

Experiencia de la Union Europea en la agenda de eficiencia energetica

Seminario Regional de América Latina de Eficiencia Energetica

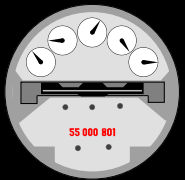
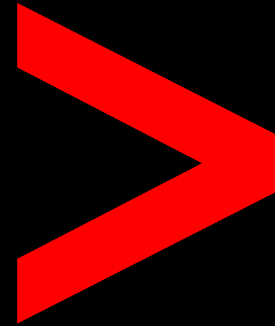
13-14 de diciembre 2022

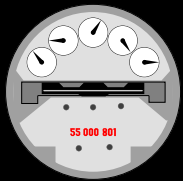
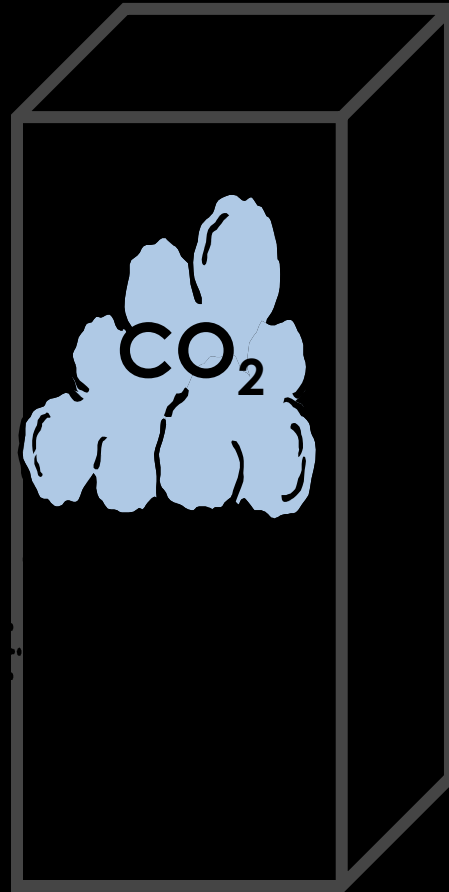
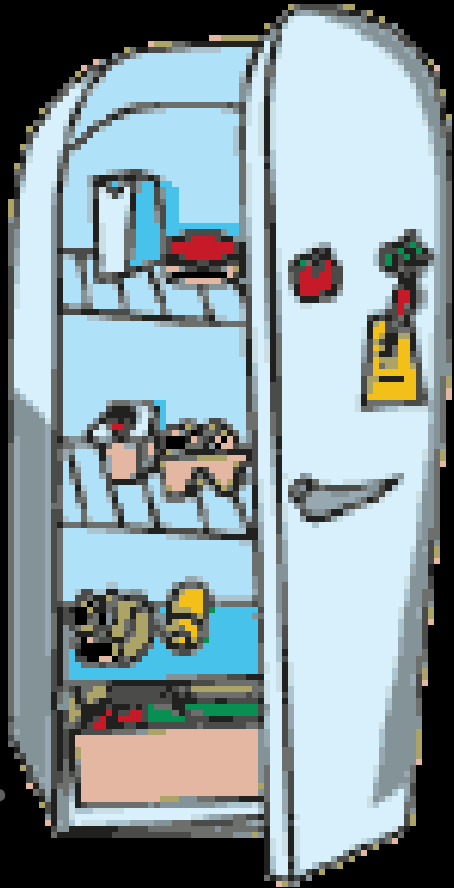
Ciudad de Panamá

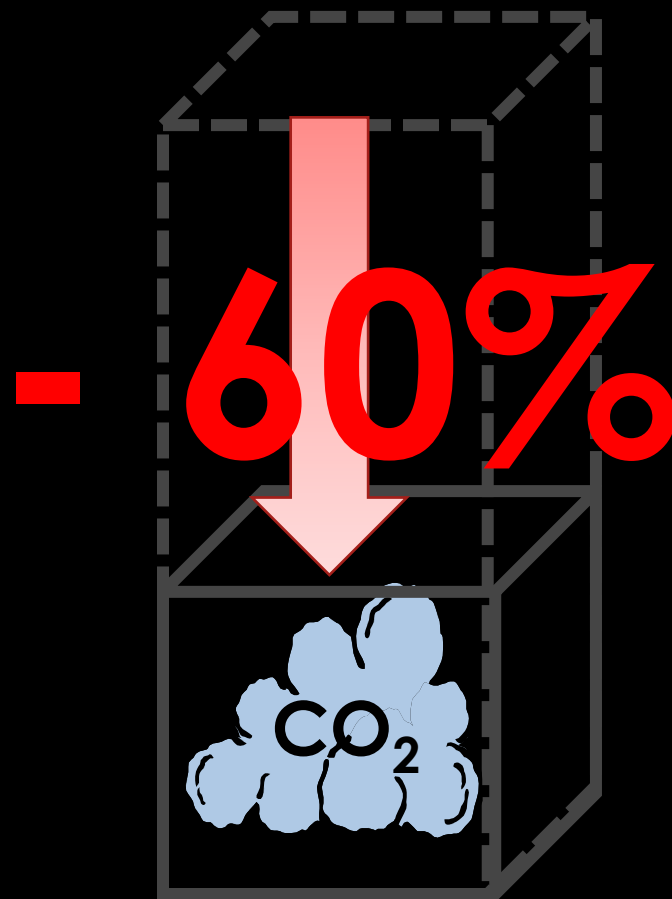
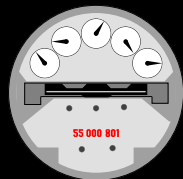
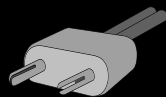
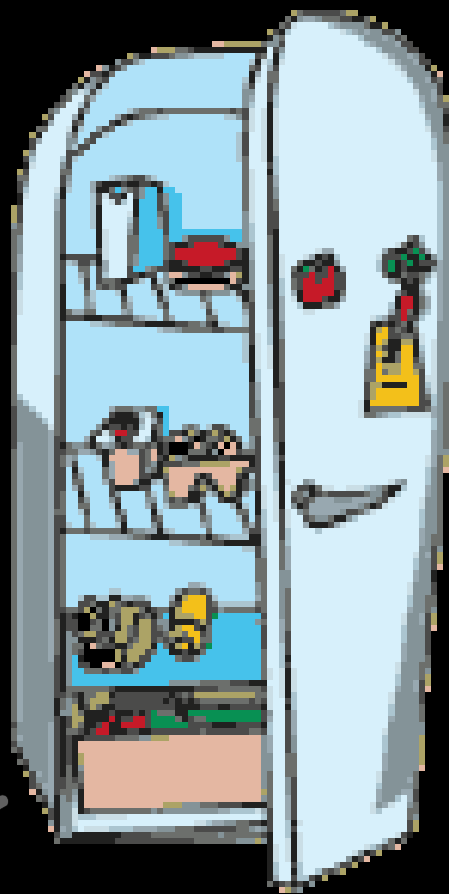
Benoît Lebot - lebotbenoit@gmail.com

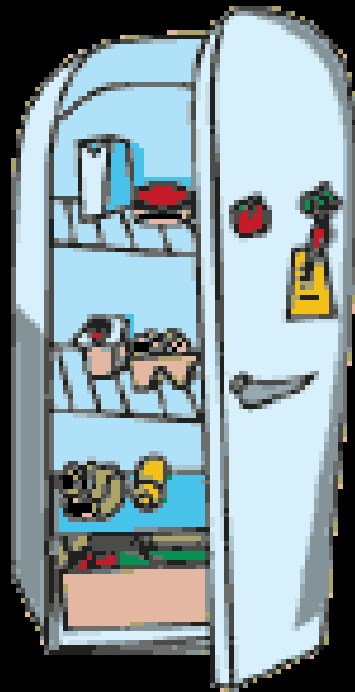


**X2 more
electricity**









CH₄

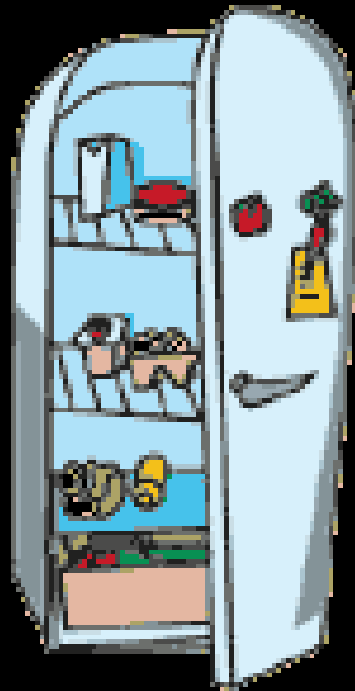
F-Gaz

CO₂

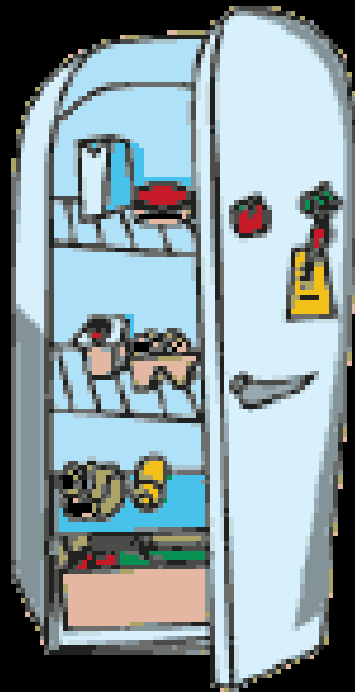
SF₆

NO_x

Greenhouse Gases

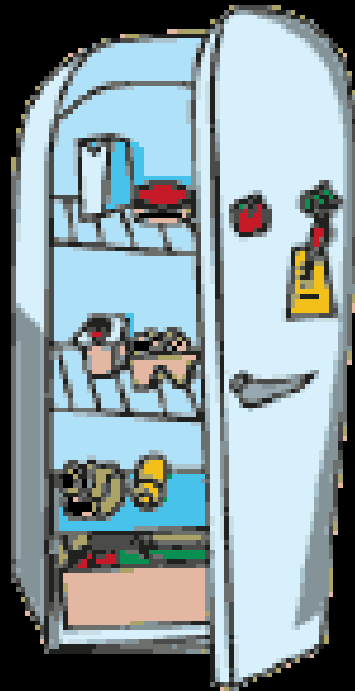


1. Choice of Fuel



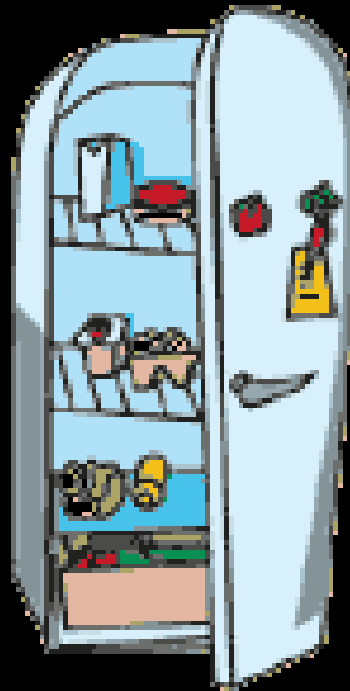
Greenhouse Gases

1. Choice of Fuel
2. Energy Efficiency



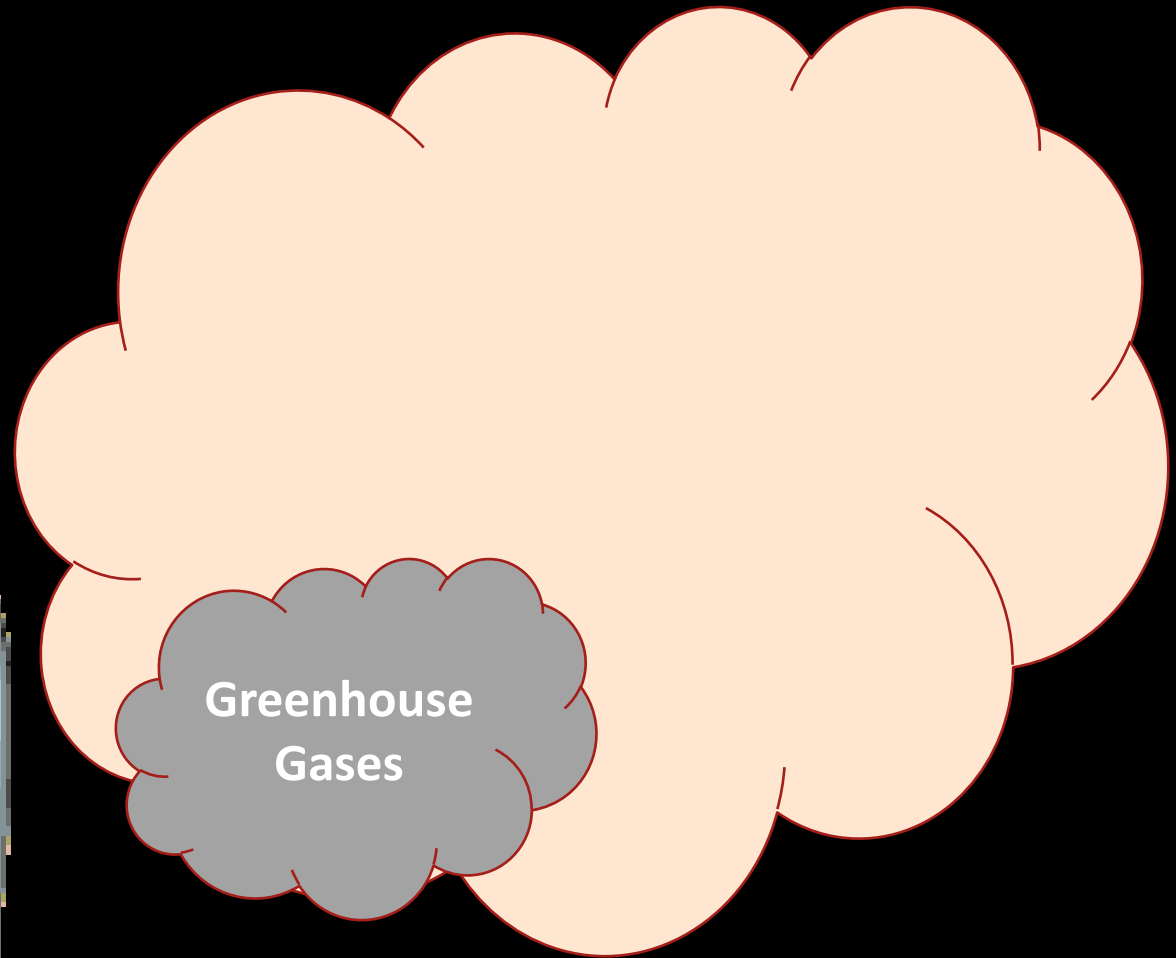
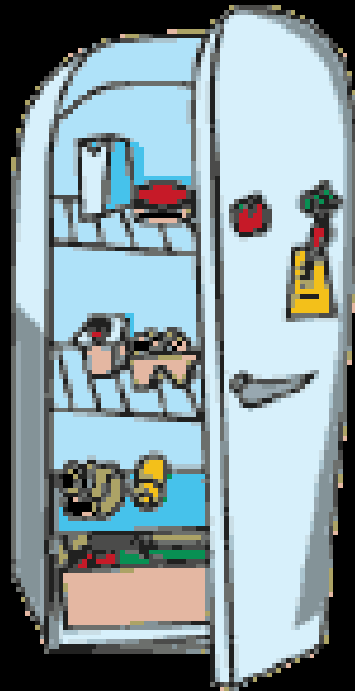
Greenhouse
Gases

1. Choice of Fuel
2. Energy Efficiency
3. Consumer behavior



**Greenhouse
Gases**

1. Choice of Fuel
2. Energy Efficiency
3. Consumer behavior
4. Manufacturing & materials

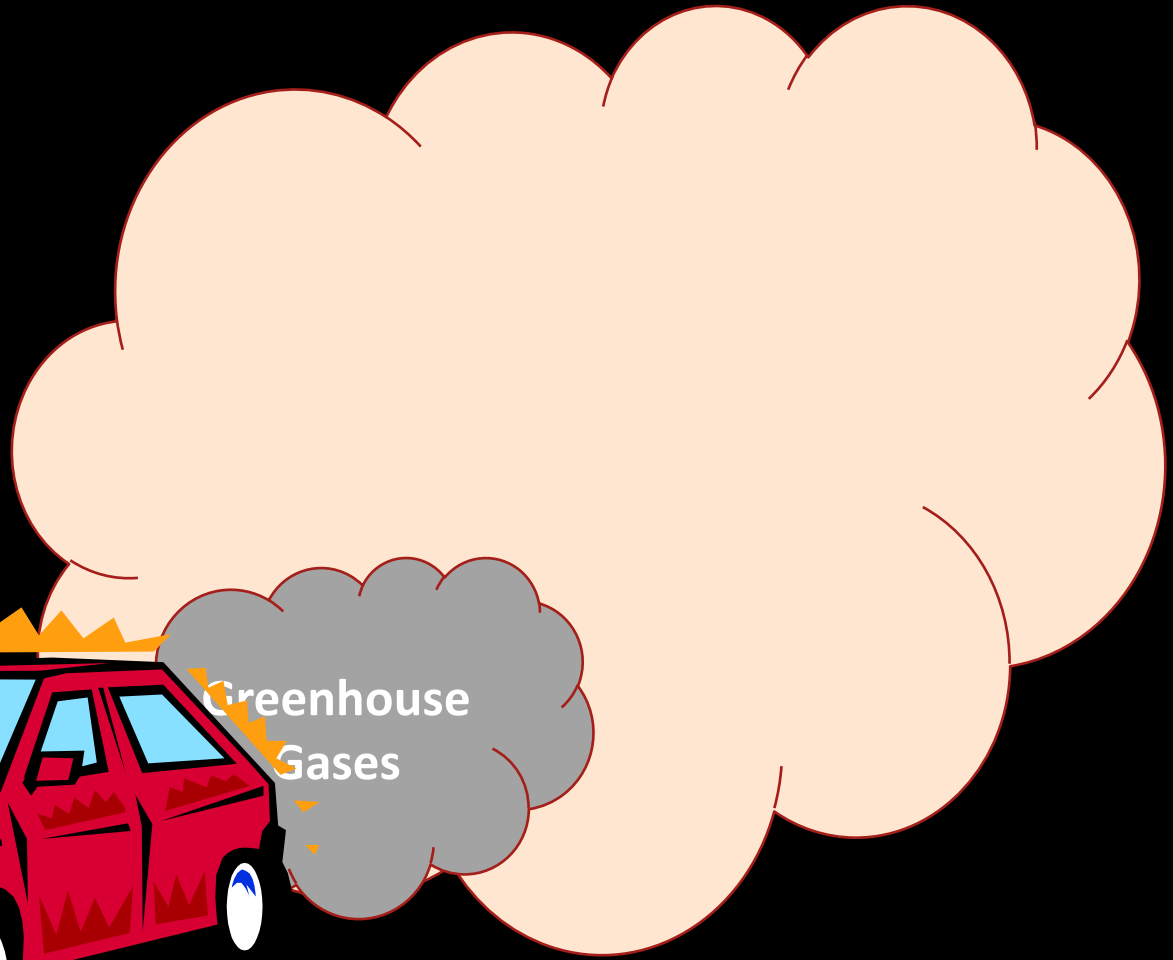


Greenhouse
Gases

1. Choice of Fuel
2. Energy Efficiency
3. Consumer behavior
4. Manufacturing & materials



Greenhouse
Gases

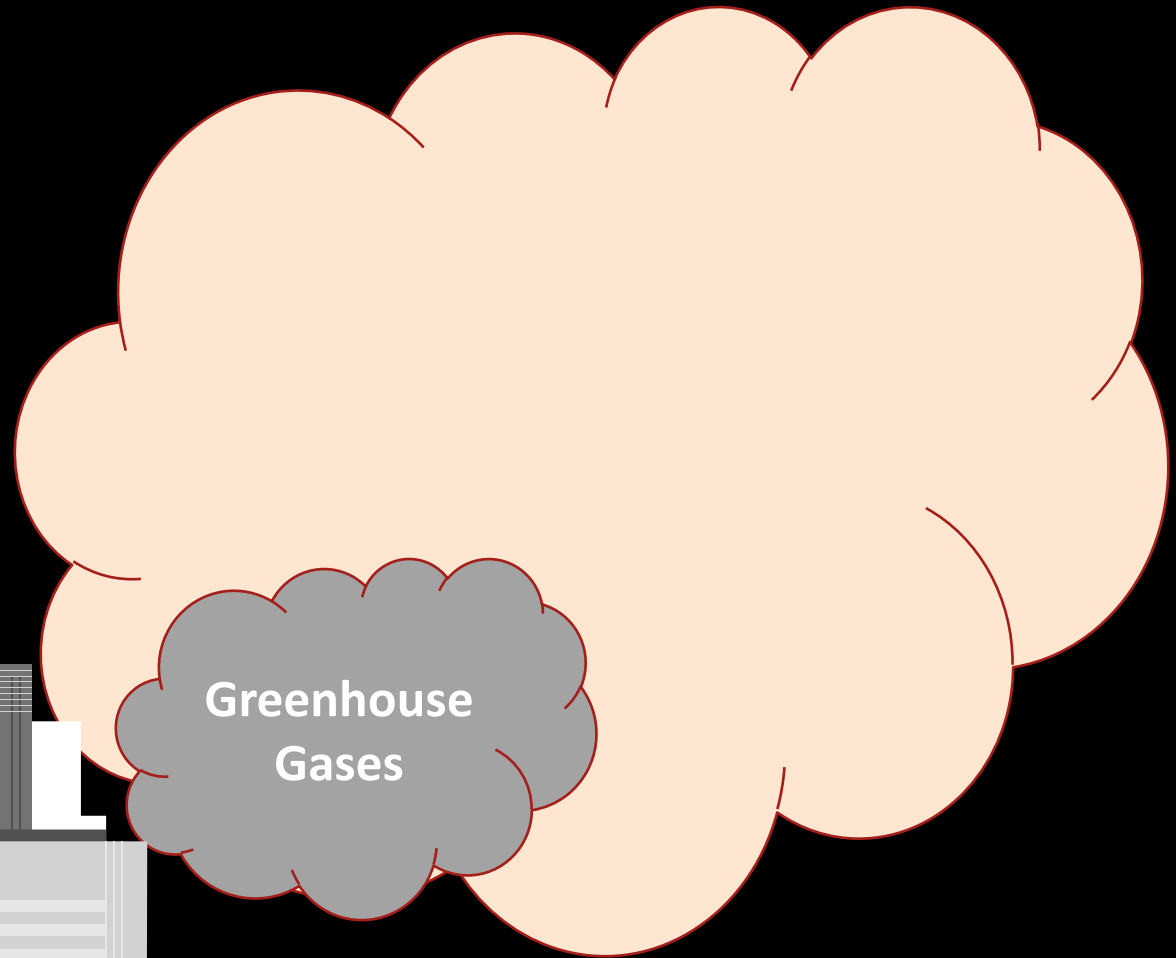


1. Choice of Fuel
2. Energy Efficiency
3. Consumer behavior
4. Manufacturing & materials



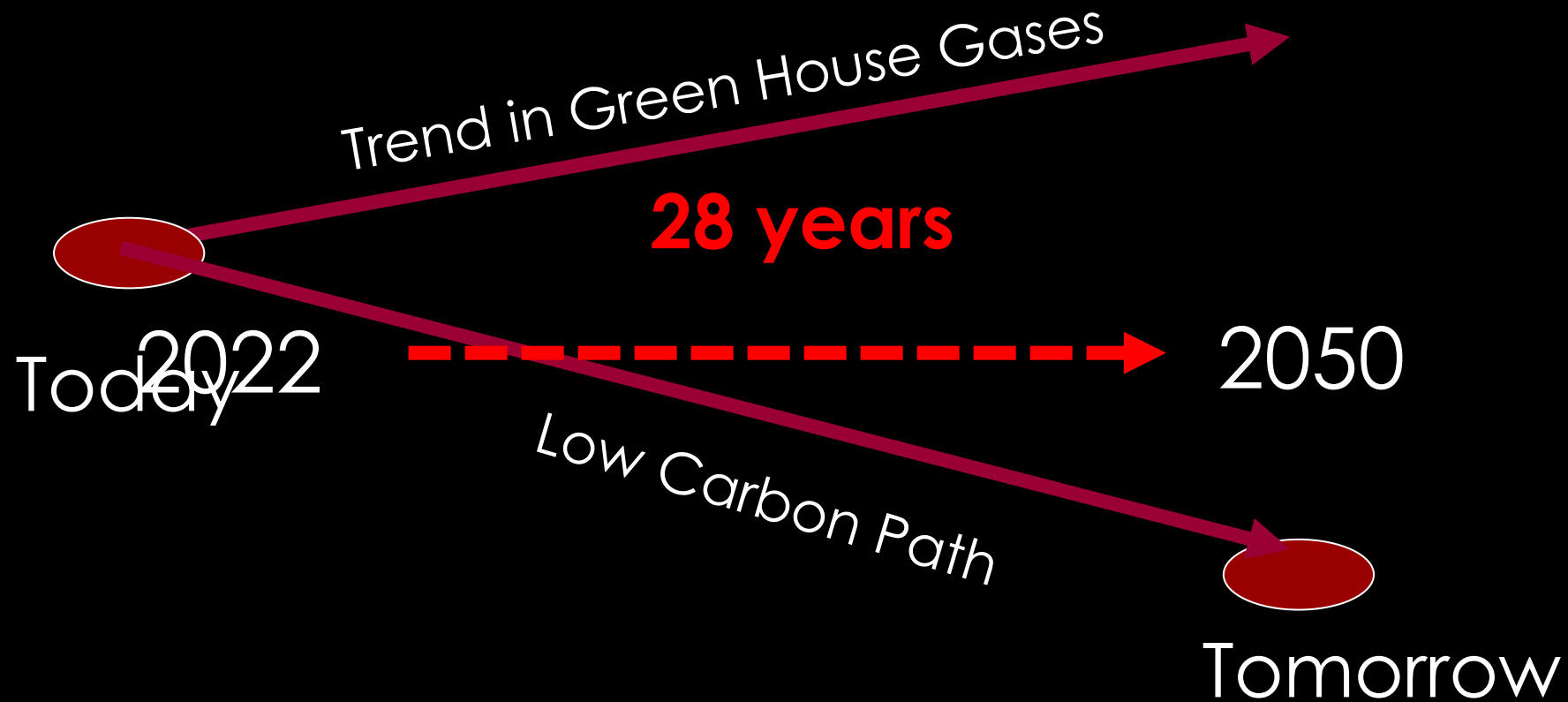
Greenhouse
Gases

1. Choice of Fuel
2. Energy Efficiency
3. Consumer behavior
4. Manufacturing & materials

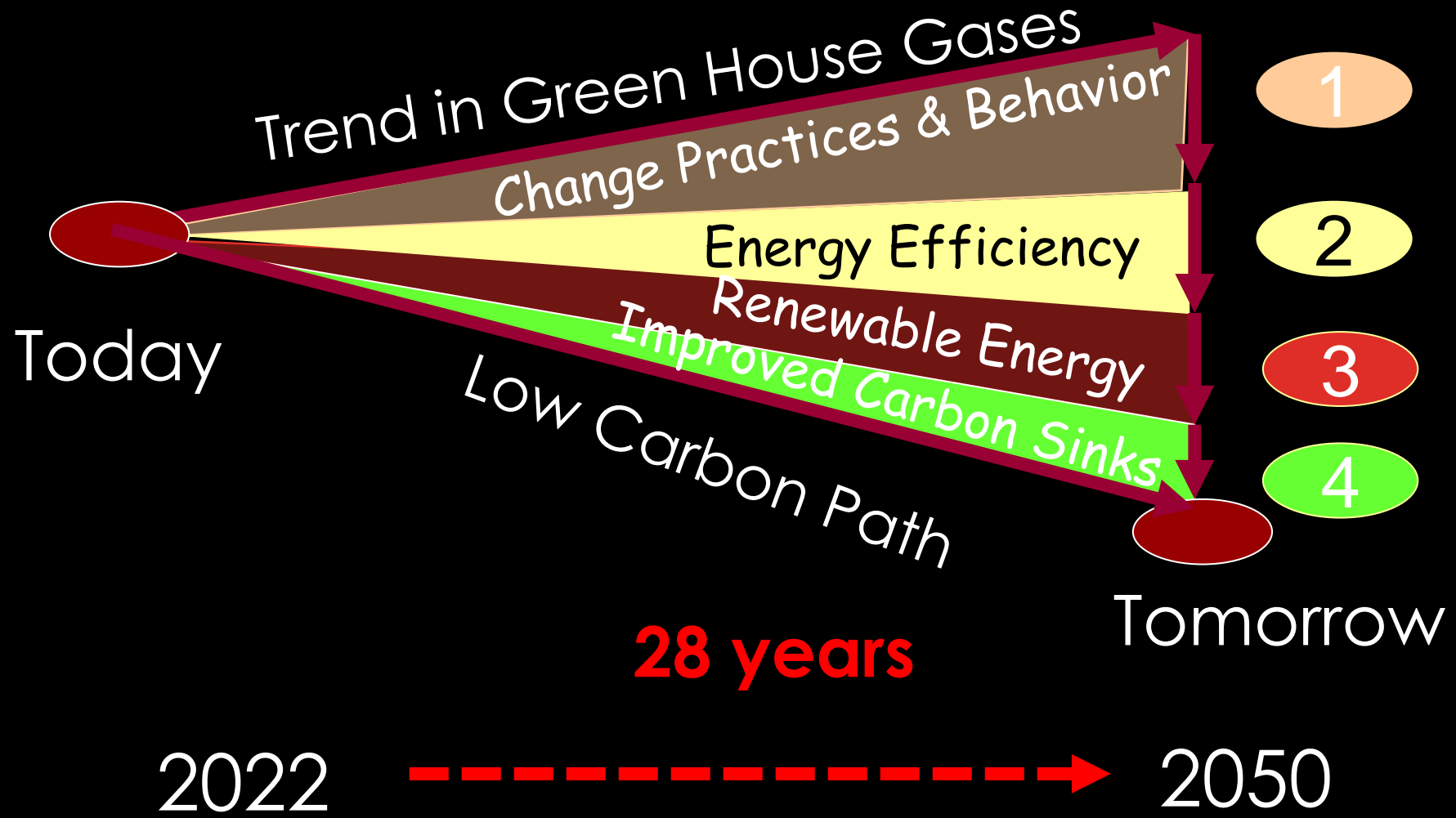


Greenhouse
Gases

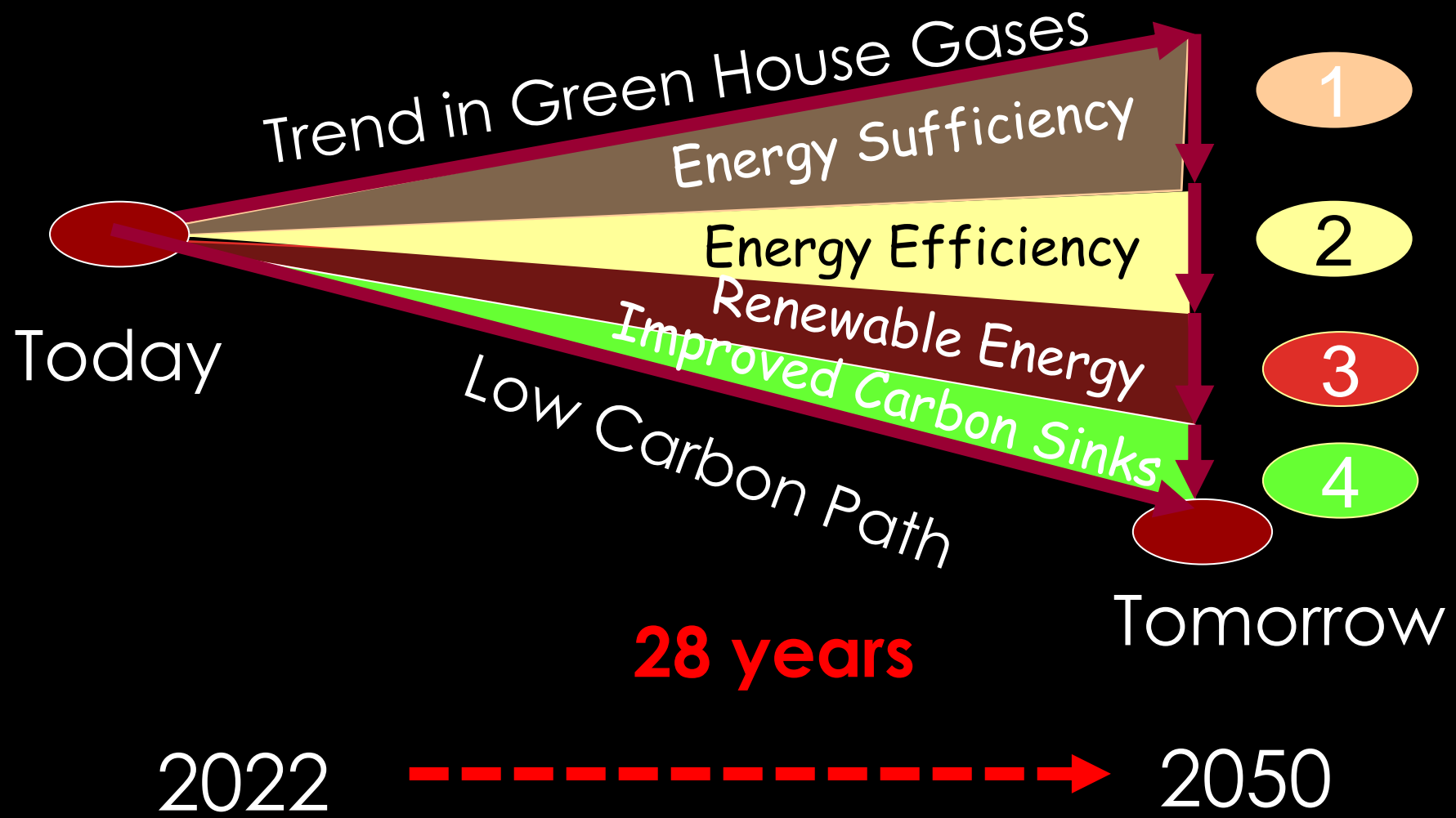
The Paris Agreement : moving on a low carbon path



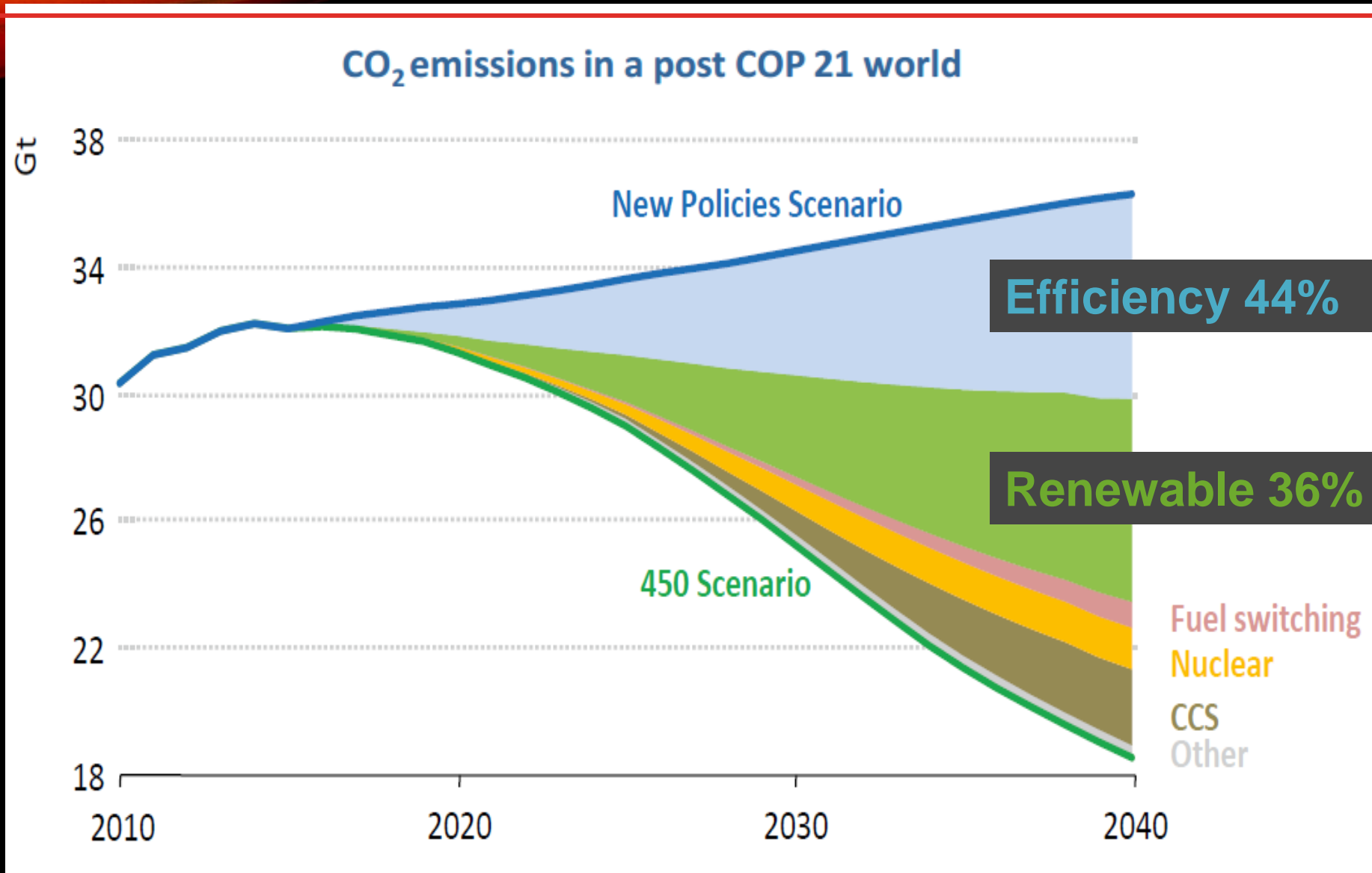
Four wedges for a low carbon development



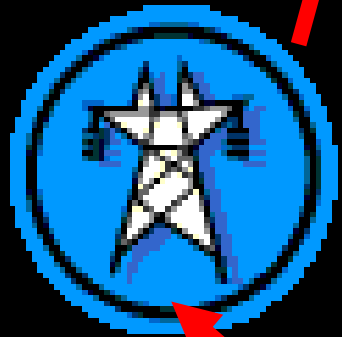
Four wedges for a low carbon development



SCENARIO OF THE INTERNATIONAL ENERGY AGENCY

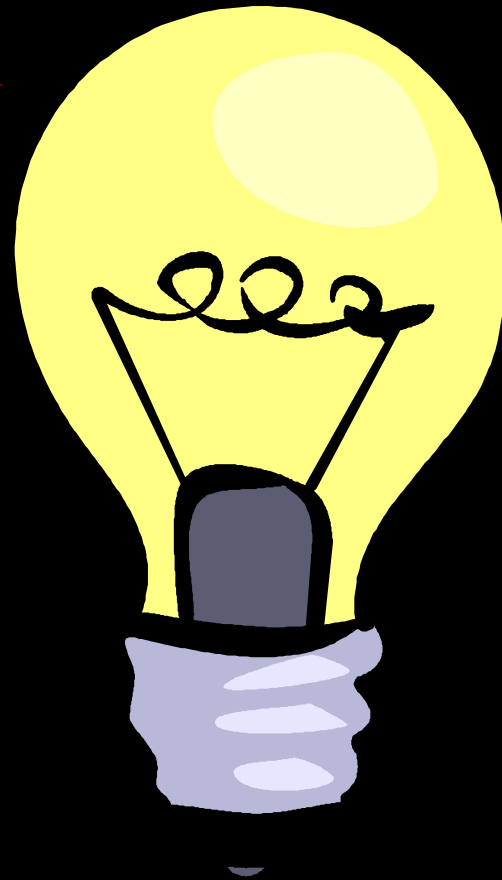


90%



5%

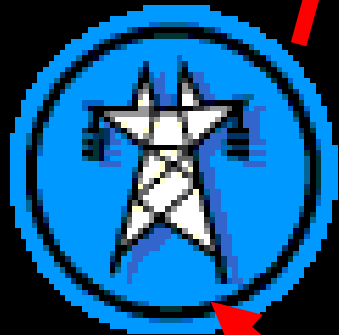
<1.5% !



33%



95%

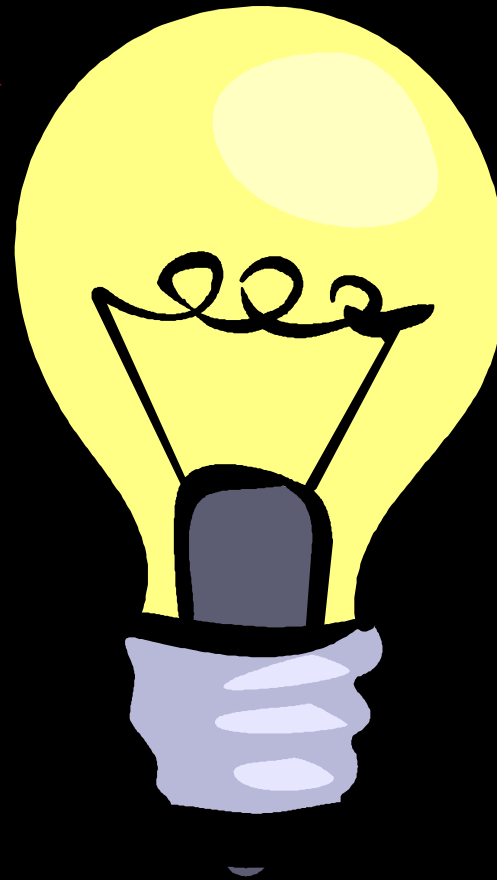


55%
Advanced
Gas Turbine

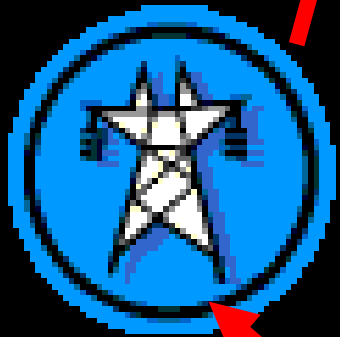


5%

2.6 %



95%

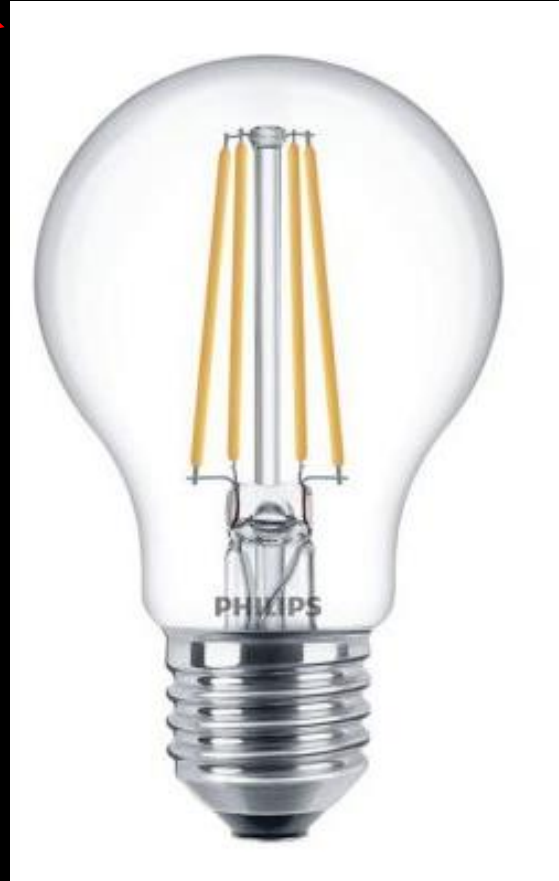


100%



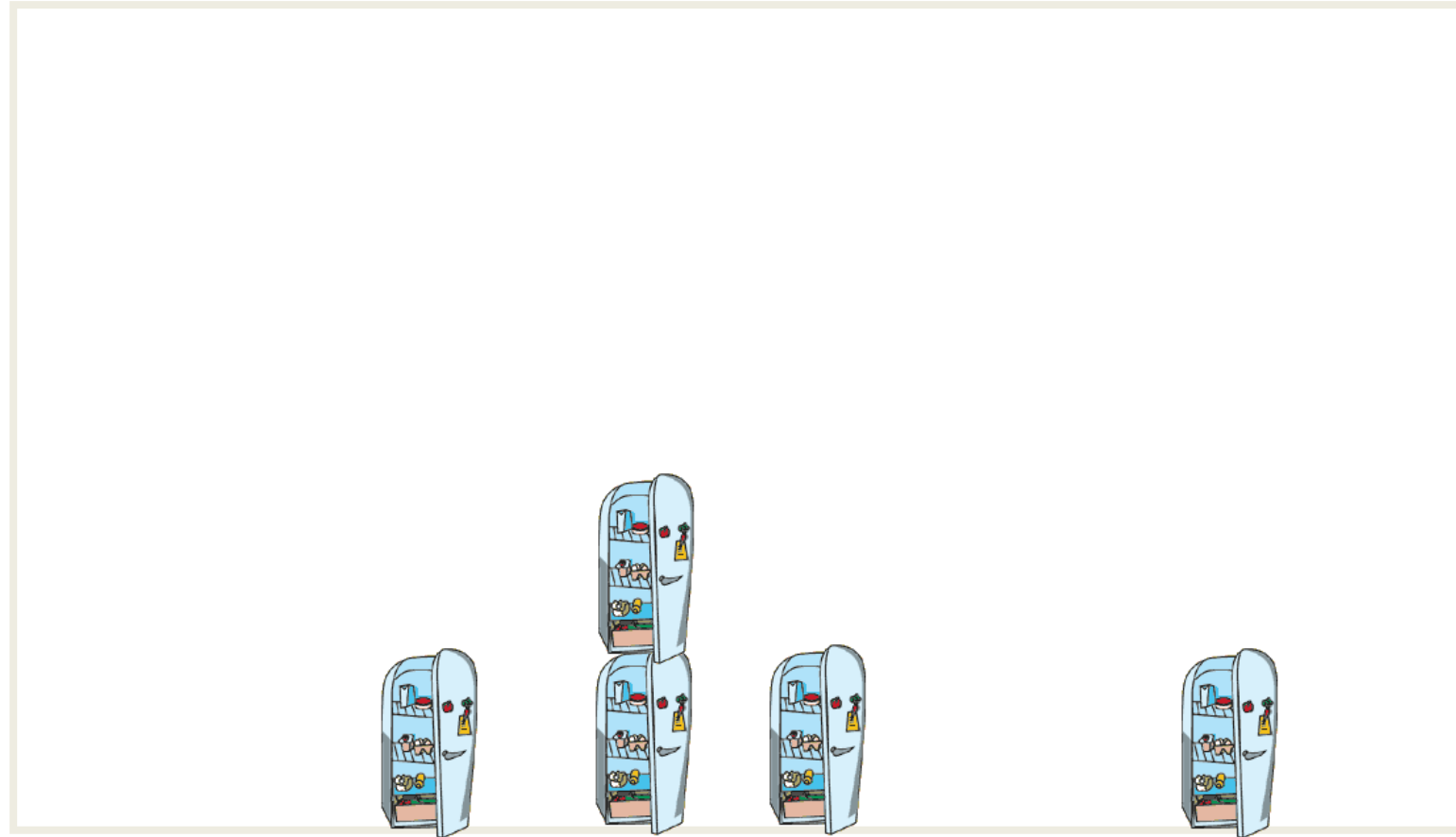
35%

33 %



% of Market

0

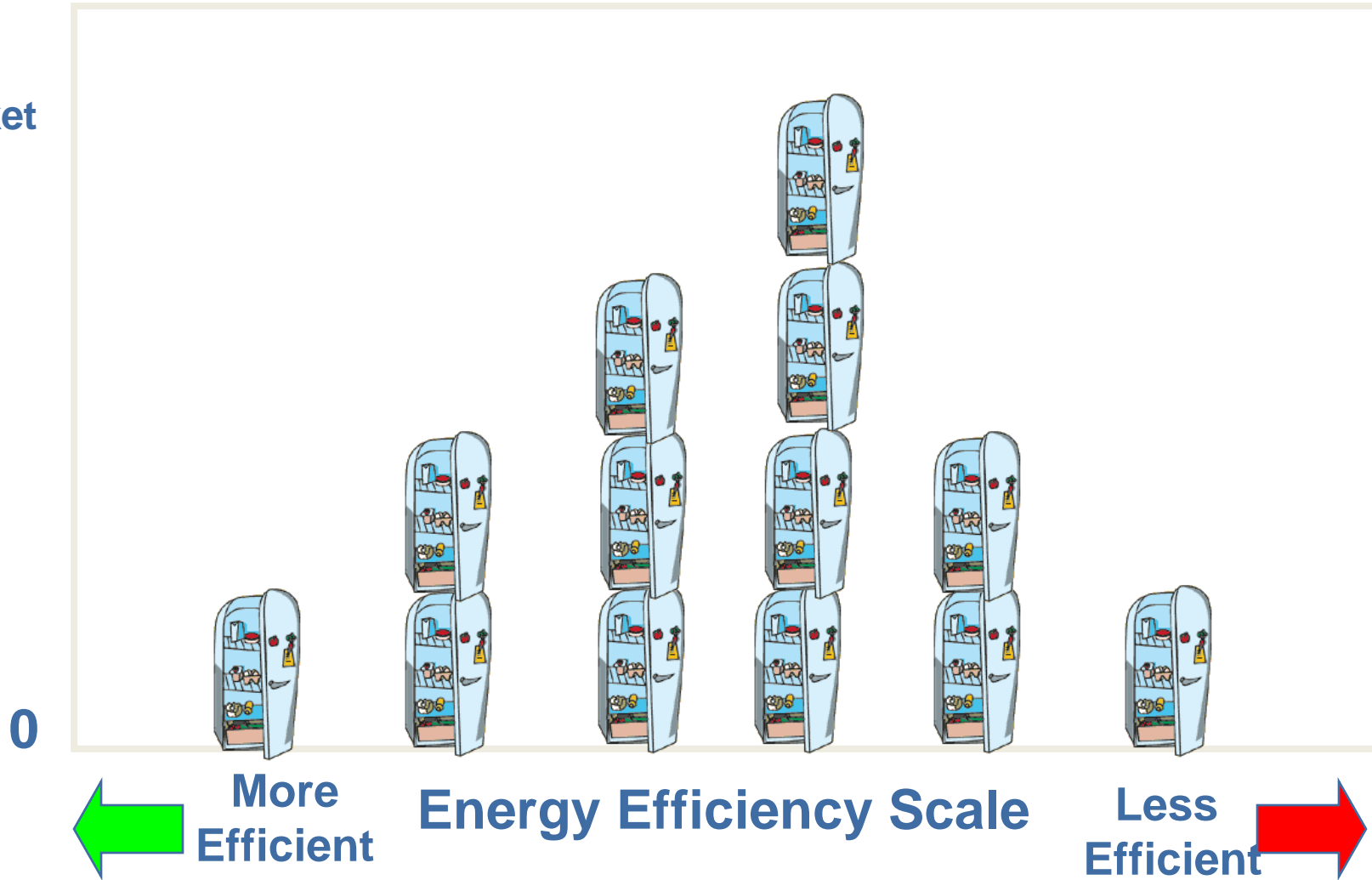


More Efficient ←

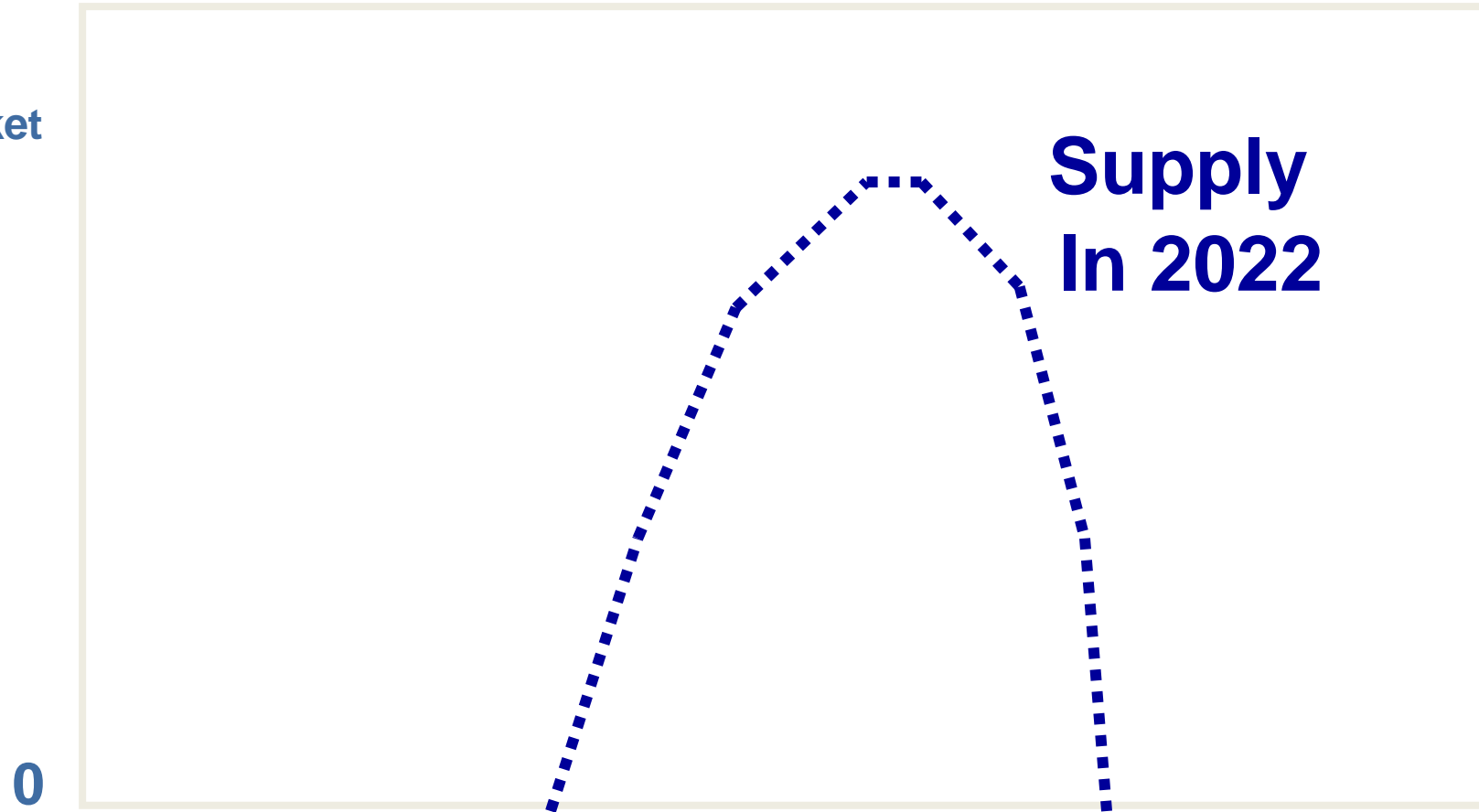
Energy Efficiency Scale

→ Less Efficient

% of Market



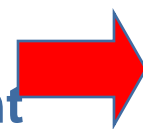
% of Market



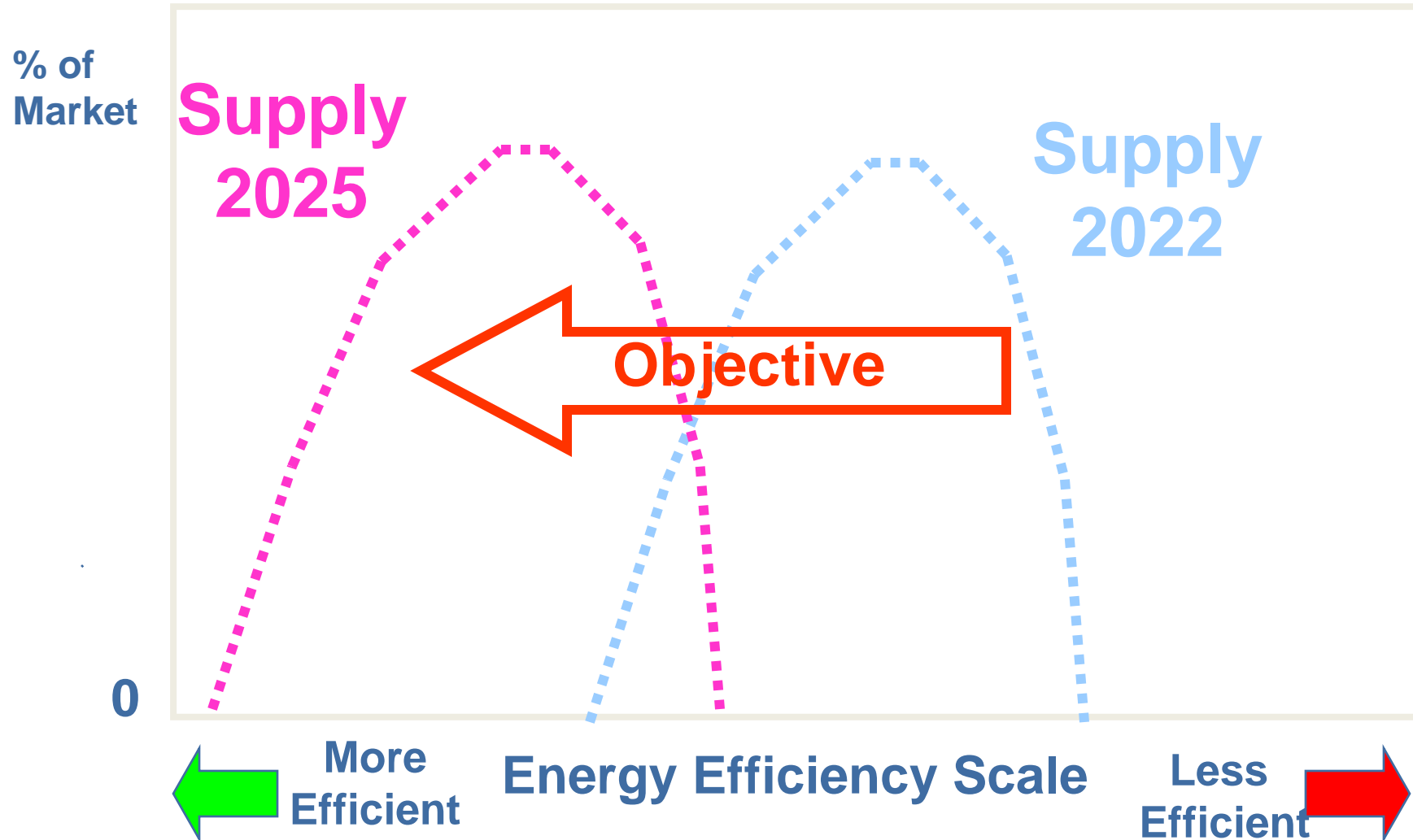
More
Efficient

Energy Efficiency Scale

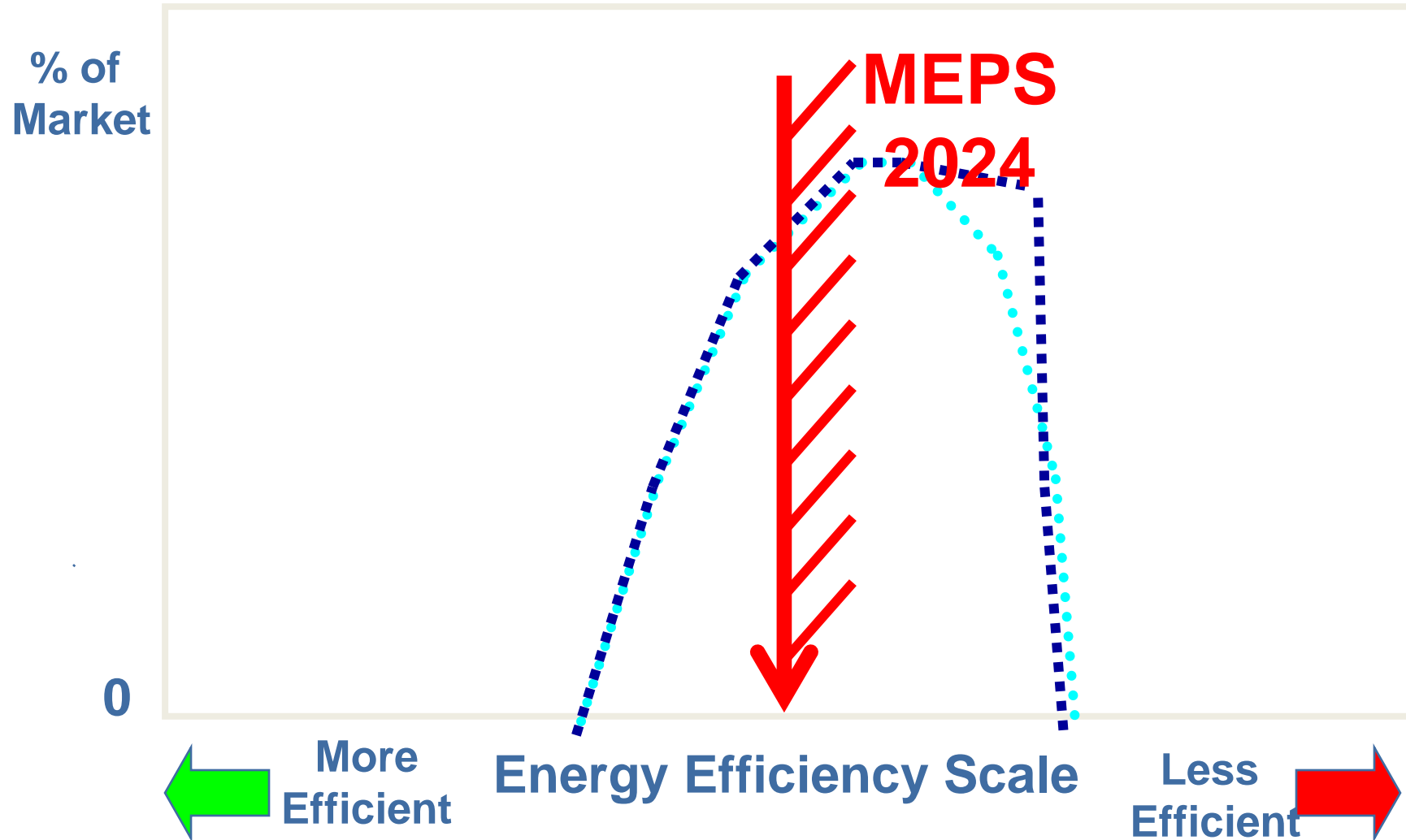
Less
Efficient



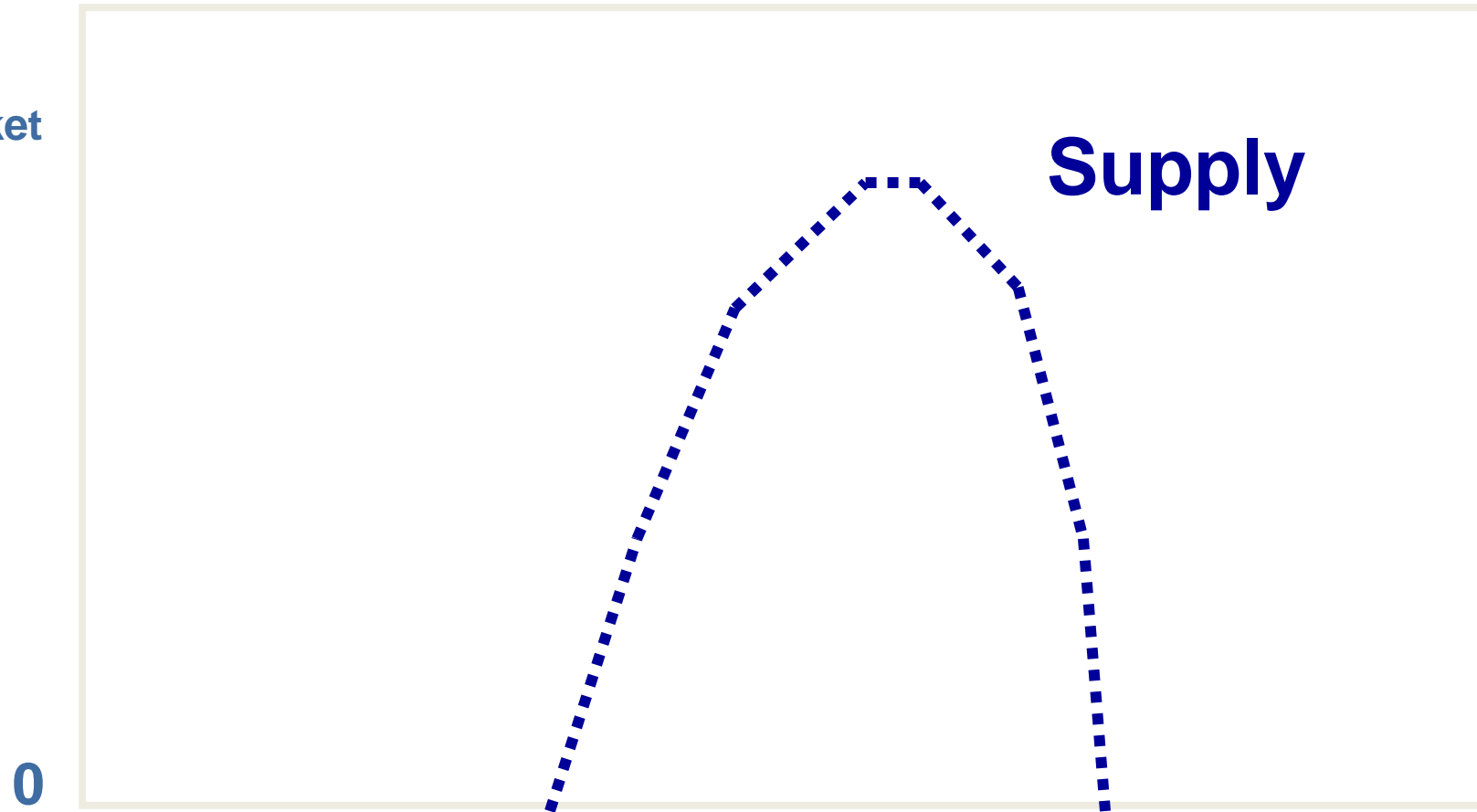
Market Transformation: A Model



Setting a Minimum Energy Performance Standard



% of Market



Supply

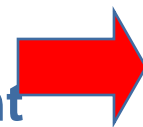
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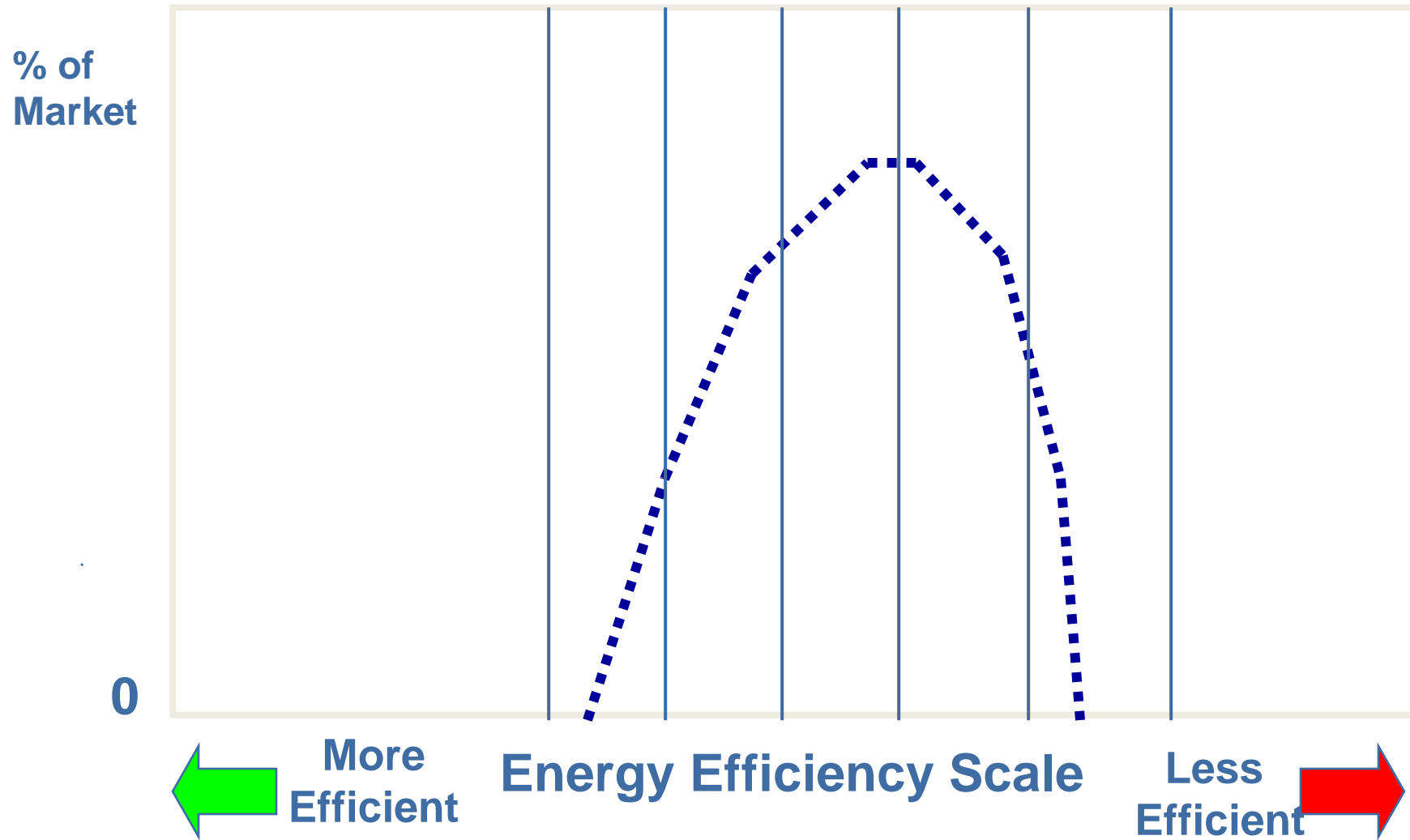


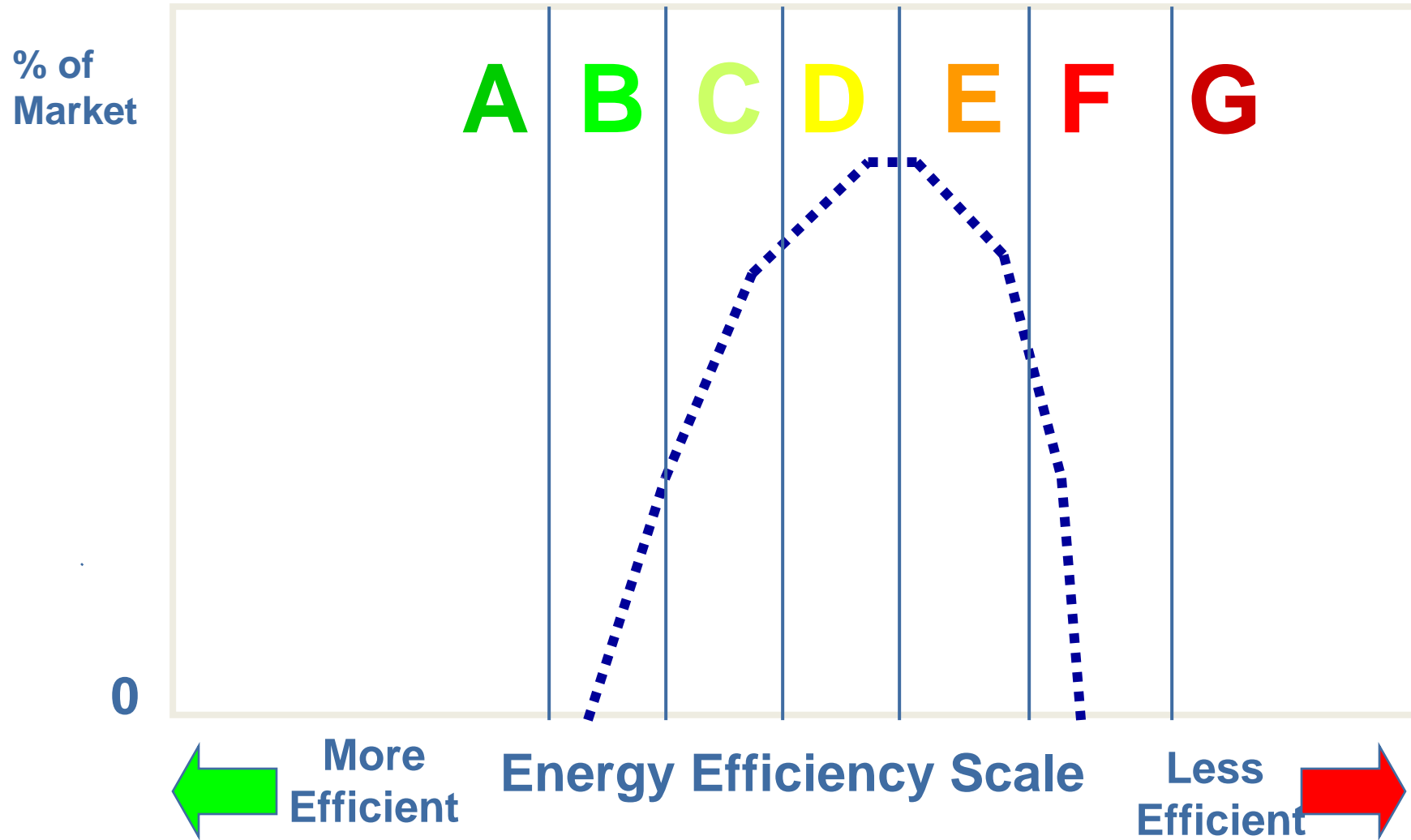
More Efficient

Energy Efficiency Scale

Less Efficient

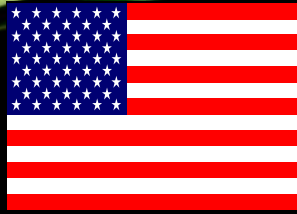








Model ID PHILIPS	ARG 764
Capacity	140 l
Parameters	*** -18 °C
Annual Energy Consumption	371 kWh
International Norms	ISO 1234



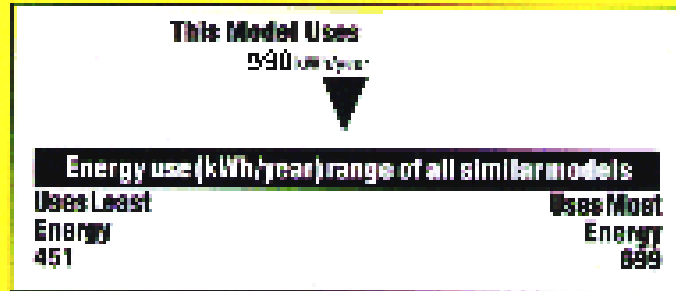
Department of Energy & Environmental Protection

ENERGYGUIDE

Dishwasher
Capacity: Standard

Model: 514
Model: 514

Compare the Energy Use of this Dishwasher
with Others Before You Buy.



kWh/year (kilo-watt-hours per year) is a measure of energy that costs you. Part of this energy use is to pump the water. Only standard built-in washers are used in this chart.

Dishwashers using more energy cost more to operate.
This model's estimated yearly operating cost is:

\$51

when used with hot water heater

\$33

when used with cold water heater

Energy Star dishwashers save up to 30% more energy than a 1998 U.S. Government national average model of \$56 per kWh for electricity and \$2.68 per therm for natural gas. Your actual operating cost will vary depending on your local utility rates and your use of the product. For more information on energy efficiency, visit www.energystar.gov.

Dishwasher
Capacity: Standard

In-Sink-Drainer Model: A67 512

ENERGYGUIDE

Estimates on this scale are based on a national average model of 1998 built-in washers and in-sink-drainers. Energy use is based on a typical 1000 sq. ft. house with 1200 sq. ft. of floor space.

Model with
lowest
energy cost

\$58

This Model

Model with
highest
energy cost

\$100

Model with
lowest
energy cost

\$33

This Model

Model with
highest
energy cost

\$100

Estimated with hot water heater

Estimated with cold water heater

Your cost will vary depending on your local energy rates and how you use the product. For more information on energy efficiency, visit www.energystar.gov.

How much will this model cost you to run yearly?

with an electric water heater

Loads of dishes per week	2	4	6	8	12
Estimated yearly 5-year operating cost	\$100	\$190	\$280	\$370	\$460
Cost per kWh	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10
Cost per therm	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Cost per gallon	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10
Cost per cubic foot	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10
Cost per BTU	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10
Cost per gallon of oil	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10
Cost per gallon of propane	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10

with a gas water heater

Loads of dishes per week	2	4	6	8	12
Estimated yearly 5-year operating cost	\$33	\$66	\$99	\$132	\$165
Cost per kWh	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10
Cost per therm	\$1.00	\$1.00	\$1.00	\$1.00	\$1.00
Cost per gallon	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10
Cost per cubic foot	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10
Cost per BTU	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10
Cost per gallon of oil	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10
Cost per gallon of propane	\$0.10	\$0.10	\$0.10	\$0.10	\$0.10

Ask your salesperson or local utility for the energy rates (cost per kilowatt-hour or therm) in your area, and for estimated costs if you have a propane or oil water heater.

Important: Read the EnergyGuide label on the product you are buying for more information.



ENERGUIDE

Energy consumption / Consommation énergétique

898 kWh
per year / par année

This model / Ce modèle ▼



Uses least energy /
Consomme le moins
d'énergie

Uses most energy /
Consomme le plus
d'énergie

Similar models
compared

Standard/Ordinaire

Modèles similaires
comparés

Model number

MAYTAG

Numéro de modèle

LAT8000 & 9000 SERIES

Removal of this label before first retail purchase is an offense (S.C. 1992, c.36)
Le retrait de cette étiquette avant le premier achat au détail constitue une violation de la loi (S.C. 1992, c.36)



Leiden Vertical



US-label



EC-label

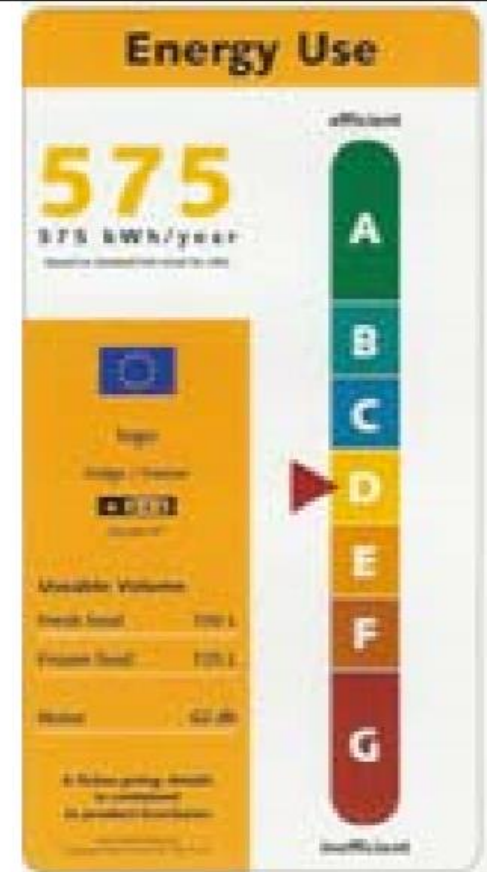
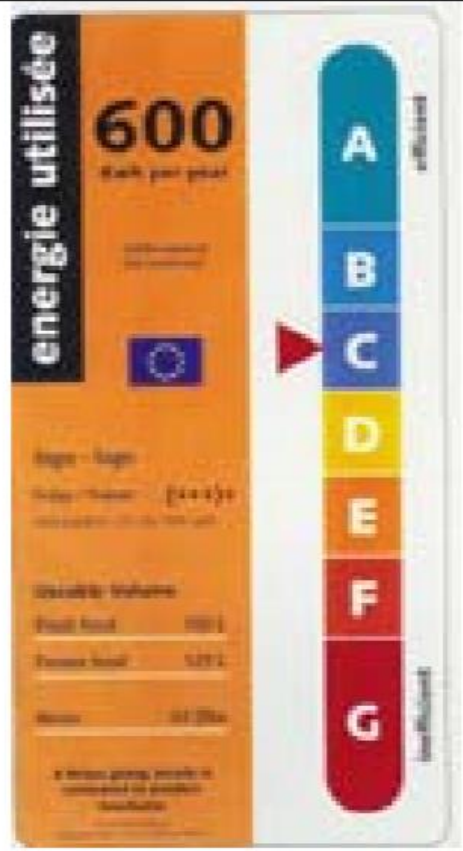
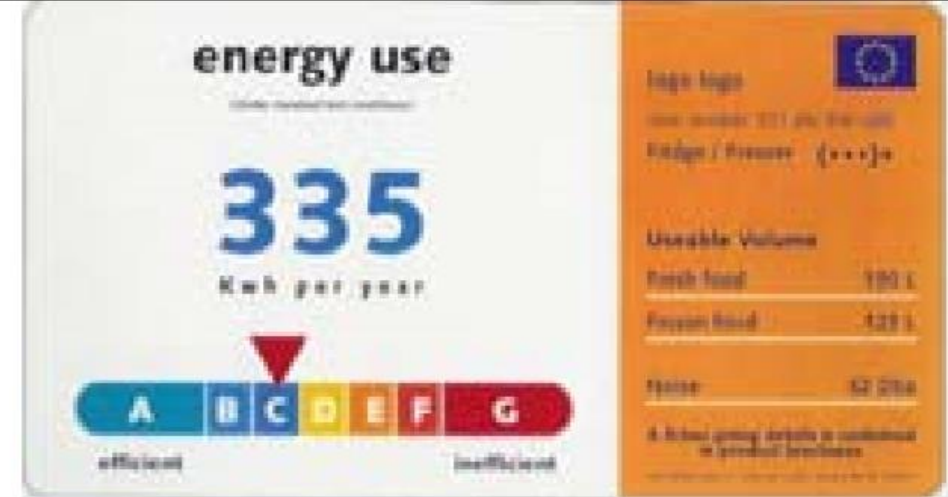


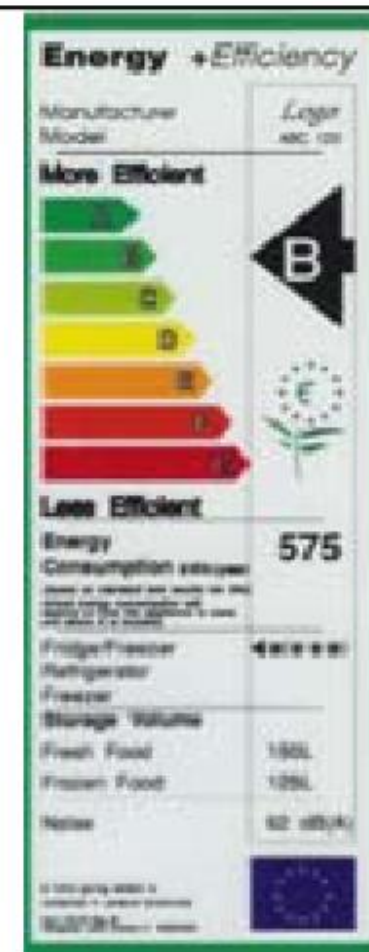
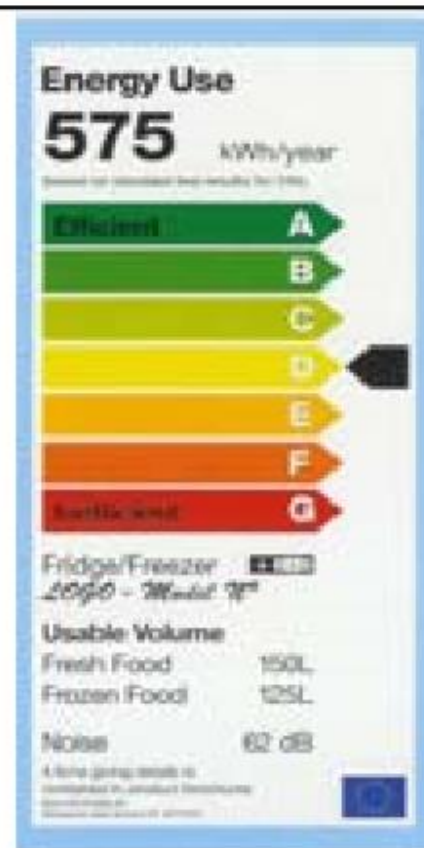
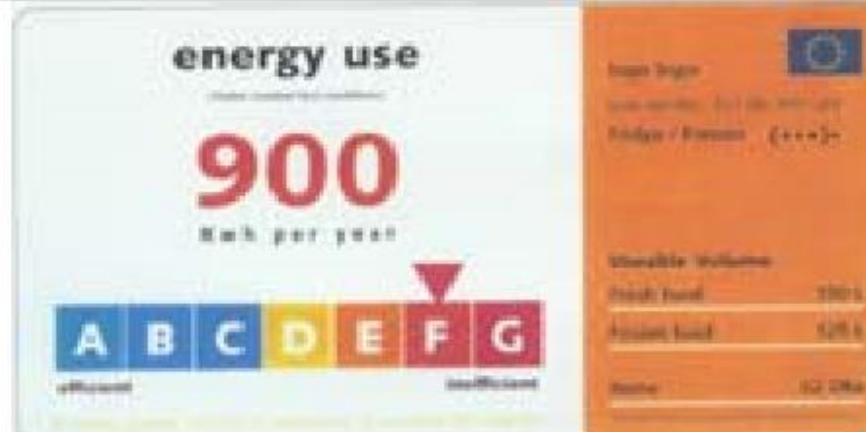
Leiden Horizontal



Leiden Star

Comprehension, Salience, Information & Appeal.





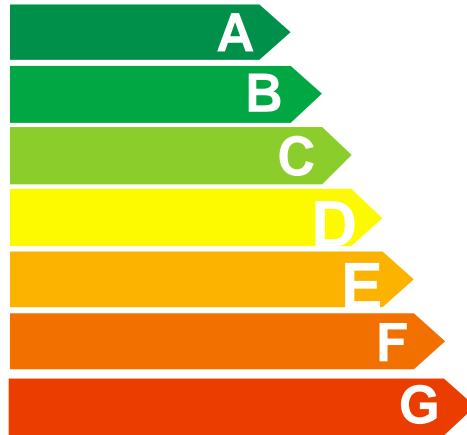


Energy

Manufacturer
Model

Logo
ABC
123

More efficient



Less efficient

Energy consumption kWh/year
(Based on standard test results for 24h)

350

Actual consumption will depend on how the appliance is used and where it is located

Fresh food volume I
Frozen food volume I

200
80



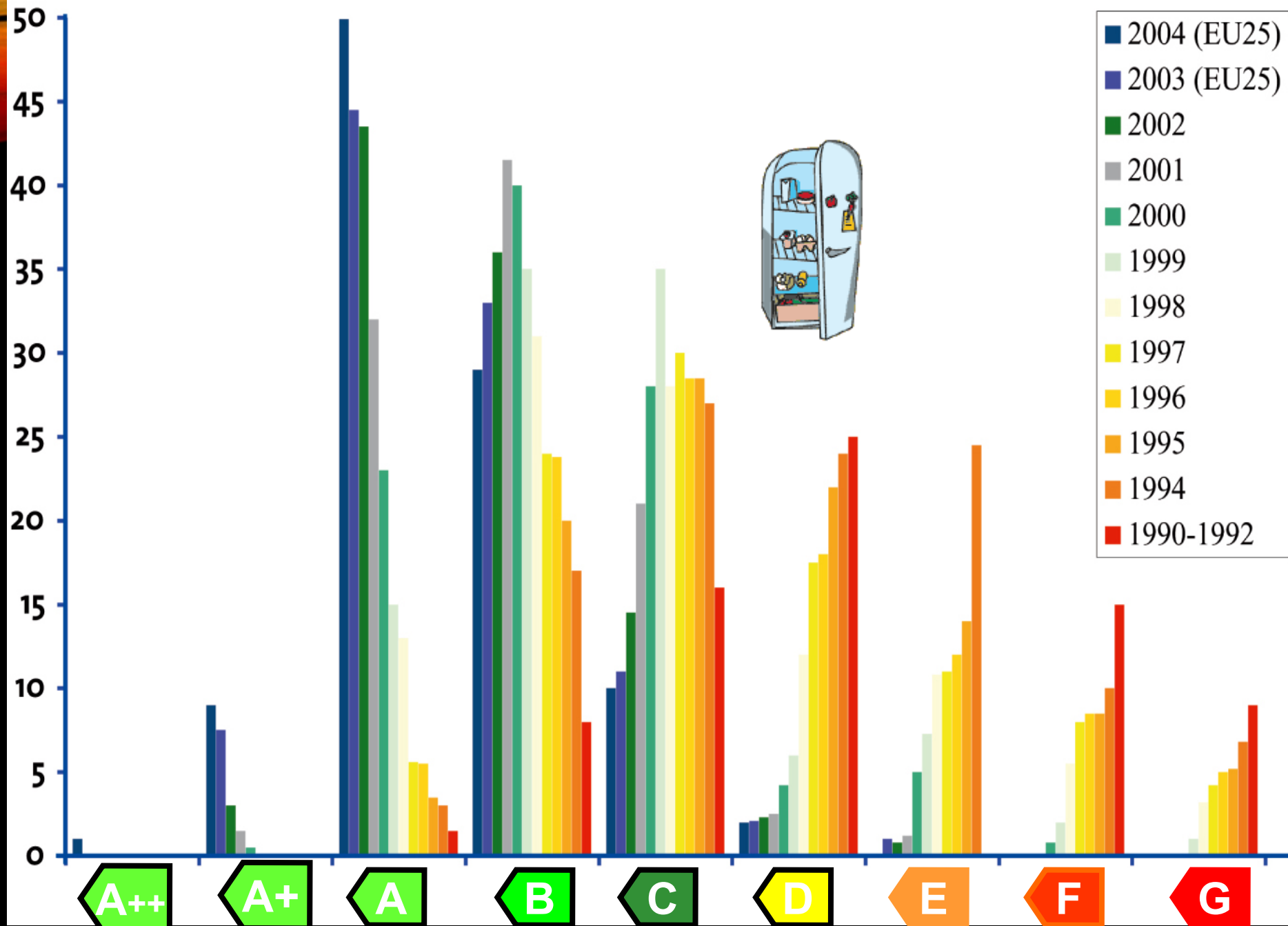
Noise
(dB(A)re 1 pW)

40

Further information is contained in product brochures



Norm EN 153 May 1990
Refrigerator Label Directive 94/2/EC



Energy

Manufacturer
Model

Logo
ABC
123

More efficient



A

Less efficient

Energy consumption kWh/year
(Based on standard test results for 24h)

350

Actual consumption will depend on how the appliance is used and where it is located

Fresh food volume I
Frozen food volume I

200
80



Noise
(dB(A)re 1 pW)

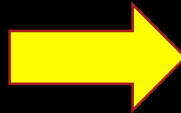
40

Further information is contained in product brochures



Norm EN 153 May 1990
Refrigerator Label Directive 94/2/EC

**New
Design
in 2019**



SUPPLIER'S NAME

MODEL IDENTIFIER



XYZ kWh/annum



XYZ L



XYZ L

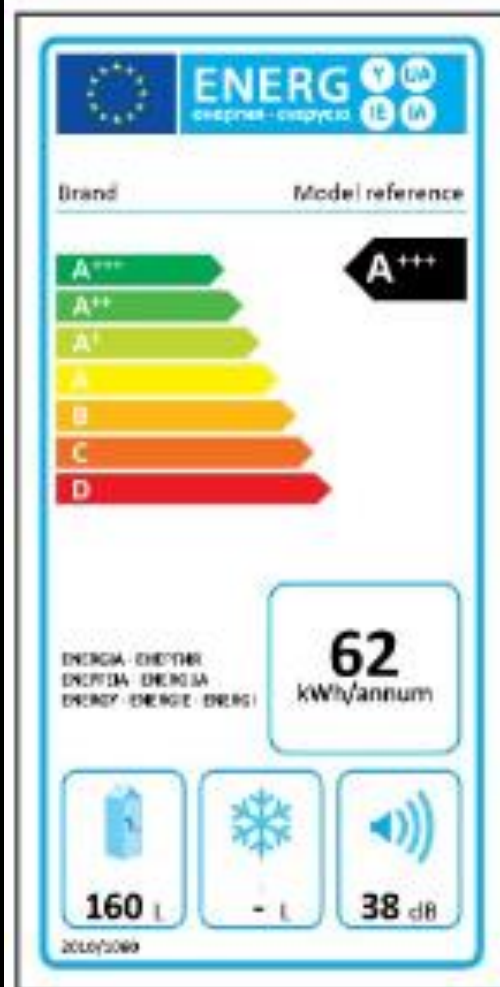


ABCD

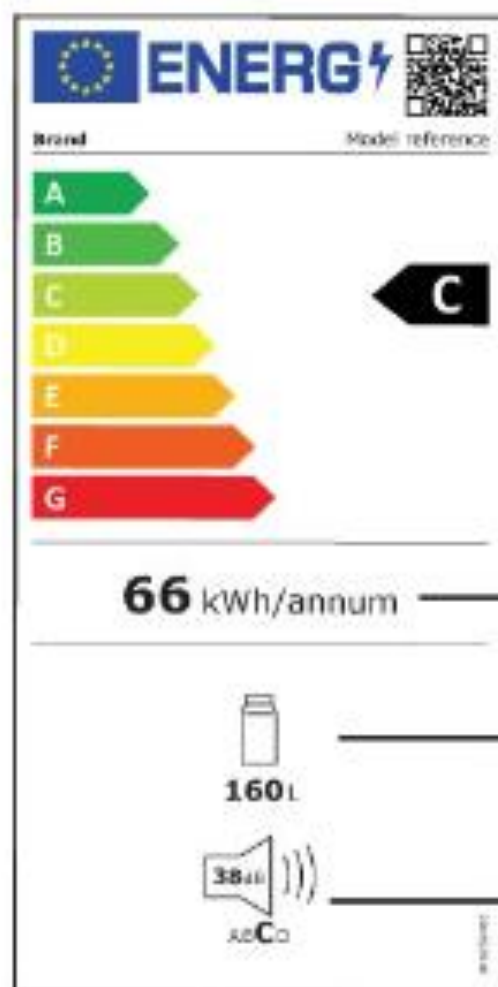
2019/00000

How to recognise a rescaled product ?

Current energy label



New energy label



The **QR code** gives access to more information on the model

The **rescaled energy efficiency class** for this fridge, an A+++ in the previous label

The **annual energy consumption** of this fridge is calculated with refined methods

The **volume** of the fridge expressed in liters (L)

The **noise level** measured in decibels (dB) and using a four classes scale

The energy labels for a fridge without freezer

ENERGY label for Refrigerators. It features the EU flag, the word 'ENERGY' with a lightning bolt, and a QR code. Below this, it lists 'SUPPLIER'S NAME' and 'MODEL IDENTIFIER'. The energy efficiency scale (A-G) is shown, with 'B' highlighted in a black arrow. The energy consumption is 'XYZ kWh/annum'. Icons for freezer volume (XYZ L) and refrigerator volume (XYZ L) are present, along with a sound power level icon (XY dB, ABCD).

ENERGY label for Dishwashers. It features the EU flag, the word 'ENERGY' with a lightning bolt, and a QR code. Below this, it lists 'SUPPLIER'S NAME' and 'MODEL IDENTIFIER'. The energy efficiency scale (A-G) is shown, with 'B' highlighted in a black arrow. The energy consumption is 'XYZ kWh / 100' with a circular arrow icon. Icons for cutlery trays (XY x) and water consumption (XY,Z L) are present, along with a cycle time icon (X:YZ) and a sound power level icon (XY dB, ABCD).

ENERGY label for Washing Machines. It features the EU flag, the word 'ENERGY' with a lightning bolt, and a QR code. Below this, it lists 'SUPPLIER'S NAME' and 'MODEL IDENTIFIER'. The energy efficiency scale (A-G) is shown, with 'B' highlighted in a black arrow. The energy consumption is 'XYZ kWh / 100' with a circular arrow icon. Icons for load capacity (XY,Z kg), cycle time (X:YZ), and water consumption (XY L) are present, along with a spin speed icon (AB CDEFG) and a sound power level icon (XY dB, ABCD).

ENERGY label for Displays. It features the EU flag, the word 'ENERGY' with a lightning bolt, and a QR code. Below this, it lists 'SUPPLIER'S NAME' and 'MODEL IDENTIFIER'. The energy efficiency scale (A-G) is shown, with 'B' highlighted in a black arrow. The energy consumption is 'XYZ kWh/1000h'. An HDR icon is shown with 'ABCDEFG' above it and 'XYZ kWh/1000h' below it. A screen size icon shows 'WXYZ px' and 'XYZ cm'.

ENERGY label for Lighting. It features the EU flag, the word 'ENERGY' with a lightning bolt, and a QR code. Below this, it lists 'SUPPLIER'S NAME' and 'MODEL IDENTIFIER'. The energy efficiency scale (A-G) is shown, with 'B' highlighted in a black arrow. The energy consumption is 'WXYZ kWh/1000h'.

Refrigerators

Dishwashers

Washing
Machines

Displays

Lighting




ES español


EPREL (Registro europeo de productos para el etiquetado energético)

El sitio web público EPREL se encuentra ahora en fase beta


[Pulse aquí para más información >](#)



Lavavajillas



Lavadoras



Lavadoras-secadoras

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Best products in your country



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- Germany
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- Lithuania
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- Poland
- Portugal
- UK
- Spain
- Sweden
- Switzerland

News



New electricity prices on Topten
 On Topten, the deposited electricity prices were adjusted to 30 cents per kilowatt hour.>> [keep reading](#)



Heating up: Merged Energy Label (Heating & Cooling)
 The merged energy labelling is a great approach but higher ambition is needed - especially for comfort fans.>> [keep reading](#)



End Fossil Heating
 An open letter has been sent to European Commission to end fossil heating. Find the details here.>> [keep reading](#)

[» View More News](#)

Topten Focus

Topten Activities



Topten: Best products in Europe
 Topten is a web portal guiding consumers to the most energy efficient appliances and cars in Europe. [» About Topten](#)



HACKS
 The project HACKS provides heating and cooling know-how and solutions in 16 countries in Europe. [» Read More](#)



New Energy Label
 Many categories received new labels in March 2021. [» Read More](#)



Topten documentation
 All Topten policy recommendations and other publications related to energy efficient products can be accessed [here](#).



Professional procurement
 Topten Pro gives purchasing guidance for



Enervee Score ▾

Get Started

#1 ENERGY EFFICIENCY PLATFORM

We make energy efficiency actionable.

Our platform empowers utility customers to make better choices and is proven to deliver shopping behavior change at scale.



What is Enervee?

One platform, multiple solutions. No IT required. Live in weeks not months.

Online Store

Energy Efficiency

Electric Vehicles



ENERG

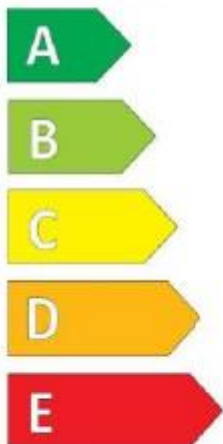


SUPPLIER'S NAME

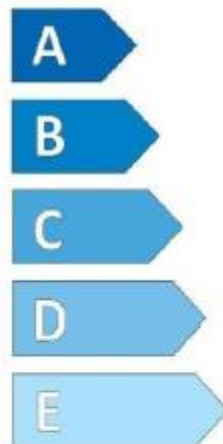
Tyre type identifier

Size

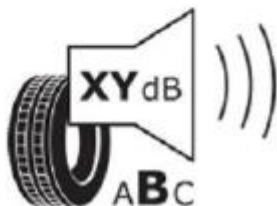
Tyre class



C



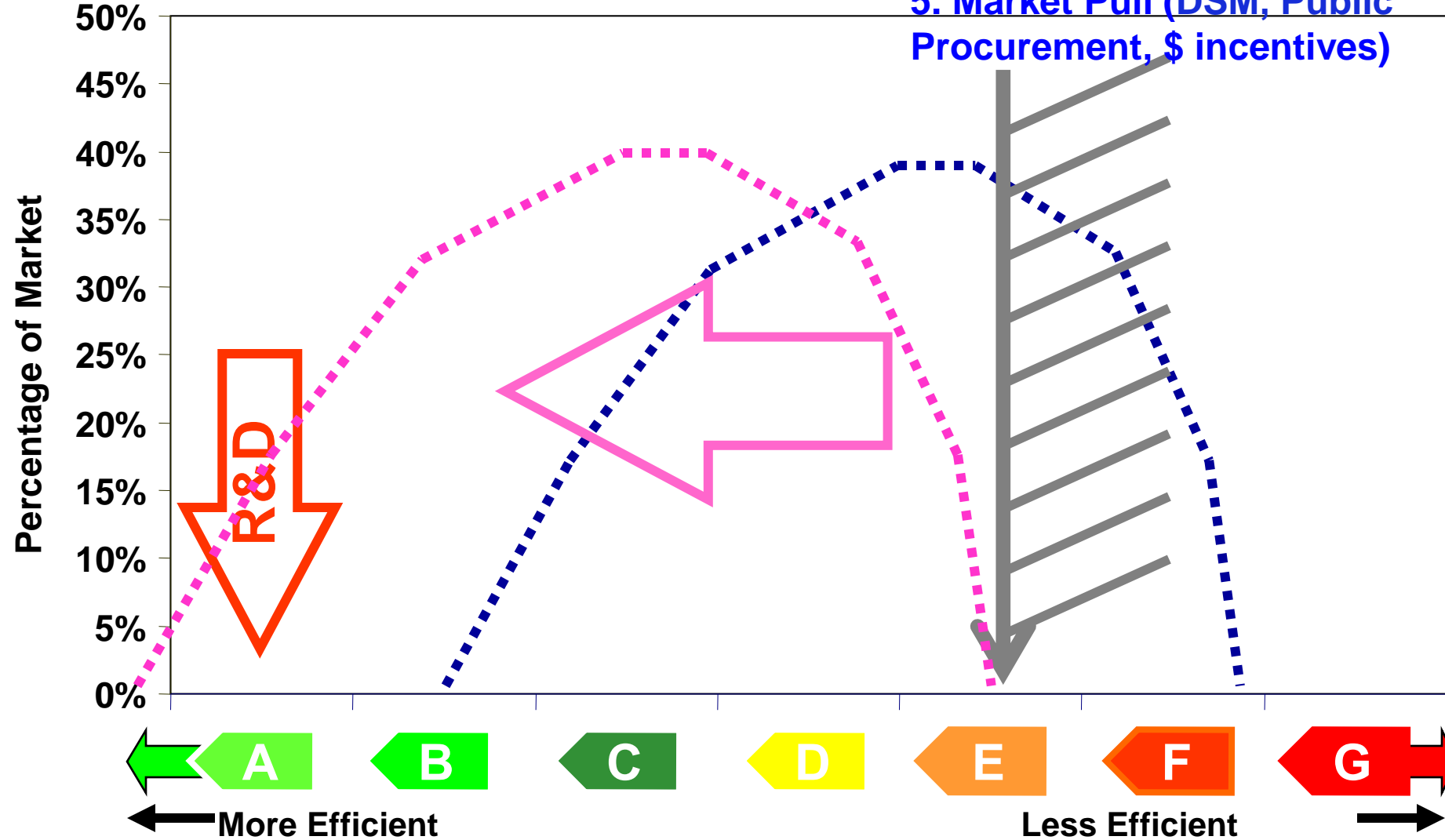
D



2019/xxx

5 Steps to Transform a Market

1. Understand the Market
2. Information & Labelling
3. Stimulate Research & Dev.
4. Set MEPS
5. Market Pull (DSM, Public Procurement, \$ incentives)



Products covered by Ecodesign and energy labels in Europe

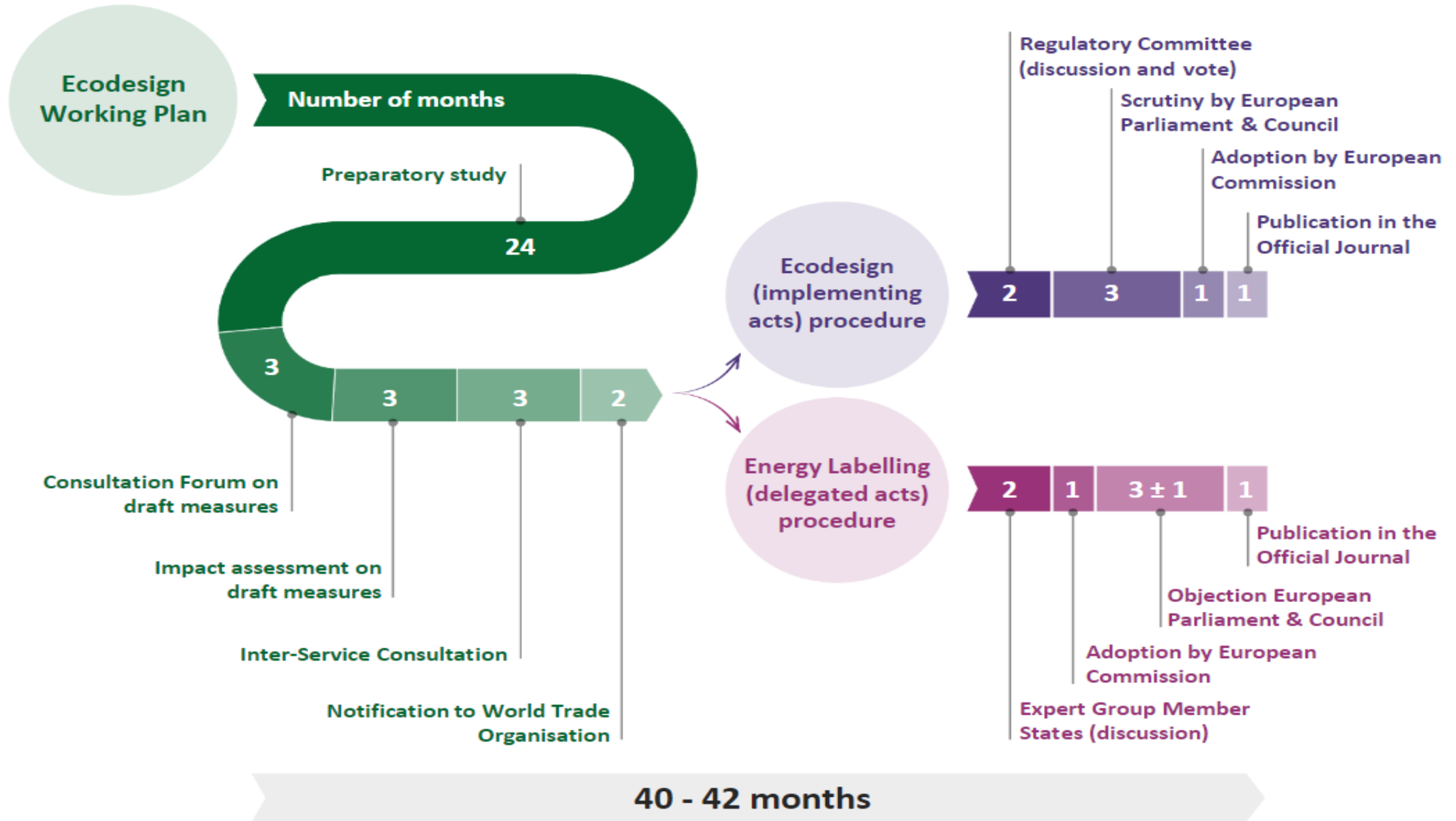
14 product groups covered by Ecodesign and labelling requirements

- dishwashers
- washing machines
- tumble dryers
- refrigerators
- professional and commercial refrigeration
- lamps
- electronic displays
- domestic cooking appliances
- heaters
- water heaters
- local space heaters
- solid fuel boilers
- air conditioners
- residential ventilation units

11 product groups only covered by Ecodesign requirements

- simple set-top boxes
- external power supplies
- electric motors
- circulators
- industrial fans
- water pumps
- power transformers
- welding equipment
- air heating products
- computers and servers
- online data-storage products

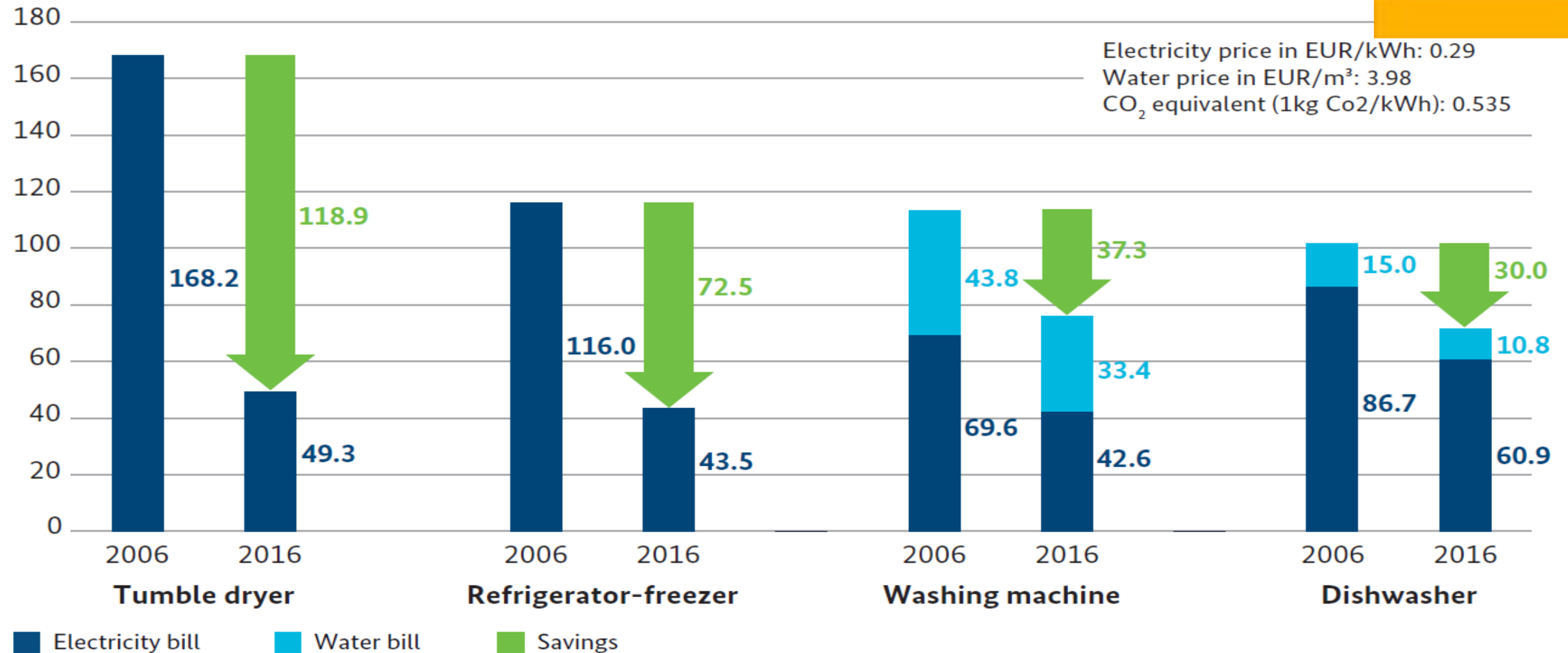
Theoretical regulatory process for adopting implementing measures under the Ecodesign and energy-labelling framework



Annual cost of electricity and water when using efficient household devices compared to typical devices that are 10 years old

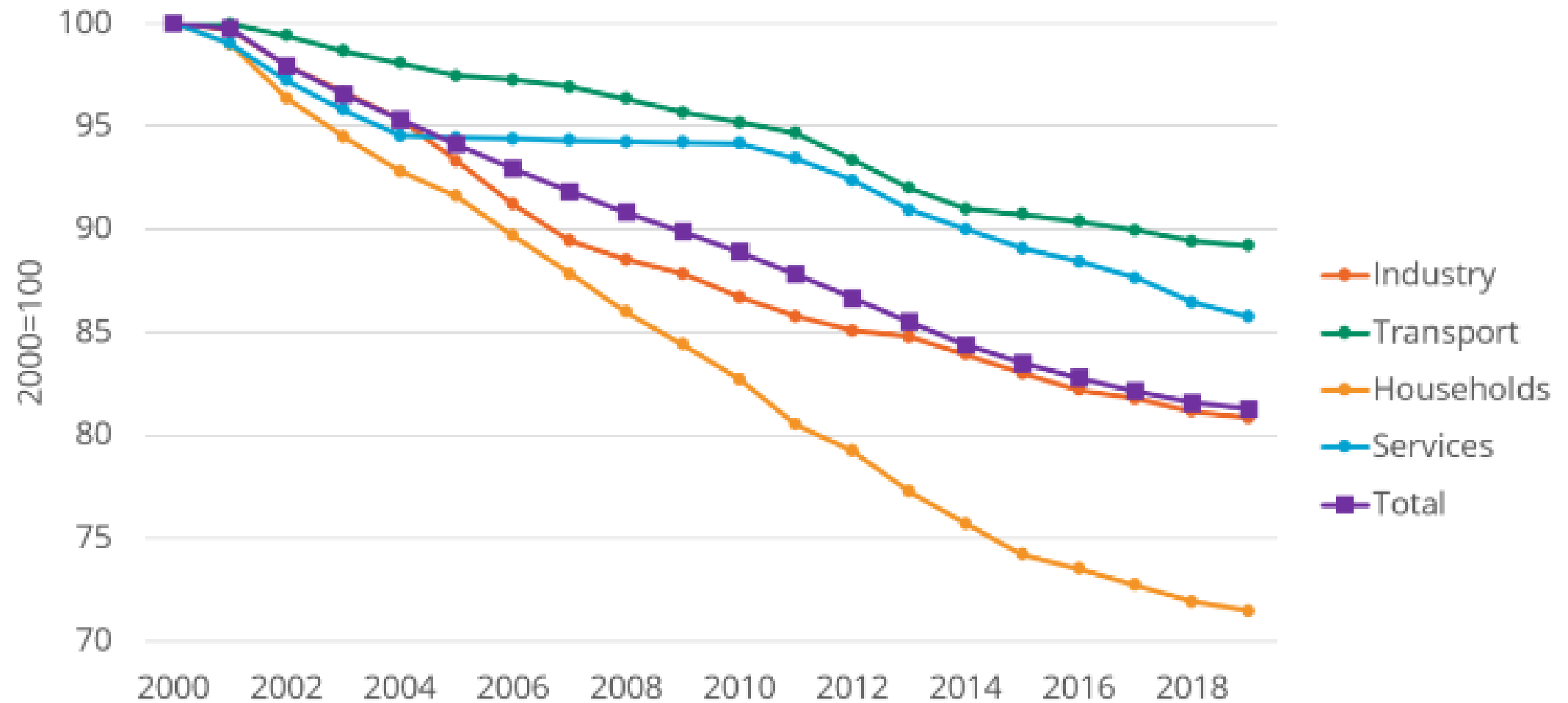


Total costs in EUR



Source: Calculated by the Federal Ministry for Economic Affairs and Energy using data taken from www.ecotopten.de and GfK (for new appliances); and, for dishwashers, <http://forum-waschen.de/online-geschirr-spielrechner.html> for old appliances.

Energy efficiency improvements for final consumers



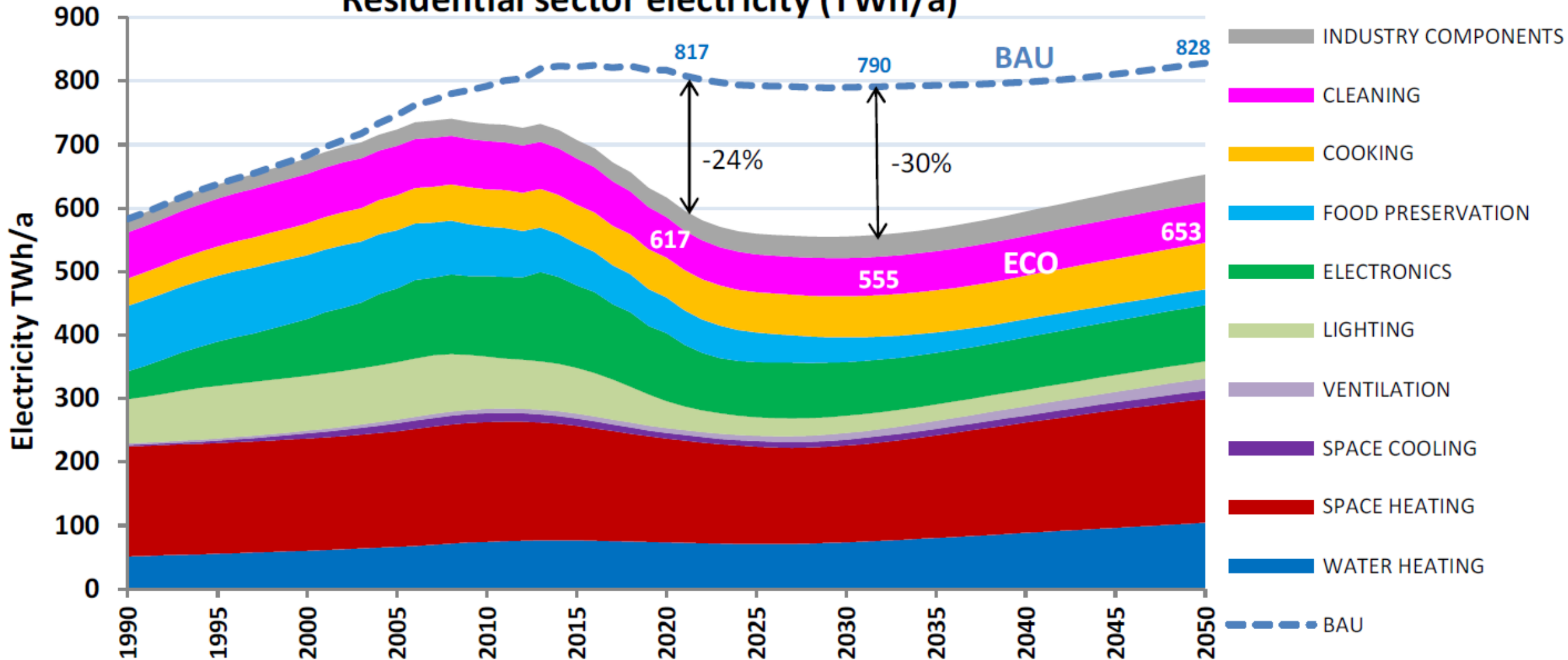
Source: Enerdata, *Odyssee database*, measured with ODEX

The Ecodesign Impact Accounting (EIA) collects, elaborates and sums data for all products regulated under Ecodesign and Energy Labelling.



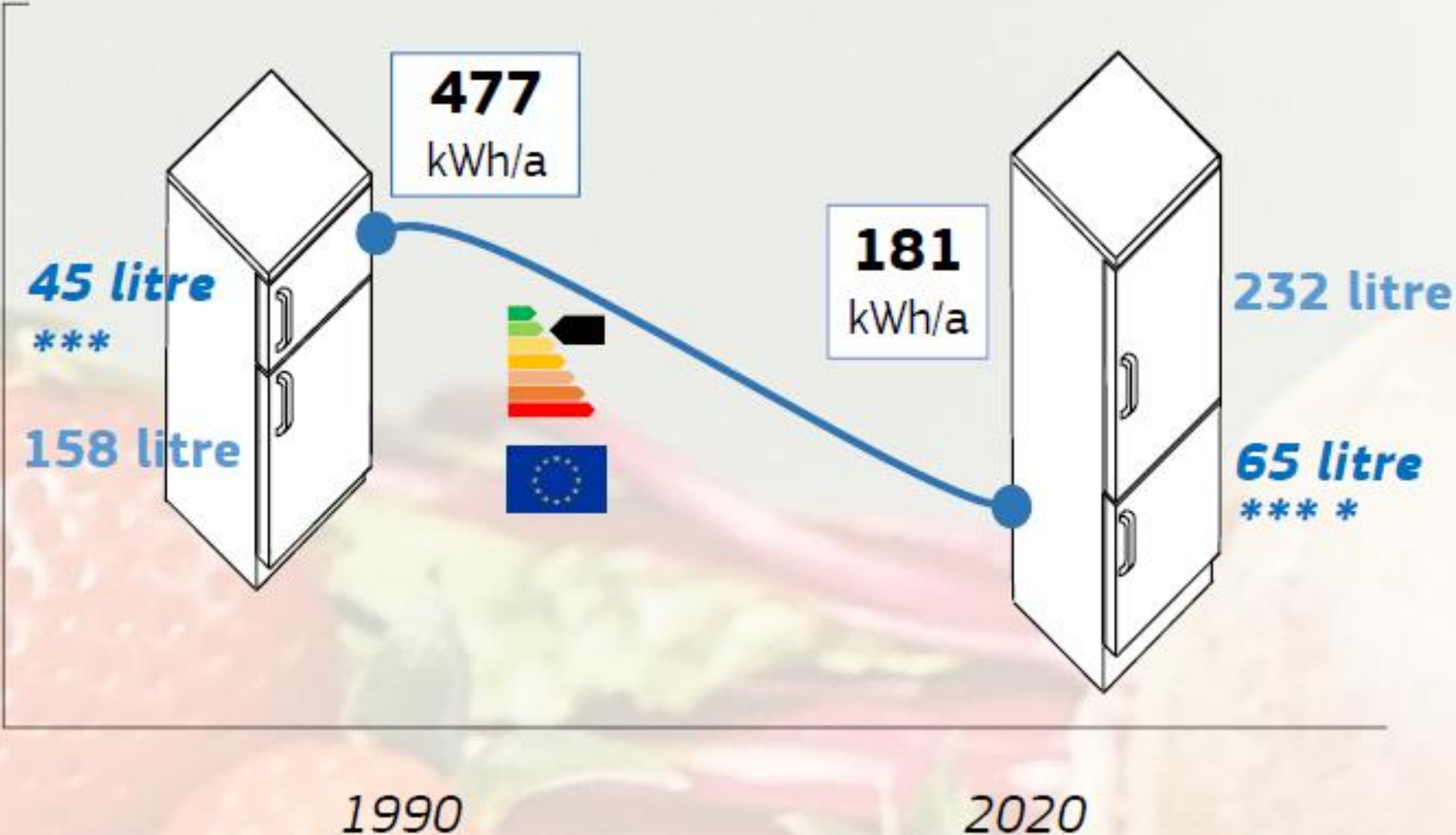
Ecodesign Impact Accounting:
<https://www.vhk.nl/downloads/Reports/EIA/ecodesign%20impact%20accounting%20annual%20report%202021-MJAW22001ENN.pdf>

Residential sector electricity (TWh/a)




Source Ecodesign Impact Accounting: <https://www.vhk.nl>

Refrigerator - Freezer



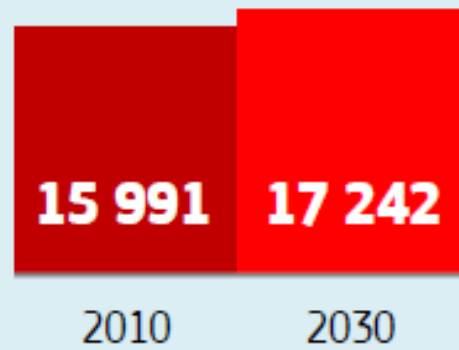
FACTS & FIGURES

 EFFECT OF REGULATIONS

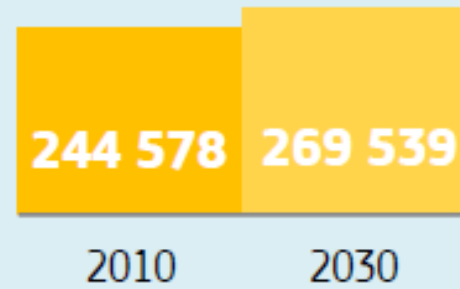
Product: [RF] (Household) Refrigeration Appliances

Measures: CR (EU) 2019/2019, CDR (EU) 2019/2016

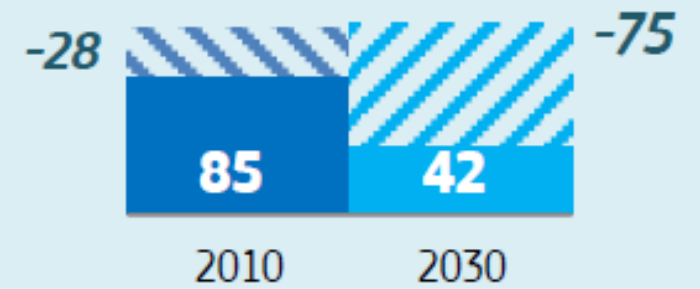
SALES (x1000 units)



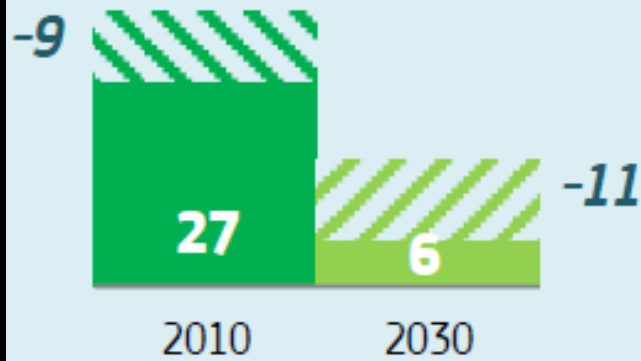
STOCK (x1000 units)



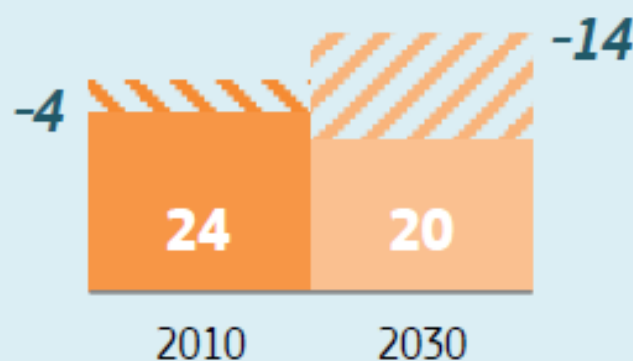
ELECTRICITY (TWh/a)



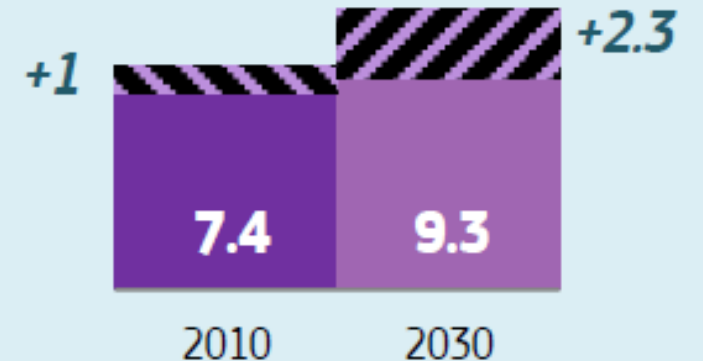
GHG-EMISSION (Mt CO₂ eq/a)



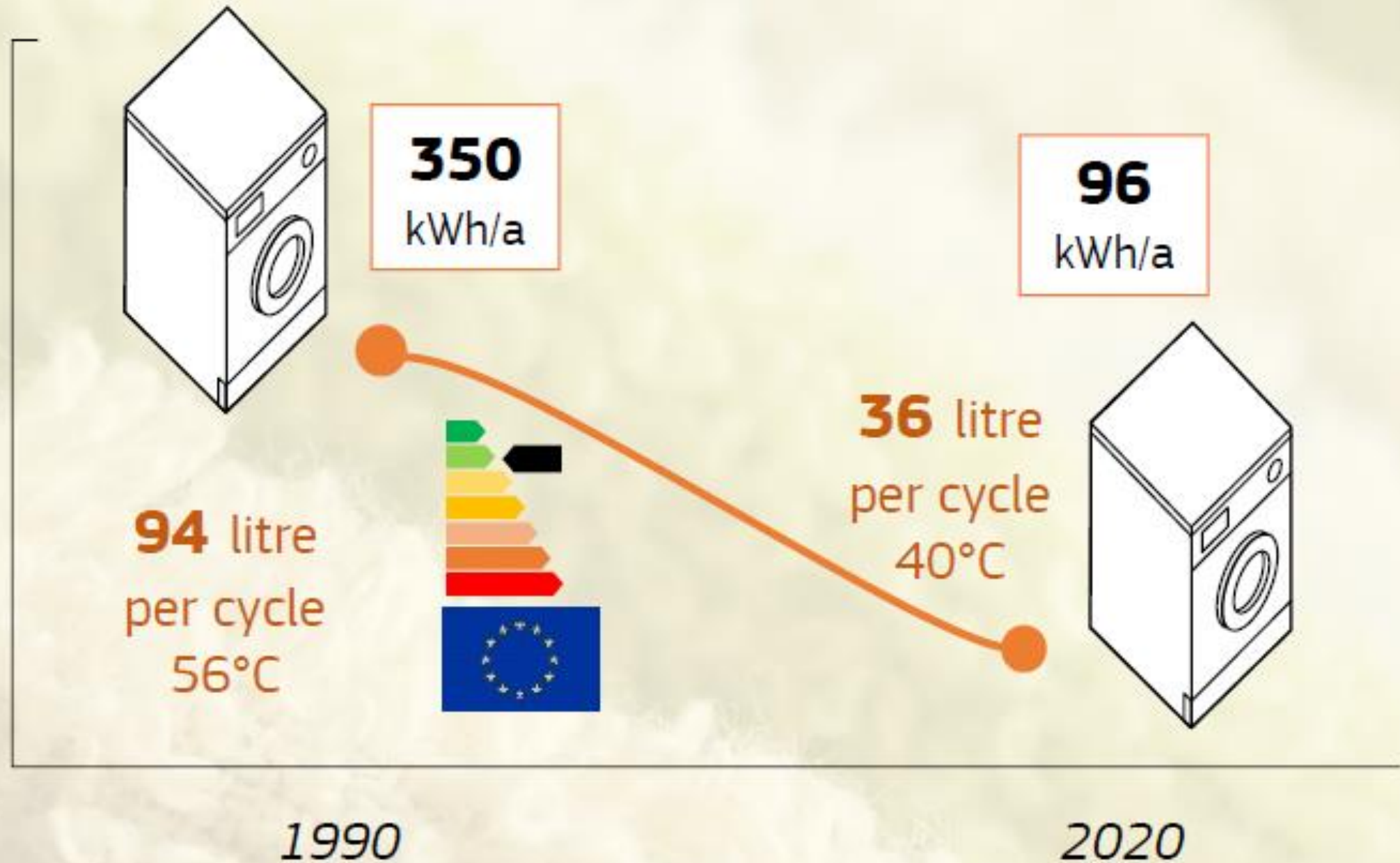
CONSUMER EXPENSES (bn €)




REVENUES (bn €)



Washing Machine



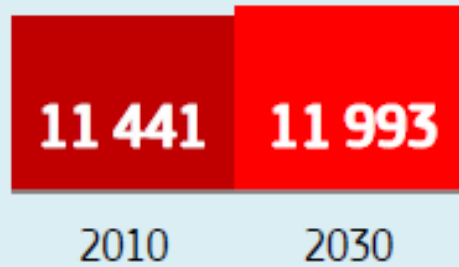
FACTS & FIGURES

 EFFECT OF REGULATIONS

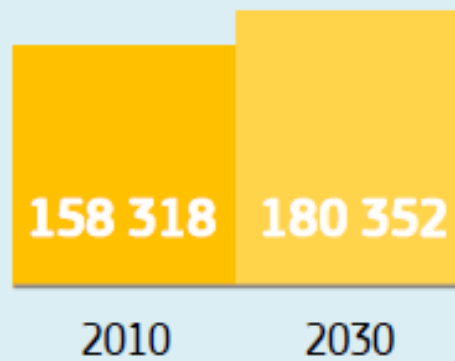
Product: [WM] Washing Machines and [WD] Washer Dryers

Measures: CR (EU) No. 2019/2023, CDR (EU) No. 2019/2014

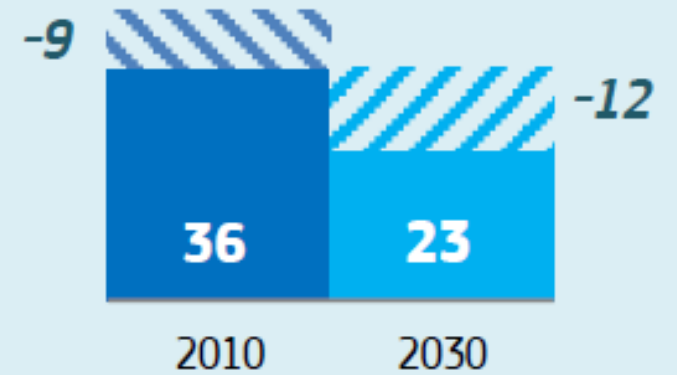
SALES (x1000 units)



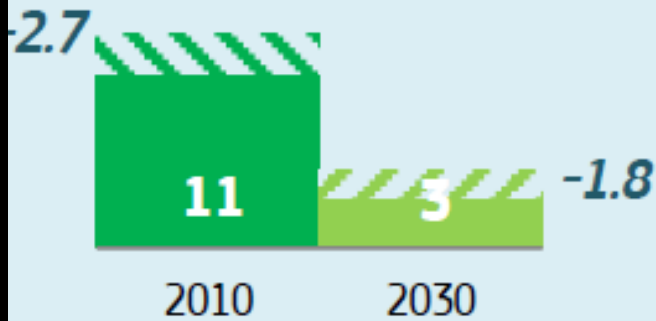
STOCK (x1000 units)



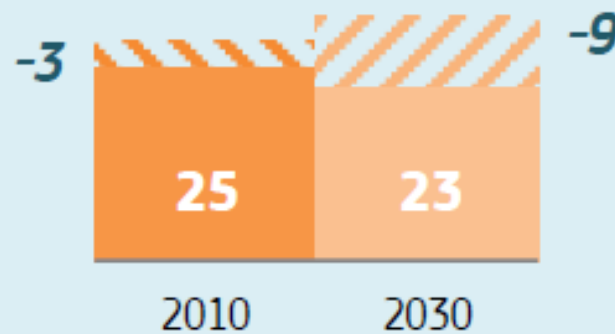
ELECTRICITY (TWh/a)



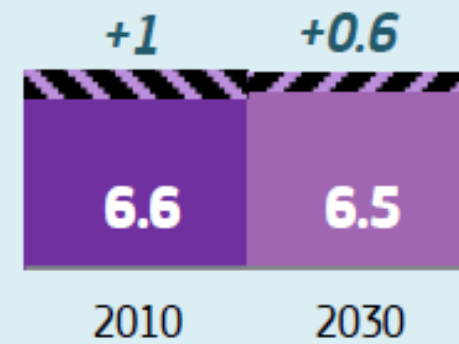
GHG-EMISSION (Mt CO₂ eq/a)



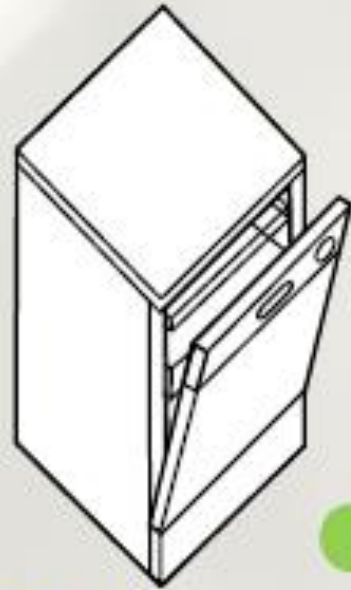
CONSUMER EXPENSES (bn €)



REVENUES (bn €)

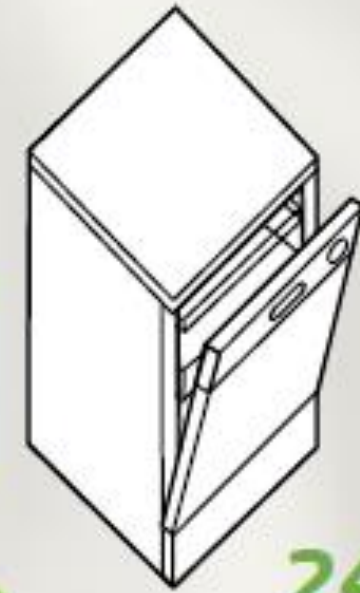


Dishwasher



310
kWh/a

30 litre
per cycle



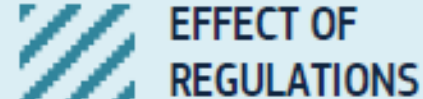
170
kWh/a

24 litre
per cycle

1990

2020

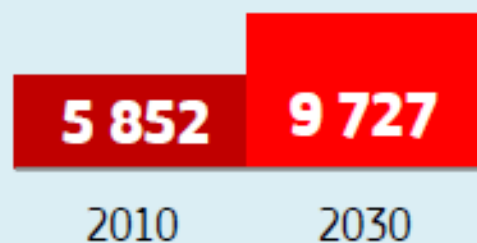
FACTS & FIGURES



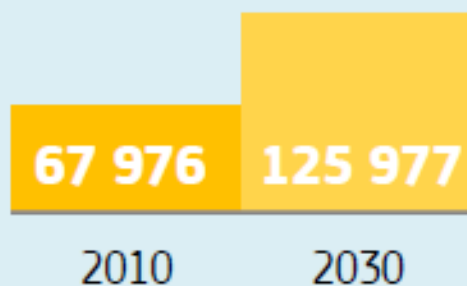
Product: [DW] Household Dishwashers

Measures: CR (EU) No. 2019/2022, CDR (EU) No. 2019/2017

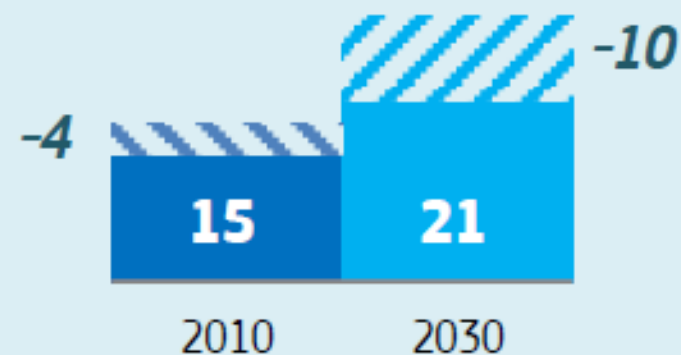
SALES (x1000 units)



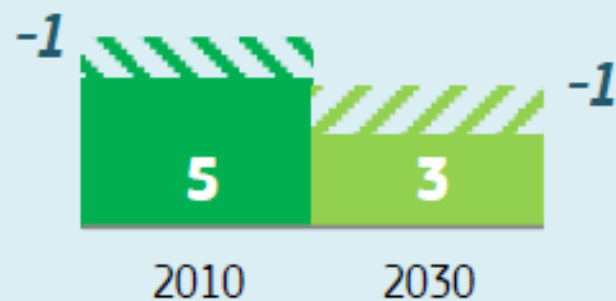
STOCK (x1000 units)



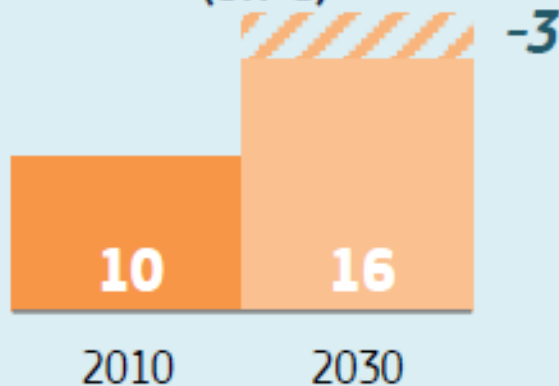
ELECTRICITY (TWh/a)



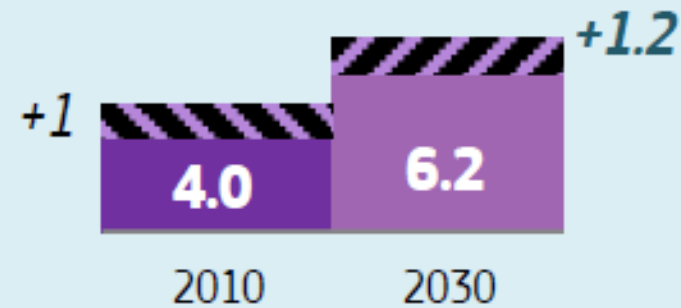
GHG-EMISSION
(Mt CO₂ eq/a)



CONSUMER EXPENSES
(bn €)

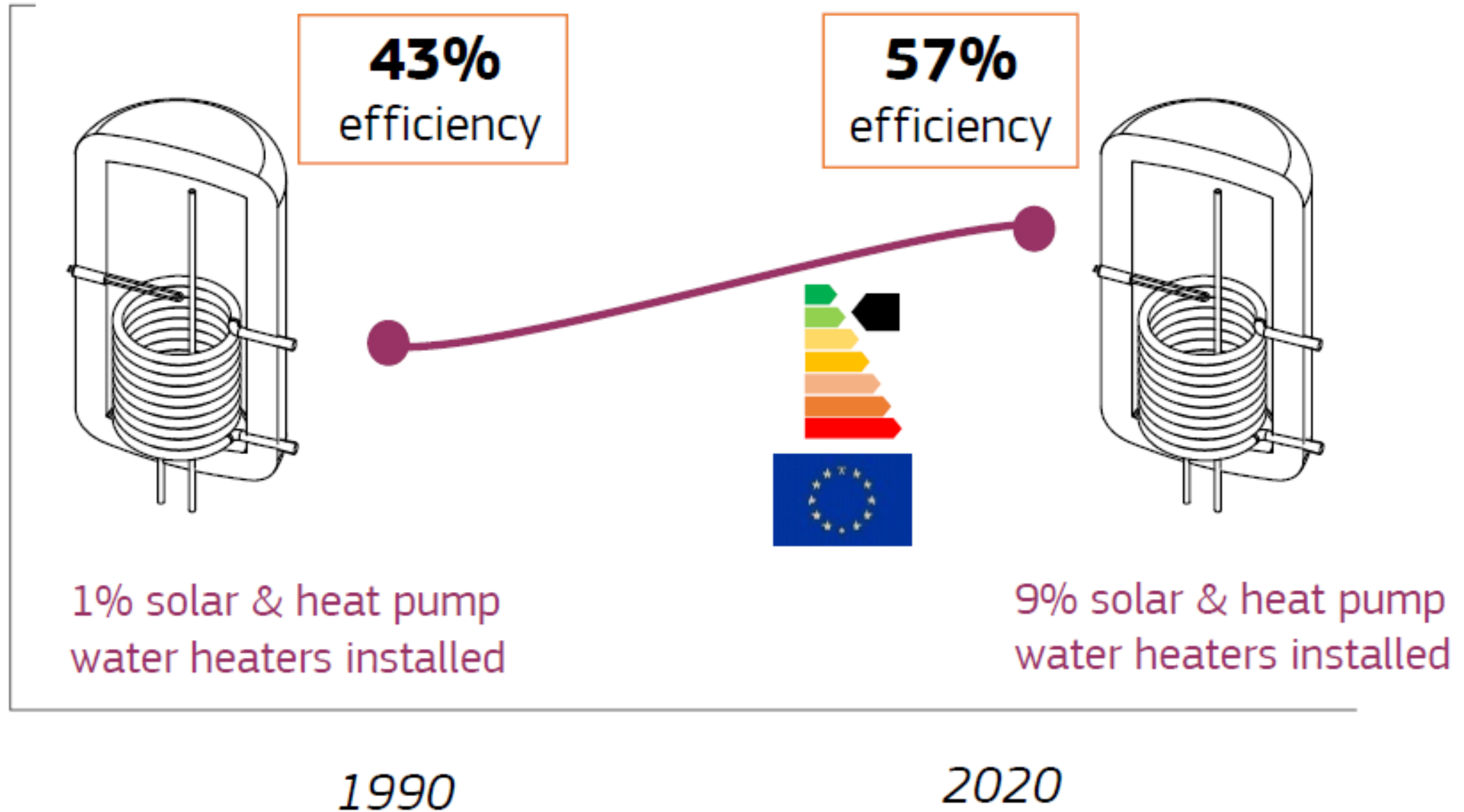


REVENUES
(bn €)



Water heaters

(combi & dedicated)



1990

2020

Household Lamps

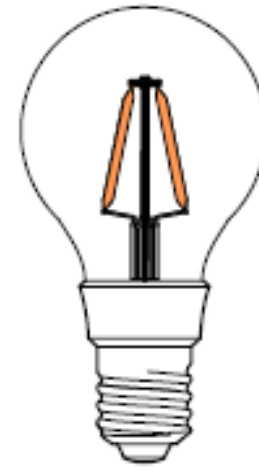


12

lm/W

Old bulb
5-10 lm/W

470 hours, 619 lumen,
51 W per lamp



100

lm/W

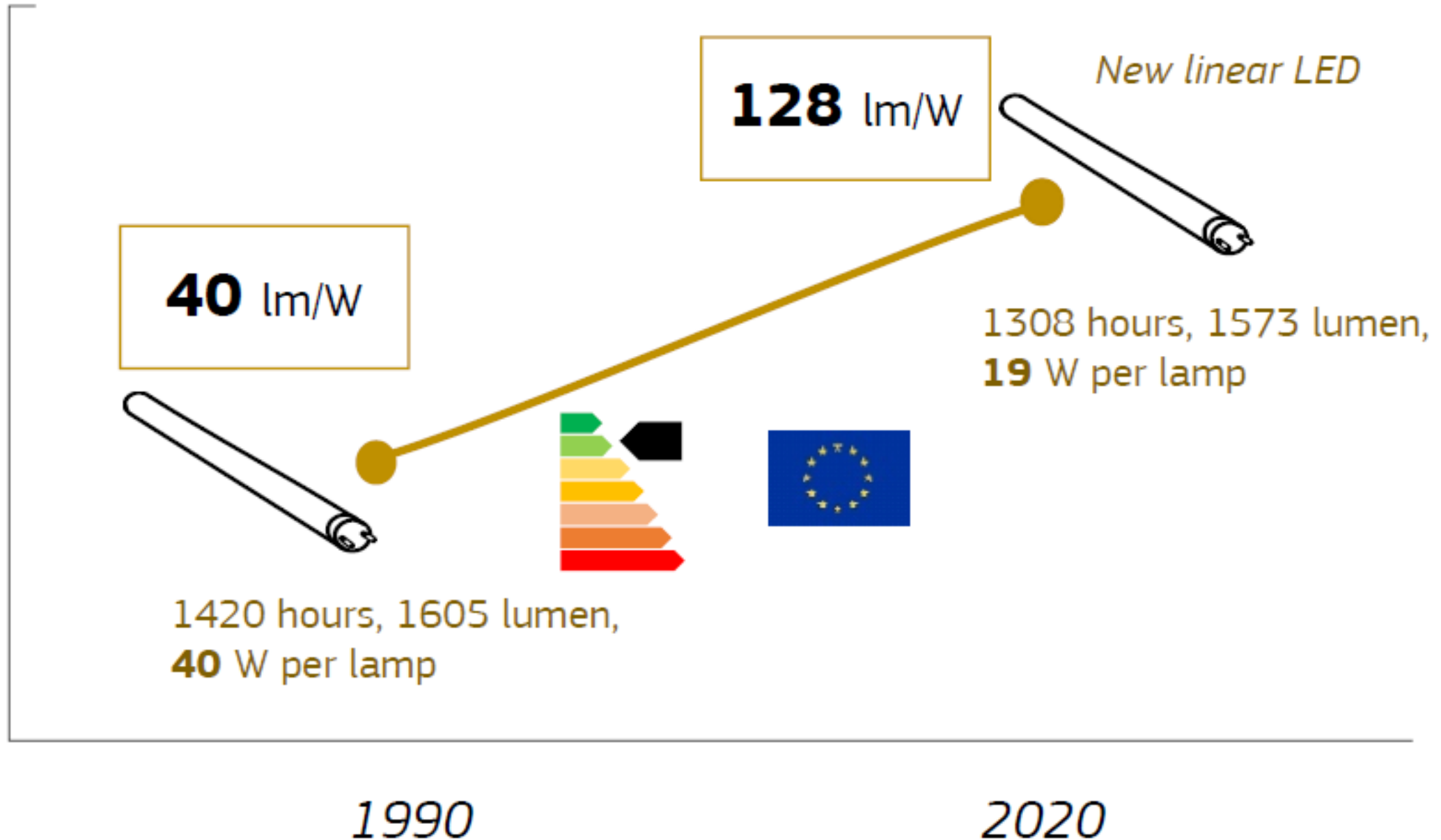
New LED bulb
90-120 lm/W

501 hours, 694 lumen,
7 W per lamp

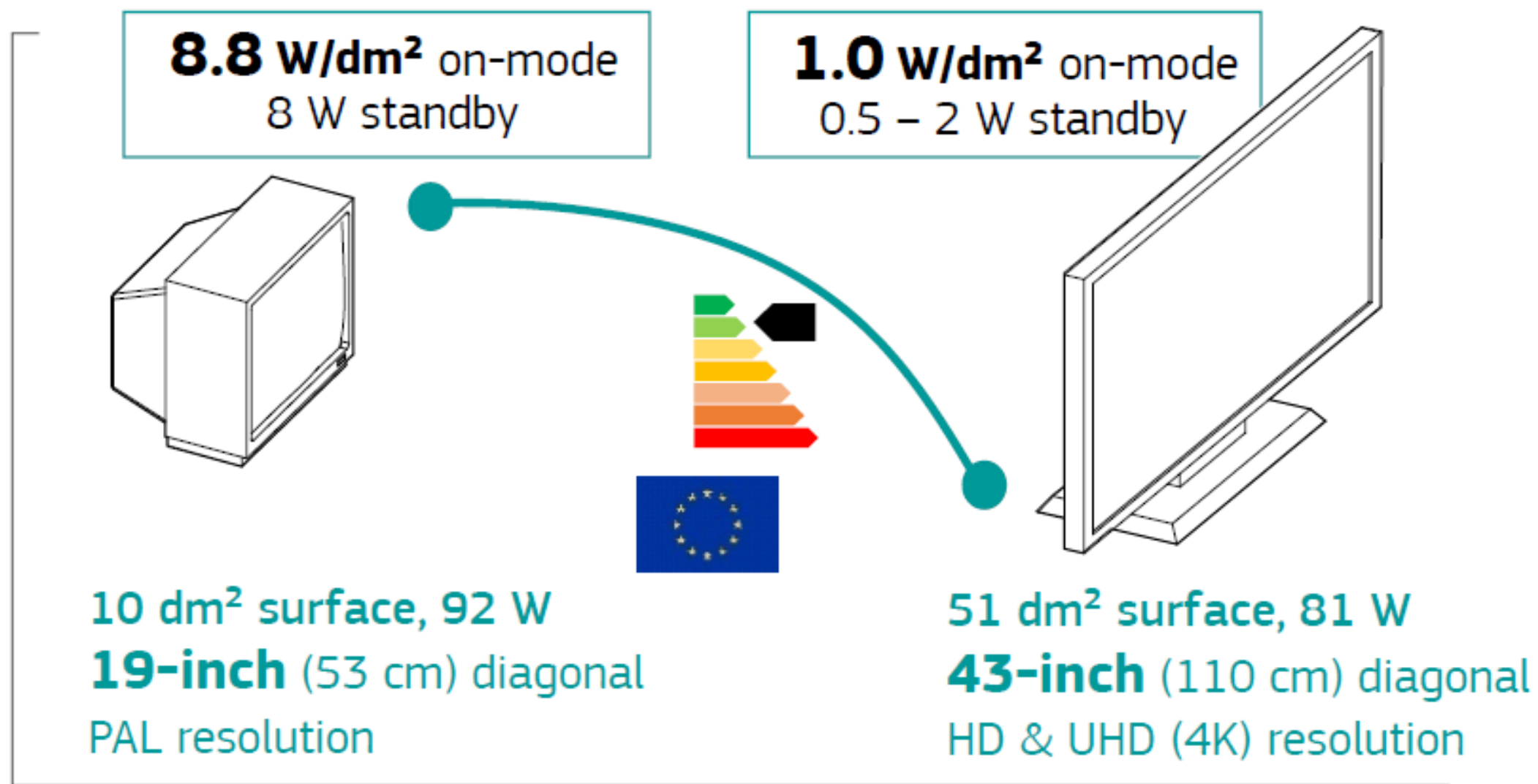
1990

2020

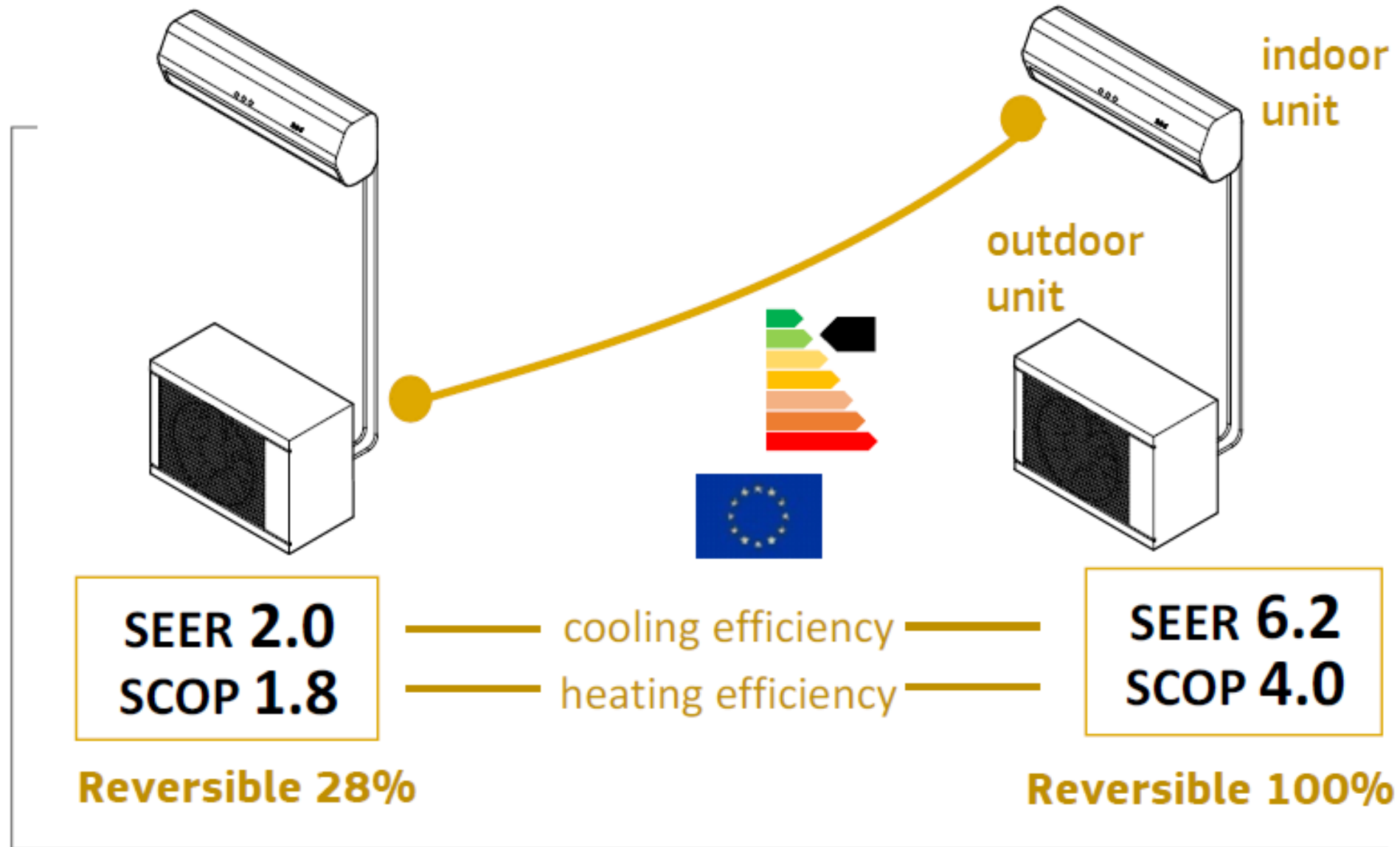
Non-Household Lamps



Televisions



Room Air Conditioners <12 kW

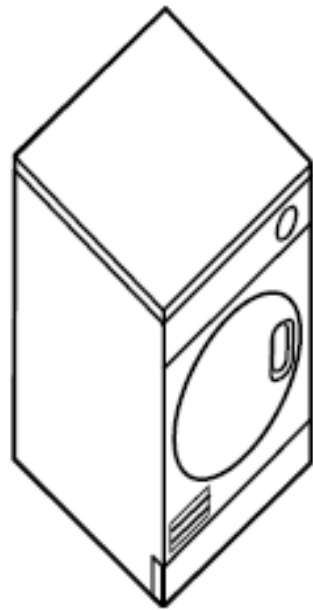


1990

2020

Laundry Dryer

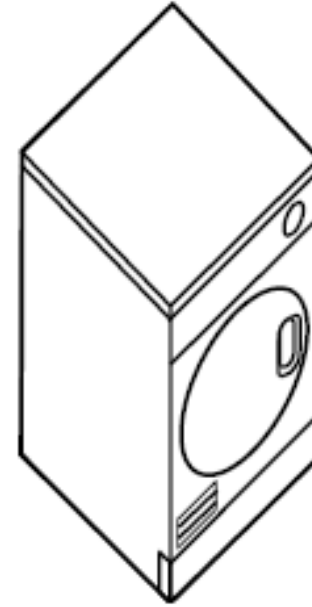
Electricity consumptions at 160 cycles per year



430

kWh/a

no heat pump
dryers



370

kWh/a

57%

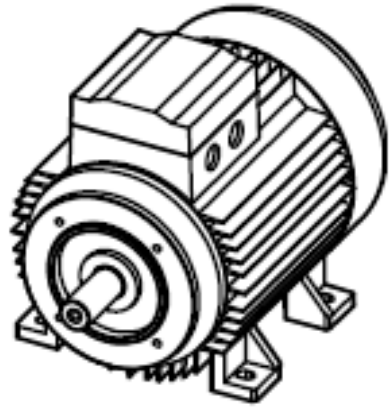
heat pump dryers

1990

2020

Electric motors 0.12 – 1000 kW

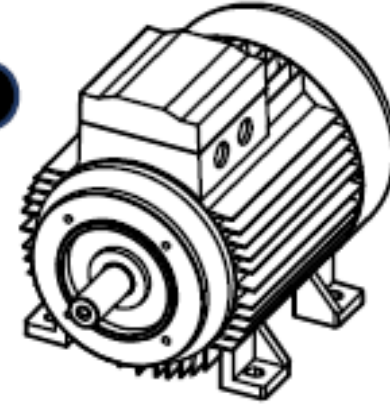
72.1%
efficiency



10% with variable speed drive
(of 0.75-375 kW motors)

1990

84%
efficiency

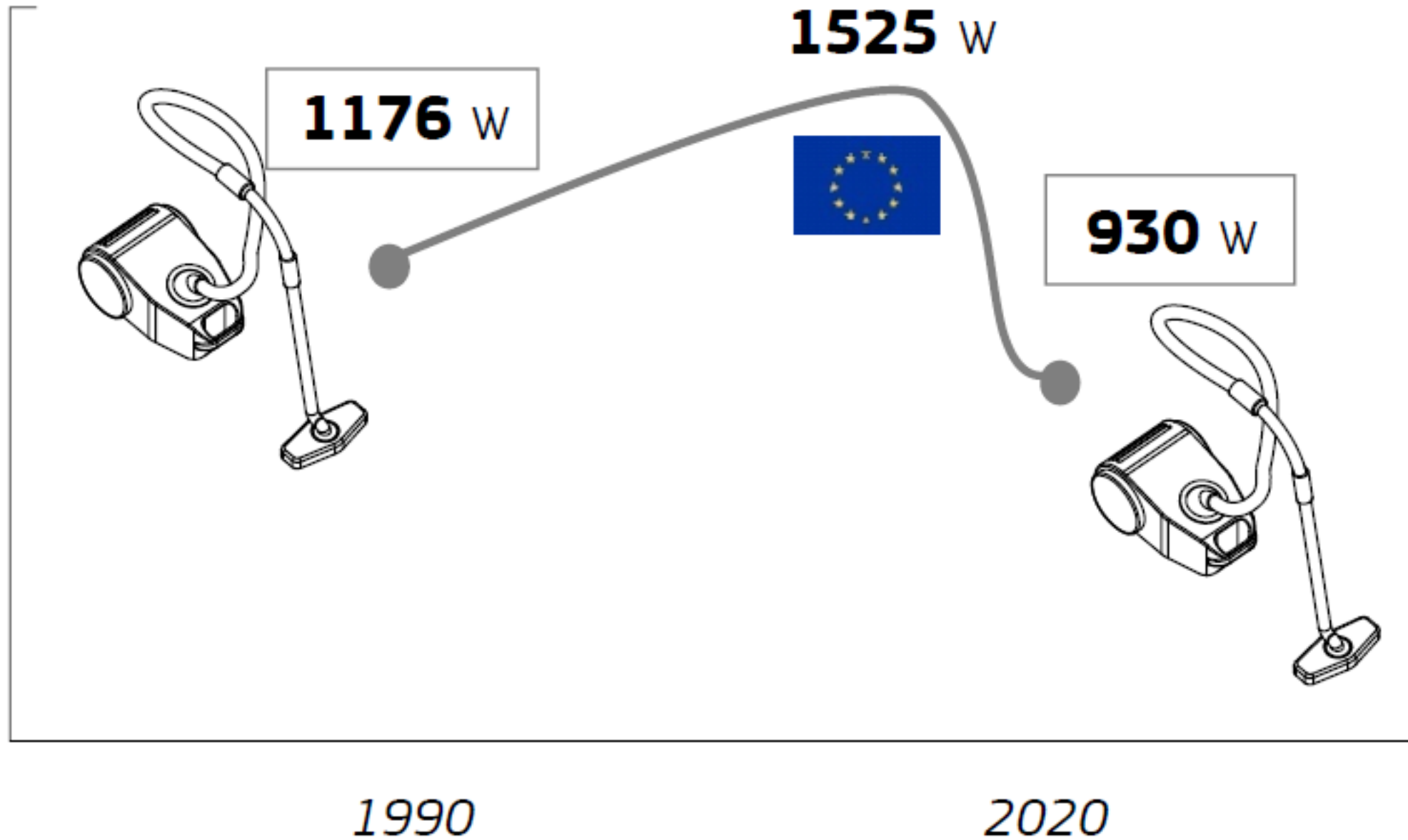


40% with variable speed drive
(of 0.75-375 kW motors)

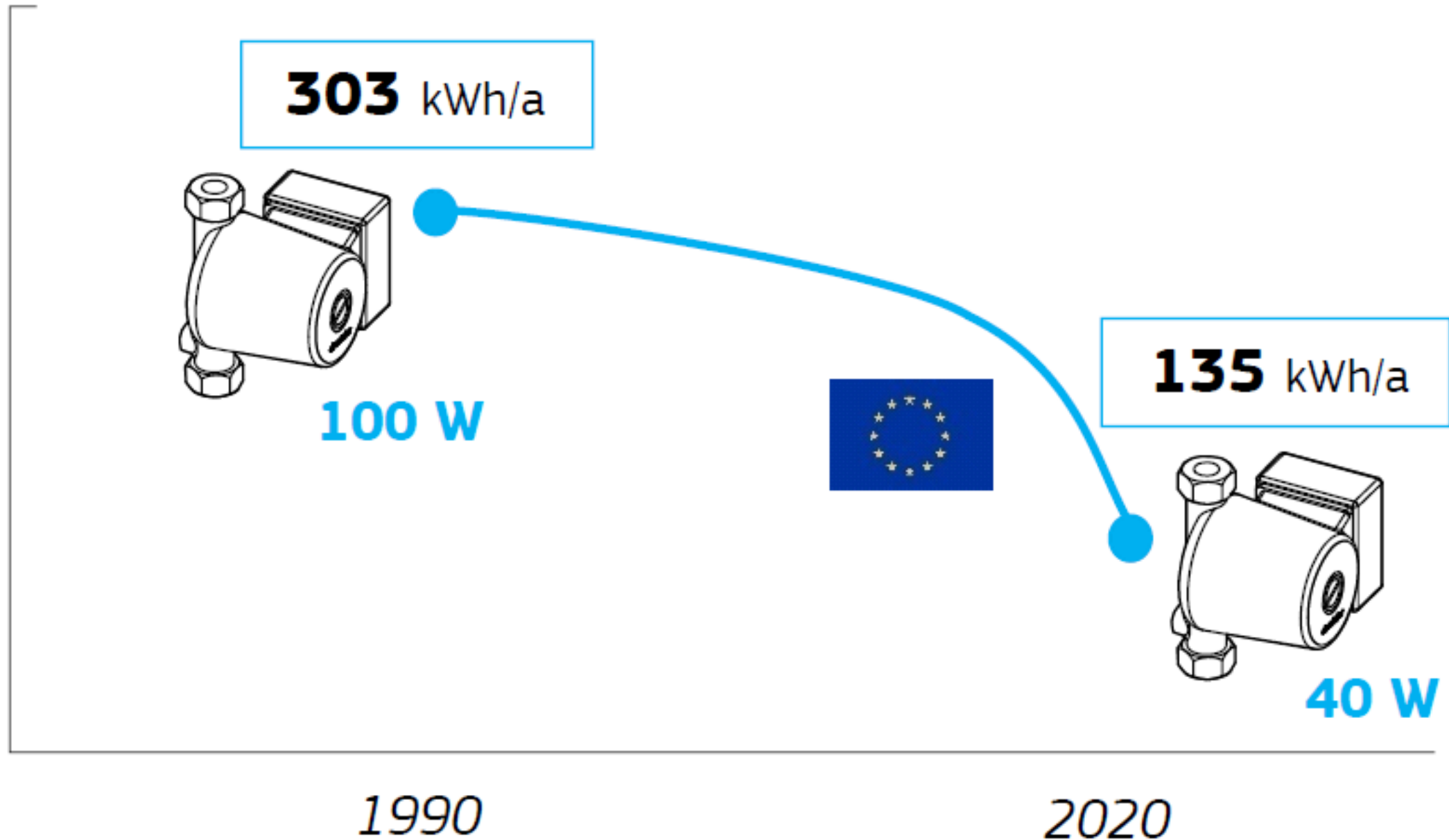
2020



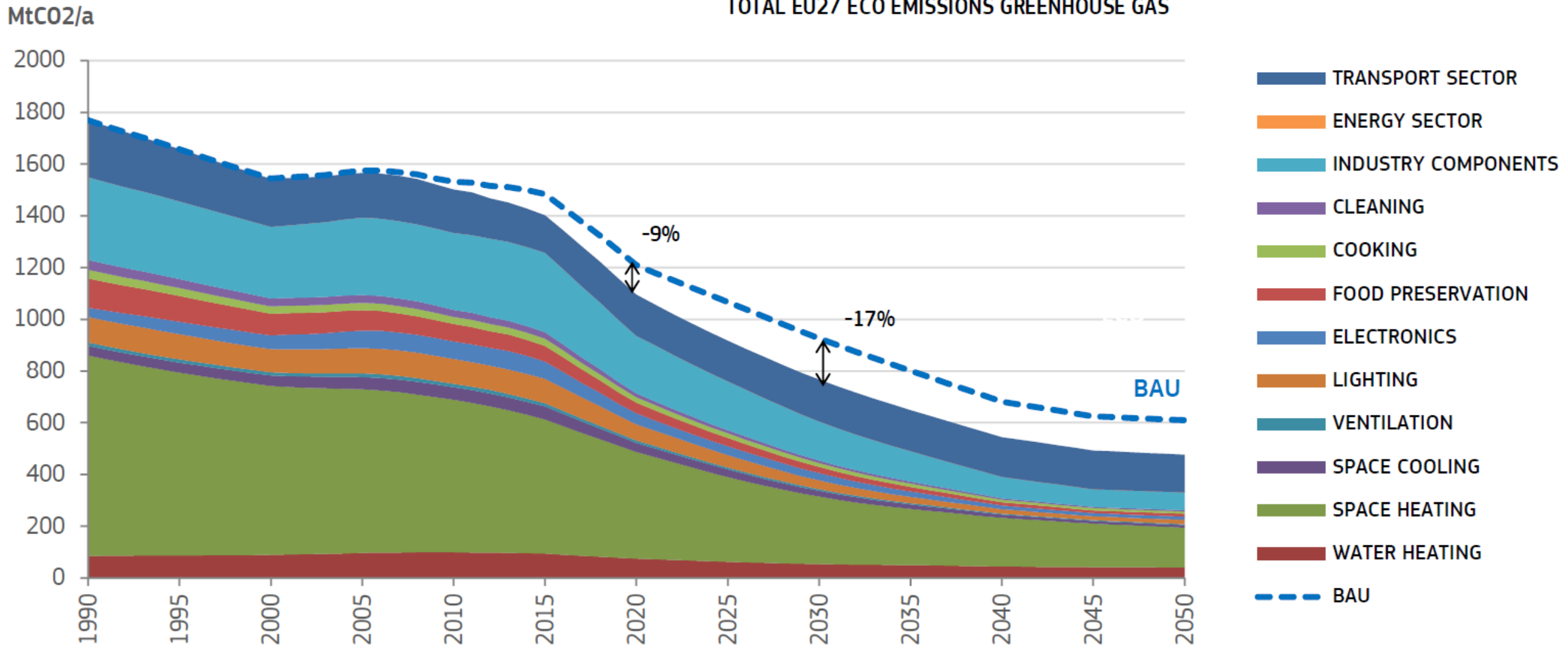
Vacuum Cleaner



Integrated Circulator (central heating pump)

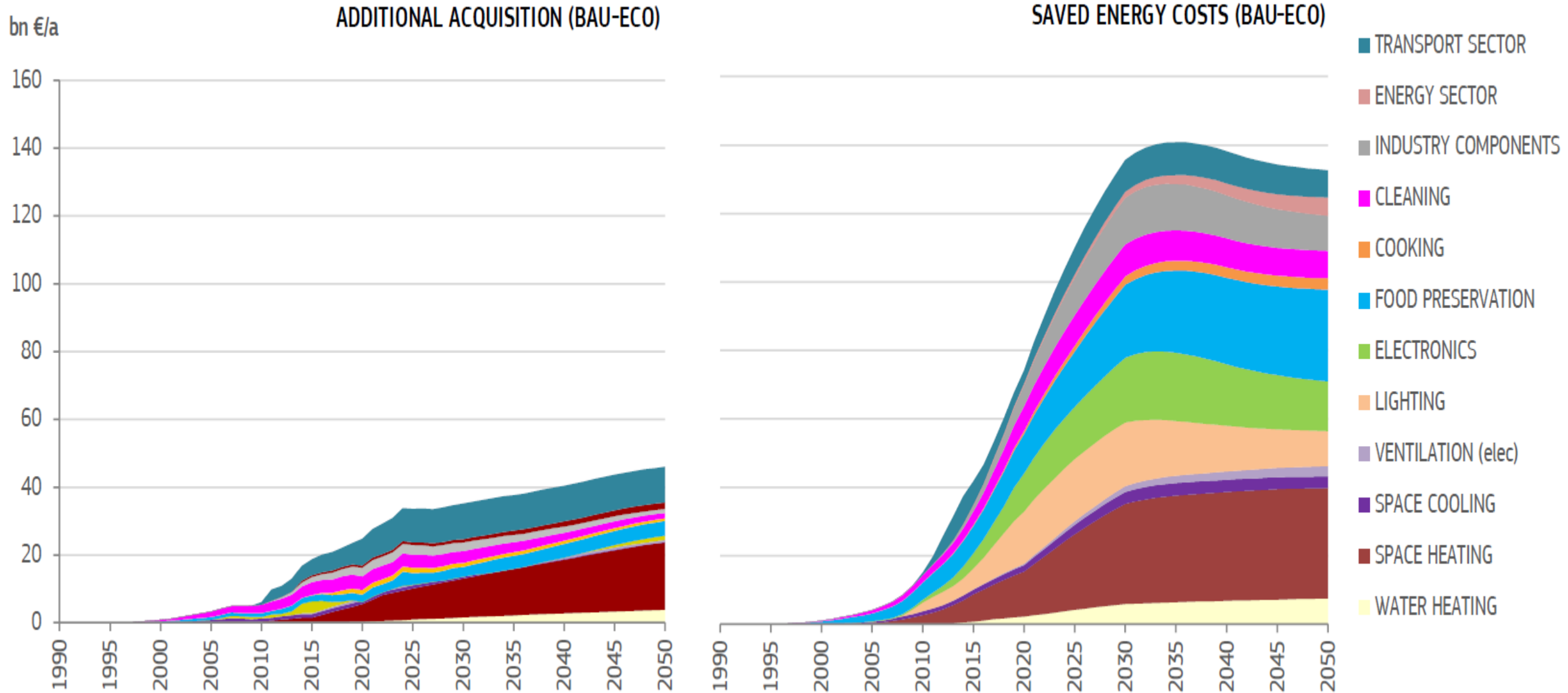


TOTAL EU27 ECO EMISSIONS GREENHOUSE GAS

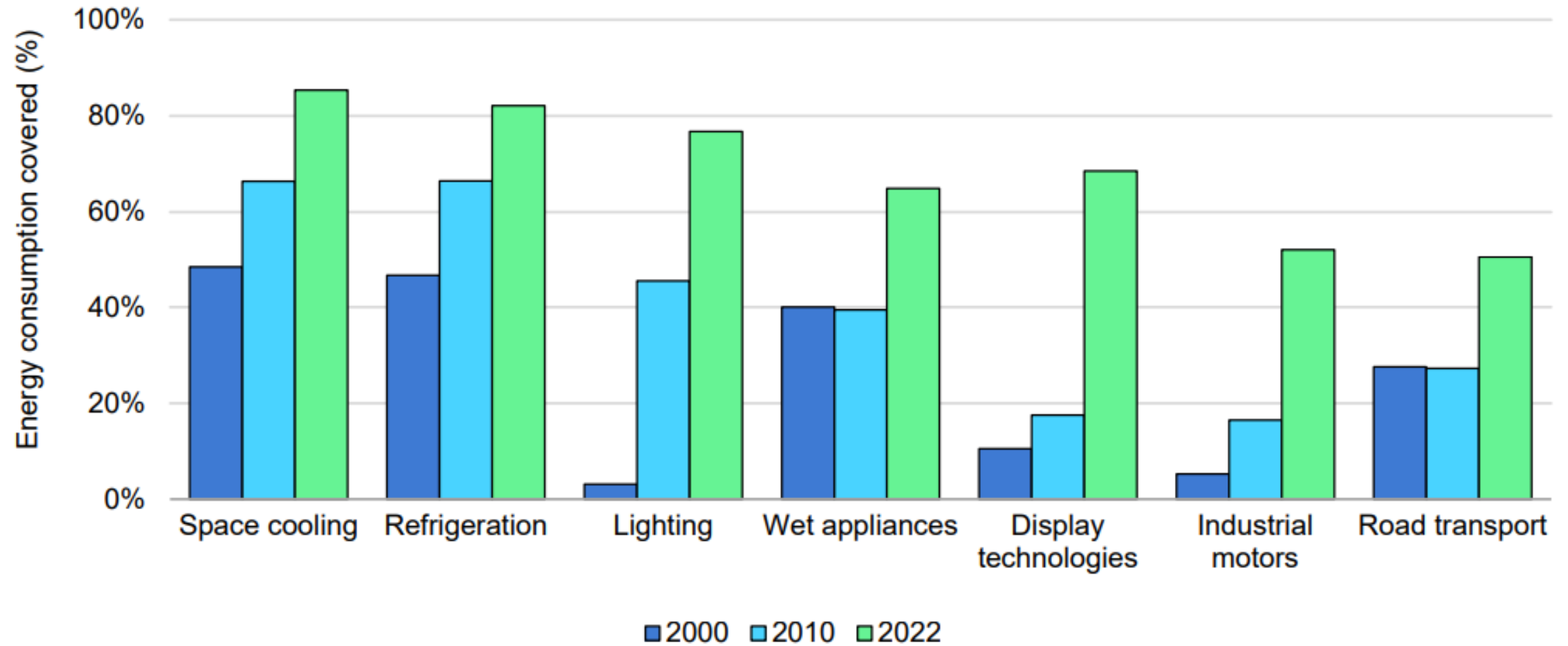


Source Ecodesign Impact Accounting: <https://www.vhk.nl>

Savings are much higher than the additional cost



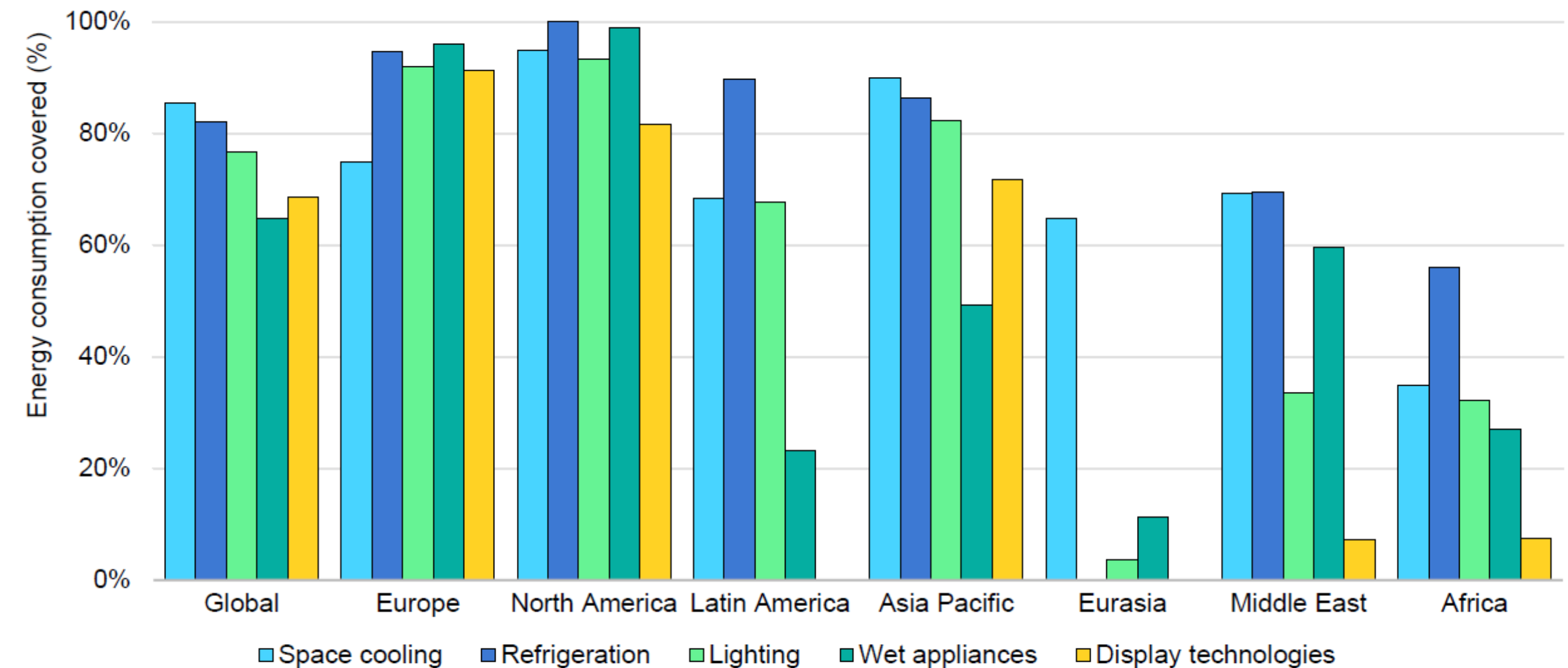
Energy use coverage of minimum standards for key end uses, globally, 2000-2022



IEA. CC BY 4.0.

Note: Coverage for space cooling, refrigeration and lighting is shown for residential sectors.
Sources: IEA analysis based on [IEA PAMS](#) database, [CLASP Policy Resource centre](#).

Energy use coverage of MEPS for key end uses, 2022



IEA. CC BY 4.0.

Note: Coverage for space cooling, refrigeration and lighting is shown for residential sectors.
Sources: IEA analysis based on [IEA PAMS](#) database, [CLASP Policy Resource Centre](#).

E

D

C

A

Beyond the appliance energy label

G

C

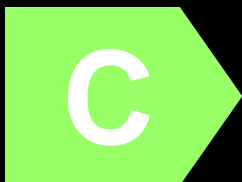
E

D

A

F

Car Labeling In Europe



Energie

Personenauto

Fabrikant

Model

Merk X

Model Y

3-drs hatchback

handschakeling

Benzine

Brandstof

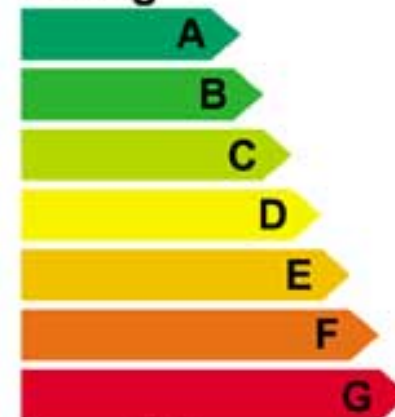
Brandstofverbruik

7,2 liter / 100 km

gemeten volgens de test van de typegoedkeuring.

= 1 liter op 13,9 km

Zuinig



Onzuinig

CO₂-uitstoot

173 gram / km

CO₂ is het broeikasgas dat bij de wereldwijde klimaatverandering de belangrijkste rol speelt.

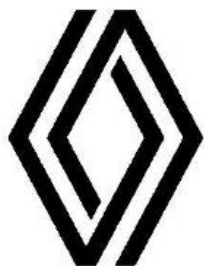
Jaar van toepassing

2001

Een gids betreffende het brandstofverbruik en de CO₂-uitstoot met gegevens voor alle nieuwe modellen personenauto's is gratis verkrijgbaar in elk verkooppunt.

Naast de brandstofefficiëntie van een auto zijn ook het rijgedrag en andere, niet-technische factoren bepalend voor het brandstofverbruik en de CO₂-uitstoot van een auto.

Richtlijn 1999/94/EG: Etikettering personenauto's



NOUVEAU RENAULT AUSTRAL E-TECH FULL HYBRID 200 CH

Jusqu'à 80% de conduite électrique en ville⁽¹⁾
conduite électrique jusqu'à 130 km/h⁽¹⁾
4,7 L/100 km⁽²⁾

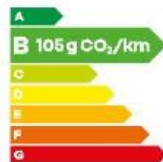
nouvel écran openR de 774 cm² avec Google intégré⁽³⁾

32 systèmes avancés d'aide à la conduite⁽⁴⁾

version esprit Alpine : teinte exclusive gris schiste satin⁽⁵⁾
bouclier avant avec lame sport, jantes alliage daytona 20"
feux arrière avec effet molré 3D, sellerie Alcantara®
volant gainé nappa

renault.fr

découvrir



(1) suivant état de charge de la batterie et style de conduite/source interne Renault/2022. (2) valeur homologuée selon protocole WLTP/source utaq/juillet 2022. (3) selon version. Google, Google Maps, Google Play sont des marques de Google LLC. (4) selon version. (5) en option. données WLTP min/max : consommation (l/100 km) : 4,4/6,6. émissions CO₂ (g/km) : 104/147. © f. schlosser

Renault recommande Castrol

pensez à covoturer #SeDéplacerMoinsPolluer



finaliste voiture de l'année 2023

In France a Fee-Bate system to transform the car market





A



A VENDRE
Maison
CLAMART CENTRE - 1 pièce - 100.00 m²
480 000 €

A VENDRE
Maison
CLAMART CENTRE - 1 pièce - 100.00 m²
475 000 €

A VENDRE
Maison
CLAMART GARE - 2 pièces - 100.00 m²
690 000 €

A VENDRE
Appartement
CLAMART CENTRE - 1 pièce - 40.00 m²
244 000 €

A VENDRE
Maison
CLAMART CENTRE - 1 pièce - 100.00 m²
799 000 €

A VENDRE
Appartement
CLAMART GARE - 1 pièce - 40.00 m²
469 000 €

A VENDRE
Maison
CLAMART CENTRE - 1 pièce - 100.00 m²
887 000 €

A VENDRE
Appartement
CLAMART CENTRE - 1 pièce - 40.00 m²
370 000 €

A VENDRE
Maison
CLAMART CENTRE - 1 pièce - 100.00 m²
450 000 €

A VENDRE
Appartement
CLAMART GARE - 1 pièce - 40.00 m²
137 000 €

A VENDRE
Maison
CLAMART BASSIN BLANCHE - 6 pièces - 100.00 m²
895 000 €

A VENDRE
Appartement
CLAMART CENTRE - 1 pièce - 40.00 m²
536 000 €

A grid of approximately 20 small real estate advertisement posters, each featuring a different property listing with photos and text.

ORPI SOLUTIONS IMMOBILIERES

Les Mandats ORPI 2014

La Banque Immobiliera d'Alsace et de Lorraine

Agence de Mandats Immobiliers

Agence de Mandats Immobiliers

CAVE, PARKING COLLECTIF

www.orpi.com

VOUESSAGE

www.orpi.com

VENTE

ORPI

CHÂTILLON (92320)
APPARTEMENT - 3 PIECES - 56 M²

252 000 €

PROXIMITE DU METRO
RUE DE FRANCE

LE + PRIN DE LA GARE

- PETITE COPROPRIETE
- BEL ESPACE DE VIE
- CAVE, PORS BOX

www.orpi.com

VENTE

ORPI

CLAMART (92140)
APPARTEMENT - 3 PIECES - 67 M²

355 000 €

PROXIMITE DU METRO
RUE DE FRANCE

LE + CENTRE VILLE

- SEJOUR, CUISINE
- 2 CHAMBRES
- CAVE
- AUCUN TRAVAUX A PREVOIR

www.orpi.com

VENTE

ORPI

CLAMART (92140)
APPARTEMENT - 3 PIECES - 65,5 M²

289 000 €

PROXIMITE DU METRO
RUE DE FRANCE

LE + CENTRE VILLE

- CALME
- AUCUN VIS-A-VIS
- DRESSING + LOGGIA
- CAVE

www.orpi.com

VENTE EXCLUSIVITE

ORPI

CLAMART (92140)
APPARTEMENT - 3 PIECES - 75 M²

367 000 €

PROXIMITE DU METRO
RUE DE FRANCE

LE + PRIN DE LA GARE

- EN ETAGE ELEVE
- SEJOUR / BALCON
- 2 CHAMBRES
- 2 CAVES, PARKING

www.orpi.com

**Suggestion:
make mandatory
the energy
category on all
commercial
support.**

LES RÉFRIGÉRATEURS

ARISTON EMG 230

Conservateur*** de 21 litres : conservez vos surgelés à -18°C jusqu'à 1 an.

- 225 litres
- Dégivrage automatique
- H 123 x L 55 cm
- Existe en marron
- Coût électricité/an : 301 F
- Fabriqué en Italie.



2590^F

Apport 316 F - 9 mens. à 259 F - Coût du crédit : 57 F

WHIRLPOOL ART 763 G

La paroi en aluminium du congélateur offre une meilleure conductivité du froid.

- 275 litres (217 + 58)
- Habillable
- H 155 x L 55 cm
- Coût électricité/an : 408 F
- Fabriqué en Italie.



2990^F

Apport 345 F - 9 mens. à 299 F - Coût du crédit : 66 F

ZANUSSI ZFC 24/7 D

Subtropicalisé, il résiste aux grosses chaleurs (38°C).

- 318 litres (250 + 68)
- H 169 cm
- Coût électricité/an : 340 F
- Fabriqué en Italie.



2990^F

Apport 365 F - 9 mens. à 299 F - Coût du crédit : 66 F

BALTIK SK 300

Coût électricité/an : 118 F. Une consommation très faible pour un grand volume.

- 281 litres, sans freezer pour un volume maximum
- Encastrable et habillable
- Étagères en verre
- H 155 cm
- Fabriqué au Danemark.



3290^F

Apport 401 F - 9 mens. à 329 F - Coût du crédit : 72 F

SIEMENS KG 31 V03

Les 3 tiroirs de ce grand congélateur assurent un rangement optimum.

Thermostat réglable

Fond lisse pour un nettoyage facile

Verre relevable pour les bouteilles

2 sacs à légumes

- 310 litres (196 + 114)
- Autonomie du congélateur 23 h
- Pouvoir de congélation 9 kg/24 h
- H 171 cm
- Coût électricité/an : 328 F
- Fabriqué en Espagne.

Calendrier de conservation des surgelés

Goulotte d'écoulement eau de dégivrage



3890^F

Apport 475 F - 9 mens. à 389 F - Coût du crédit : 96 F

WHIRLPOOL ART 831 G

Economique et sûr : les 2 moteurs permettent de régler indépendamment réfrigérateur et congélateur.

- 317 litres (196 + 121)
- H 170 cm
- Coût électricité/an : 386 F
- Fabriqué en Italie.



4590^F

Apport 560 F - 9 mens. à 459 F - Coût du crédit : 101 F

LIEBHERR KD 2814

Avec une largeur de 55 cm, il se glisse partout.

- 273 litres (219 + 54)
- Autonomie du congélateur 26 h
- Pouvoir de congélation 6 kg/24 h
- Subtropicalisé (38°C)
- H 172 x L 55 cm
- Existe aussi en 60 cm de large
- Coût électricité/an : 301 F
- Fabriqué en Allemagne.



3490^F

Apport 426 F - 9 mens. à 349 F - Coût du crédit : 77 F

BRANDT RBM 355

2 moteurs et une esthétique tout en douceur.

- 355 litres (235 + 120)
- Thermomètre extérieur
- Espace fruits et légumes à humidité contrôlée
- H 181,8 cm
- Coût électricité/an : 484 F
- Fabriqué en France.



5290^F

Apport 645 F - 9 mens. à 529 F - Coût du crédit : 116 F

Roulettes arrières

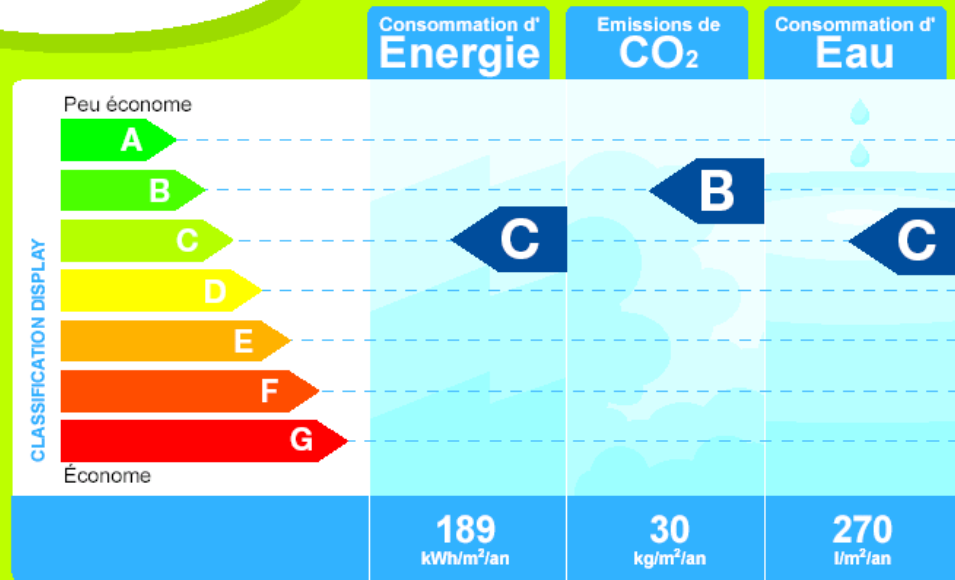


display

Energie-Cités' European
Municipal Buildings
Climate Campaign

Ecole CLOTEAUX

Ce bâtiment est-il performant ?



Faire progresser ce bâtiment vers la classe A

► Des gestes simples

Maîtrisons l'énergie, l'eau et préservons l'environnement :

- En éteignant la lumière quand on quitte une pièce
- En fermant les portes et les fenêtres dès que possible...

Vous pouvez ainsi réduire de 10% voire plus les consommations de ce bâtiment

► Des solutions techniques

- A été adopté un système électronique sur la chaudière réduisant ses consommations en gaz
- En 2004, installation d'économiseurs d'eau dans les sanitaires
- D'ici la fin 2004, rénovation du système d'éclairage intérieur et extérieur

En gagnant une classe,
on éviterait par an

La consommation d'énergie de	Les émissions de CO ₂ de	La consommation d'eau de
5 maisons individuelles	4 tours du monde en voiture	9320 douches

Energies utilisées



72%
Fossile



24%
Nucléaire



4%
Renouvelables

www.display-campaign.org

Pour plus d'information :

Ville de Rennes
Service Energie / Jean Marc Berthet
Tél. : 02 99 28 57 80
e-mail : jmberthet@ville-rennes.fr
www.ville-rennes.fr



Site officiel :

www.display-campaign.org





proteínas,
fibra, frutas,
frutos secos
y verduras

**MEJOR
CALIDAD NUTRICIONAL**



A

B

C

D

E

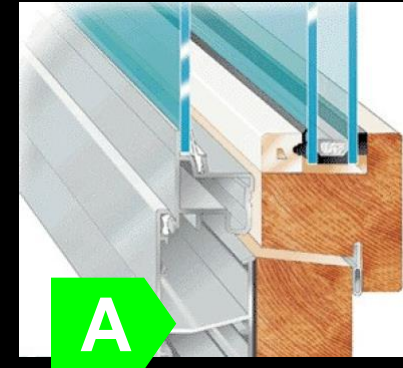
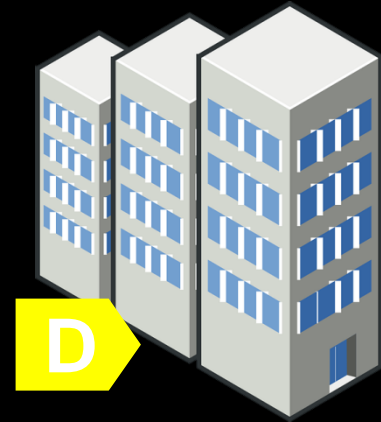


kilocalorías,
grasa saturada,
azúcares totales
y sal

**MENOR
CALIDAD NUTRICIONAL**



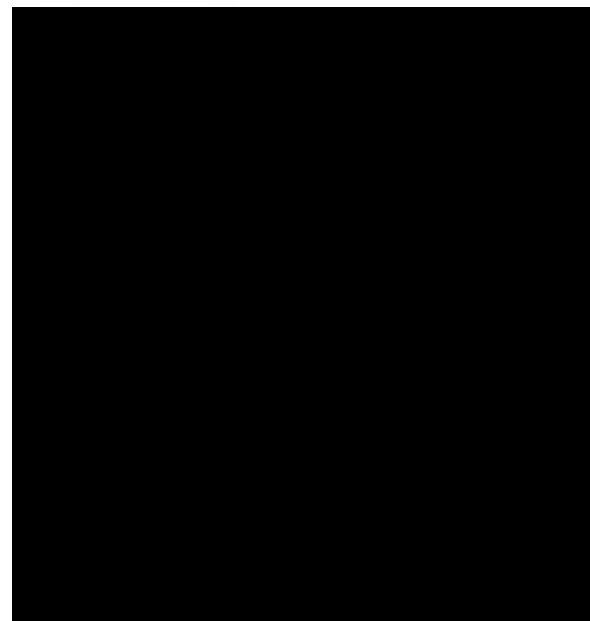
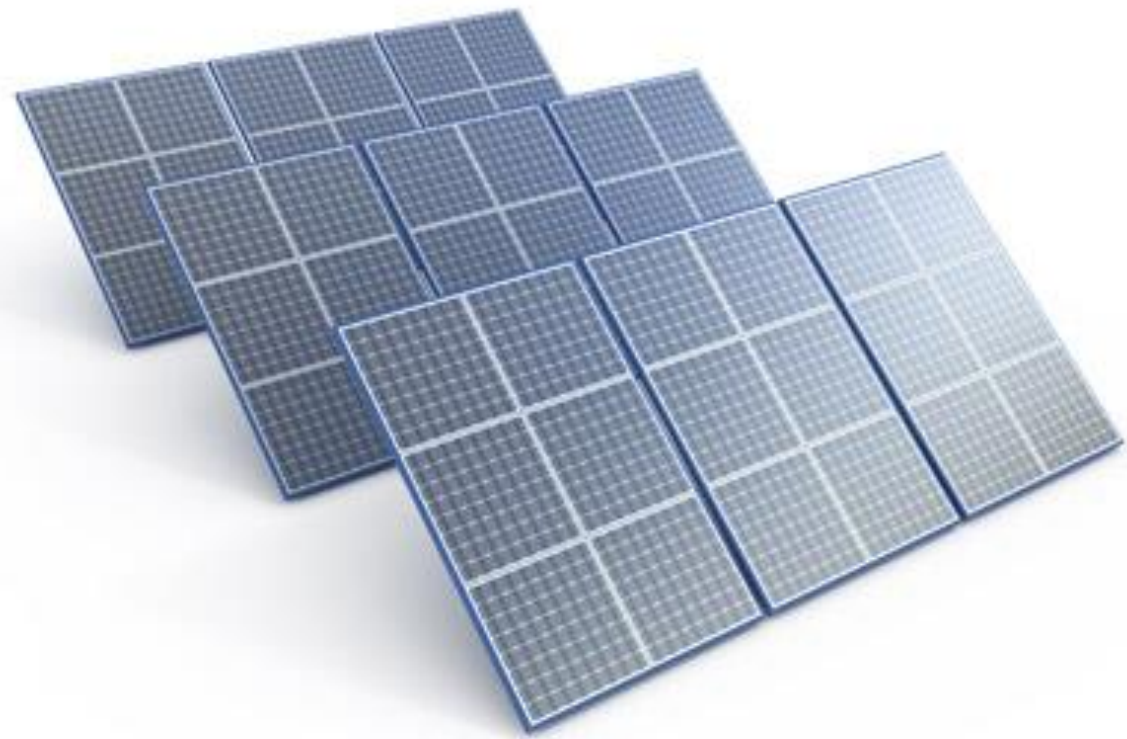
Labelling can also be applied to...



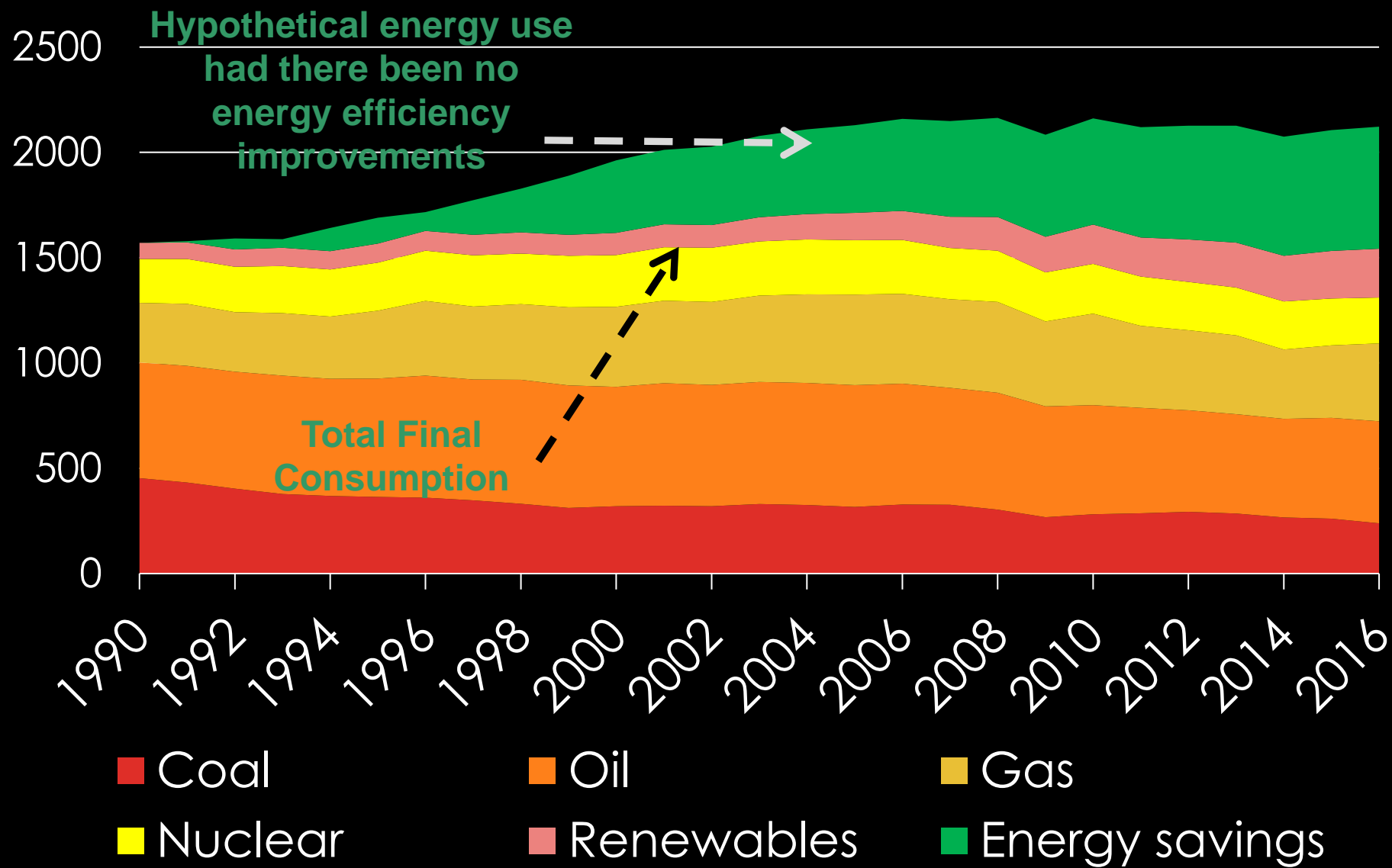








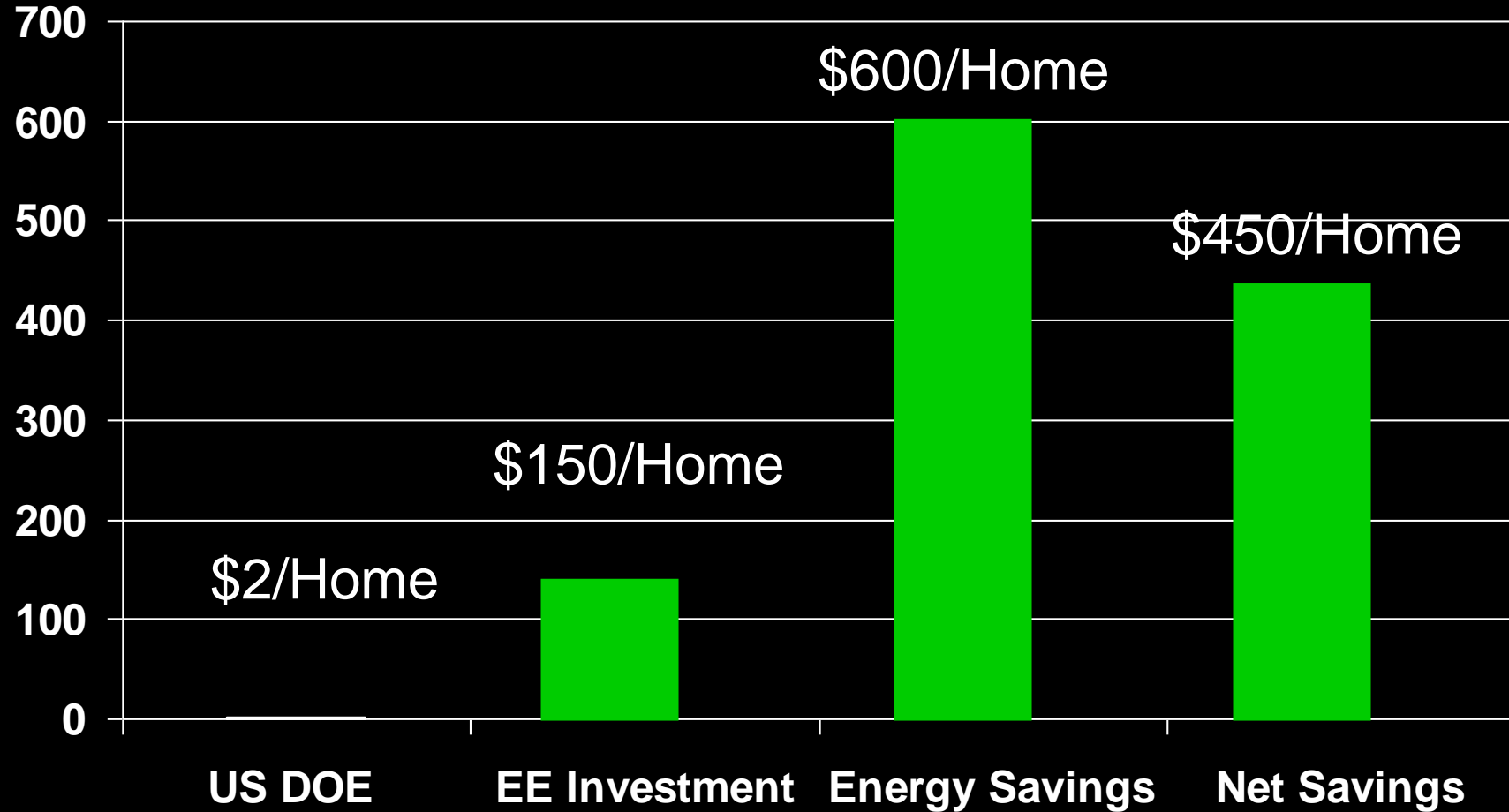
Energy savings first fuel over a 25 year period (EU)



Appliance Energy Efficiency Standards in the US



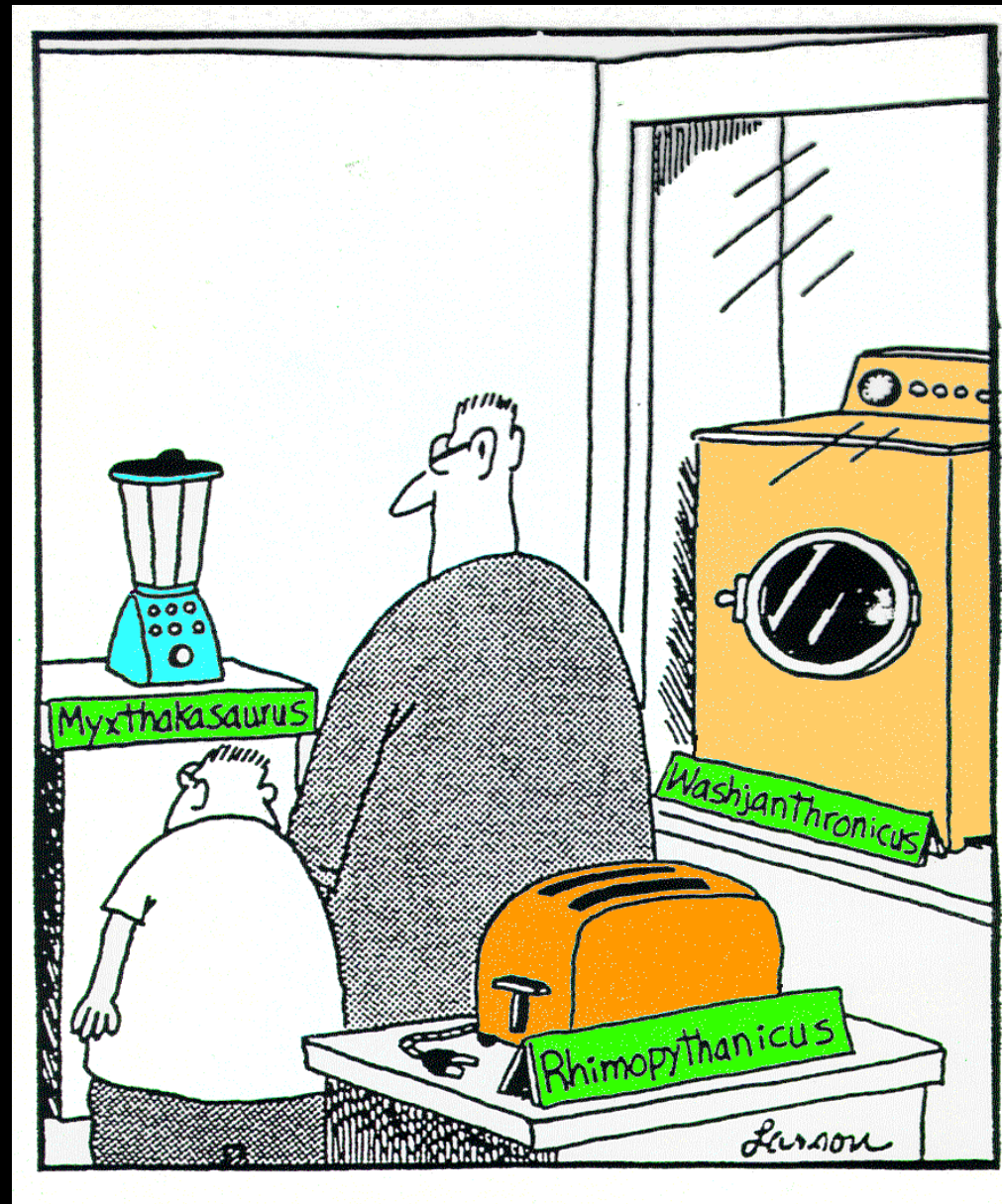
Appliance Energy Efficiency Standards in the US



Benefits of International S&L Policy Co-ordination

- **S&L predict large, lasting, quantifiable energy savings & GHG reductions**
- **Greater Market Transparency**
- **Reduced Costs for Product Testing & Design**
- **Enhanced Prospects for Trade & Technology Transfer**
- **Reduced Cost for developing Government & Utility Efficiency Programs**

Inefficient Products to Museum



**All over
the World!**

Gracias !

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#benoitlebot

