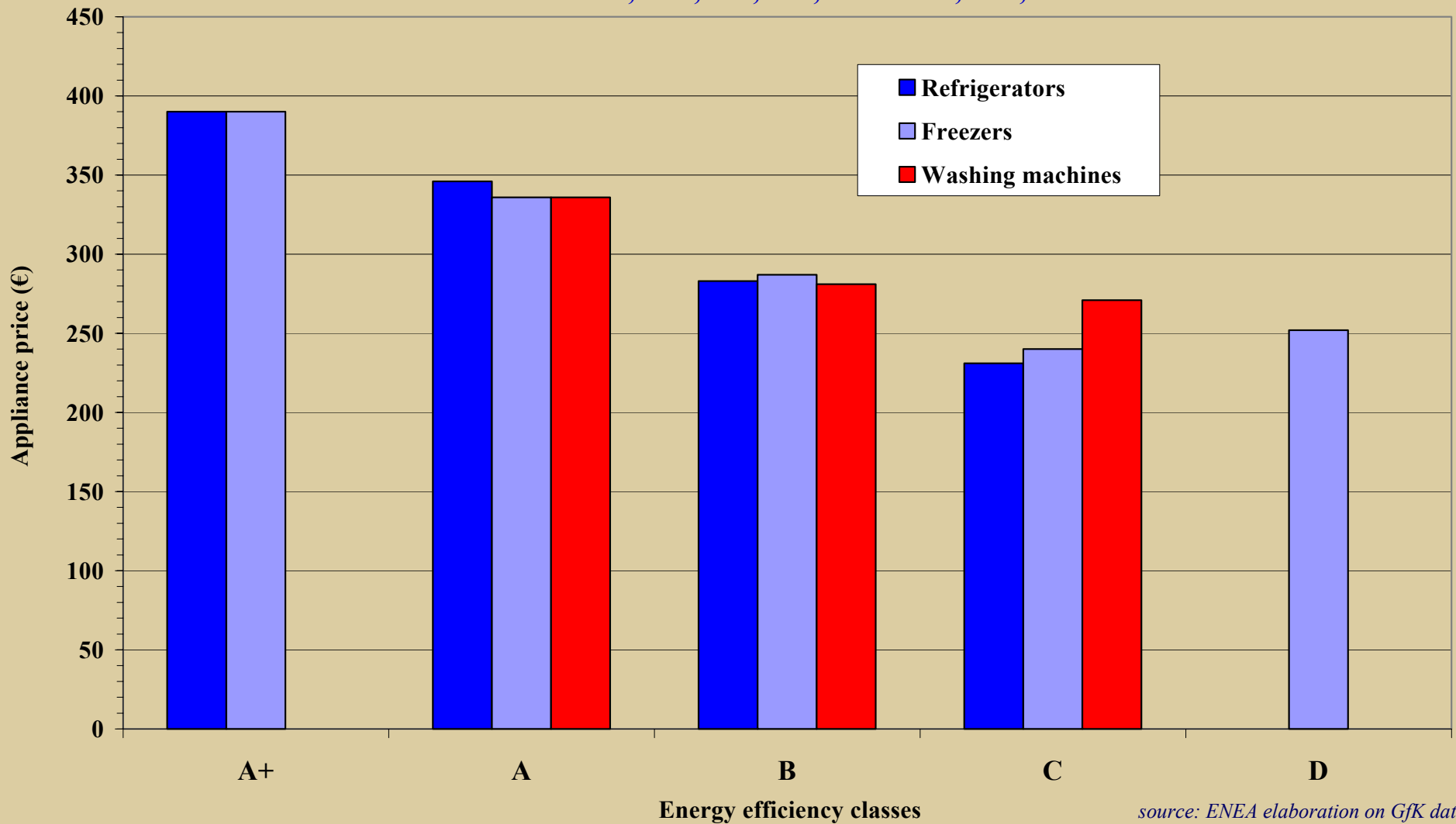
Impact of the EU S&L on dishwasher market in some European countries in 2003



source: ENEA elaboration on CECED and national data

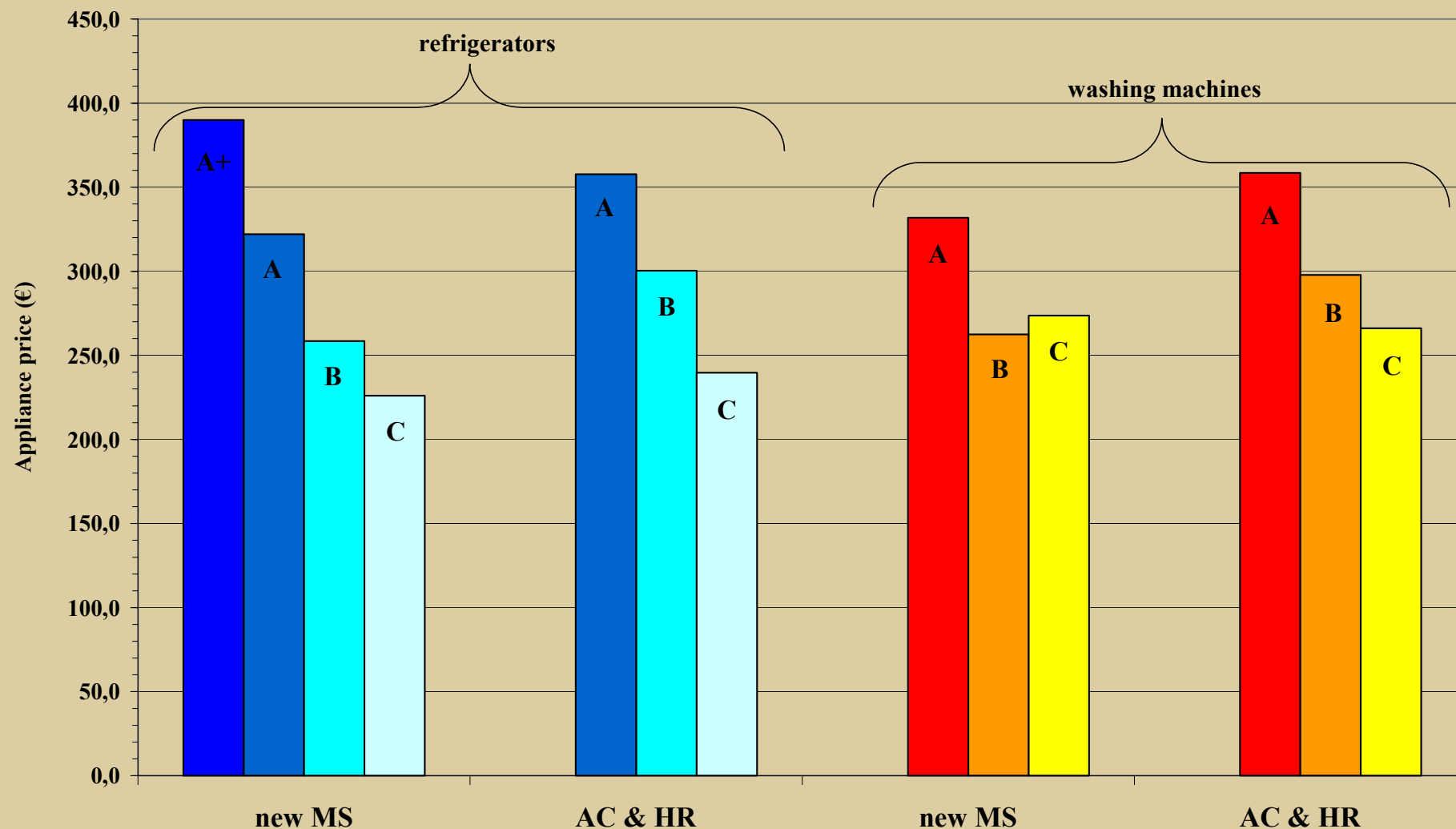
Appliance average price by energy efficiency class in some CEECs in 2004

CEECs: CZ, HU, PL, SK, SI & RO, BG, HR



source: ENEA elaboration on GfK data

Appliance average price by energy efficiency class in new MS and AC & HR in 2004



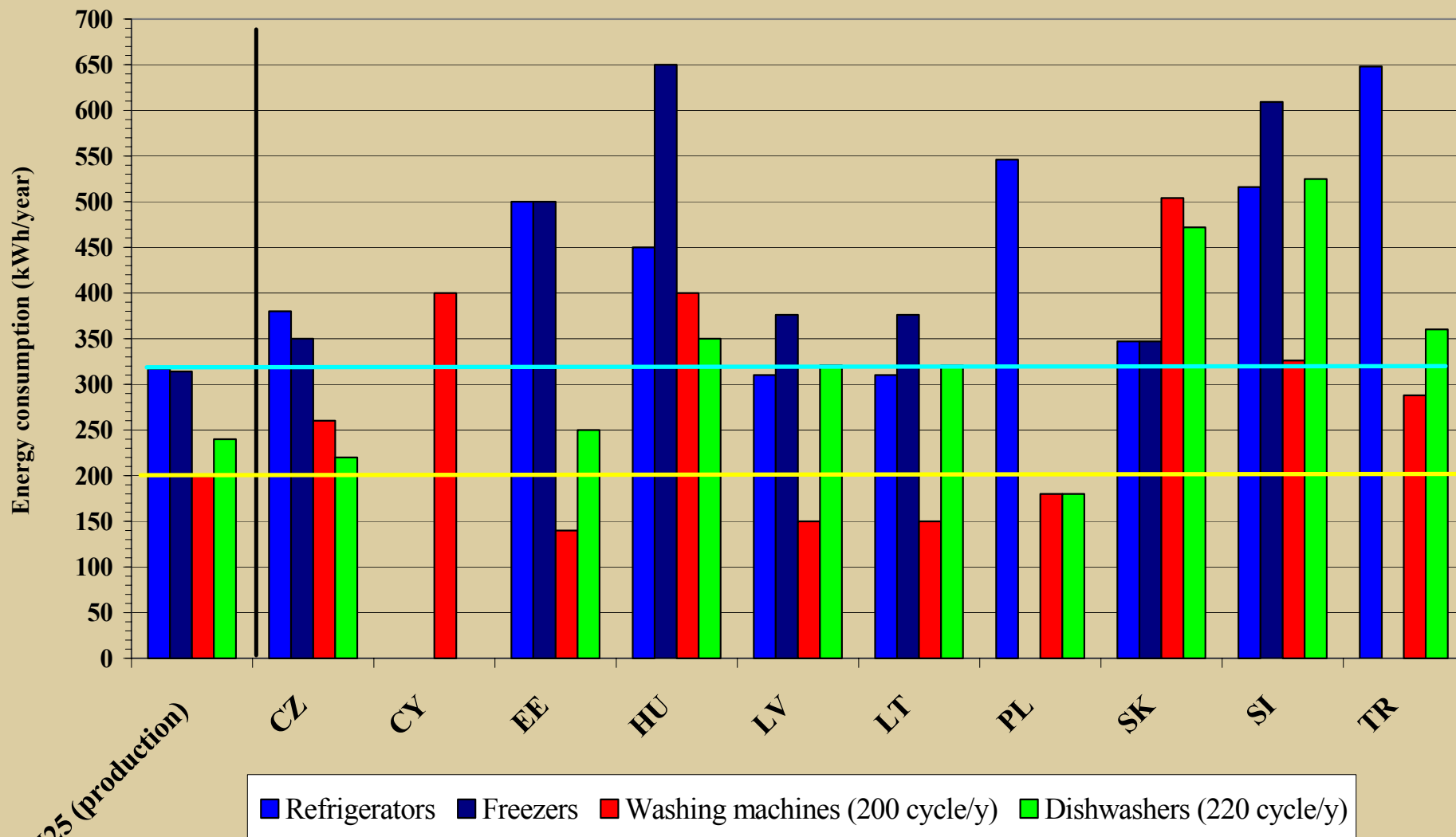
source: ENEA elaboration on GfK data

Energia Costruttore Modello	Logo ABC 123
Classi consumi Alti consumi	
Consumi di energia kWh/anno <small>In base ai risultati di prove standard per litri em</small> <small>Il consumo effettivo dipende dal modo in cui l'apparecchio viene usato e dal paese in cui è situato</small>	XYZ
Volume alimenti freschi Volume alimenti congelati 	xyz xyz
Rumore <small>dB(A) re 1 pW</small> <small>Gli apparecchi Euroclassi conengono una etichetta particolareggiata</small>	xyz
<small>Norma EN 10484:1997 Direttiva 94/10/CE relativa al rendimento energetico</small>	

Energy efficient appliances (A+/A++) Directive 2003/66/CE

Fridge-freezer, 2 doors, (****)	
Refrigerator compartment:	249 l
Freezer compartment:	68 l
Annual energy consumption:	
Class A	310 kWh/year
Class A+	237 kWh/year
Class A++	169 kWh/year

Energy consumption of installed household appliances in CEECs (2003)



source: ENEA elaboration on CECED and GfK data

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Thank you !