

# Rescaling Energy Labels in Europe

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# Domestic Refrigerators

- Challenges
  - Evolving technology
  - Increasing complexity
- Opportunities
  - Large range of efficiencies
  - Energy consumption important in purchase decision
  - Better food preservation





# Case Study: European Union – a long story

<b>E</b>	
Refrigerator [MAKE]	[Model]
Usable volume	000 l
Low temperature storage compartment	<b>***</b> - 18 °C 00 l
Energy consumption in 24 hours	0.00 kWh
Automatic defrost	
European standard	...

**Energia**  
Fabricante Modelo Logo ABC 123

**Eficiente**

A  
B  
C  
D  
E  
F  
G

**Ineficiente**

Consumo de energia kWh/año  
Con base en un período de energía normalizado de 24h

Consumo de agua con las condiciones de utilización de muestra y con la suya normalizada

Volume de alimentos frescos l  
Volume de alimentos congelados l

Nivel de ruido dB(A) a 1 m

Ficha presentada en el folio de producto

Norma EN 151, 150 de 1999  
Directiva 90/269 CEE (Seguridad en el trabajo)

XYZ kWh/año

XYZ L

YZ L

YZ dB

**B**

**XYZ**

**2010/1060**

**ENERG**  
energía - Energie

A+++  
A++  
A+  
A  
B  
C  
D  
E  
F  
G

**A++**

ENERGIA - ENERGIA - ENERTEIA  
ENERGIA - ENERGY - ENERGIE  
ENERGI

XYZ kWh/año

XYZ L

YZ L

YZ dB

**2010/1060**

**ENERG**  
energía - Energie

A+++  
A++  
A+  
A  
B  
C  
D

**A++**

ENERGIA - ENERGIA - ENERTEIA  
ENERGIA - ENERGY - ENERGIE  
ENERGI

XYZ kWh/año

XYZ L

YZ L

YZ dB

**2010/1060**

**ENERG**

SUPPLIER'S NAME MODEL IDENTIFIER

A  
B  
C  
D  
E  
F  
G

**B**

XYZ kWh/año

XYZ L

XYZ L

XYZ L

ABC

**2017/1060**



**1979-1980**

Mandatory indication By Labelling Of The Energy Consumption

**1994**

Mandatory Comparative Energy Label A to G

**2009-2010**

Ecodesign and Energy Labelling

**2019**

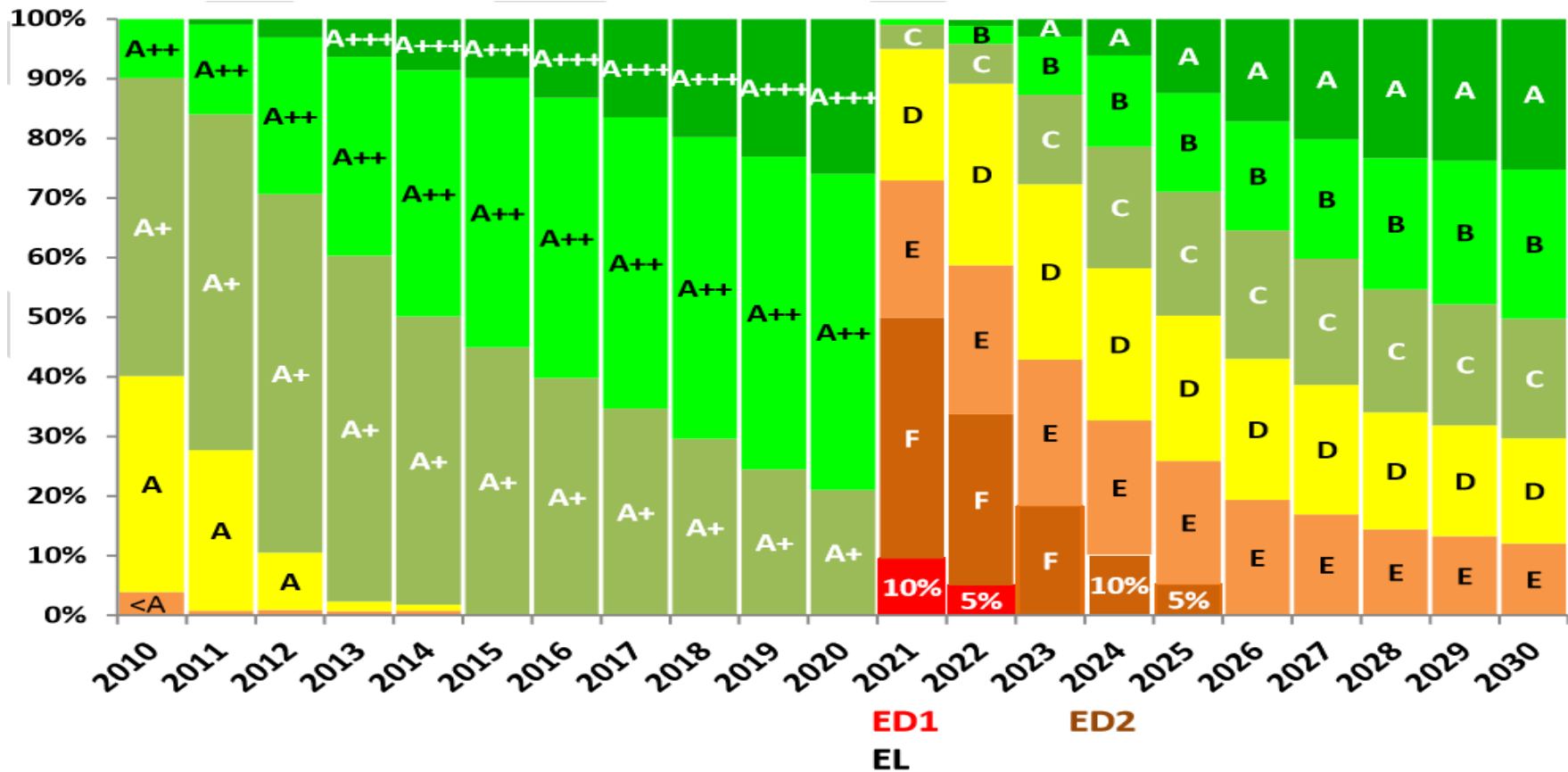
Ecodesign and energy labelling revised

2017: New Labelling framework

Empty top classes  
30% A => rescale



# European Union – 2019 revision

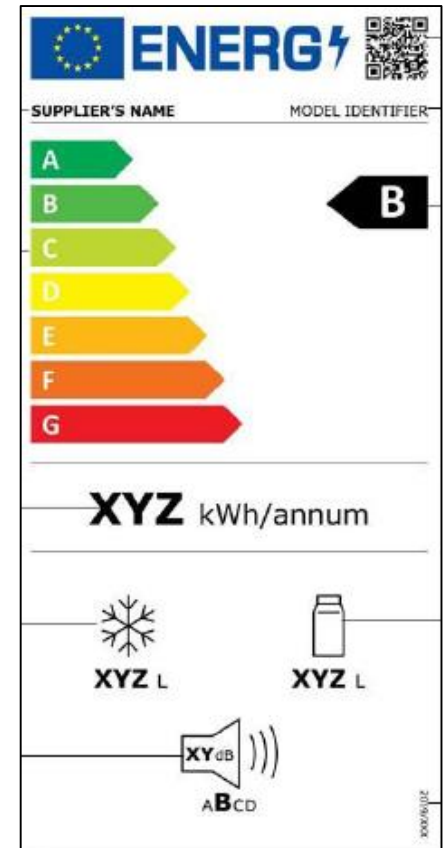


- Significant rescale – Moving back to A-G scale with top classes empty
- By 2021 cutting 10% and again in 2024



# Timing of Rescaling

- New label applies from 1 April 2021
  - All new products placed on the market after this date must have the new label
- Transition period – two weeks\*
  - Old label and new label will co-exist
- Full implementation
  - All old labels must be covered by a sticker
  - Only new labels permitted – on new and existing stock of products

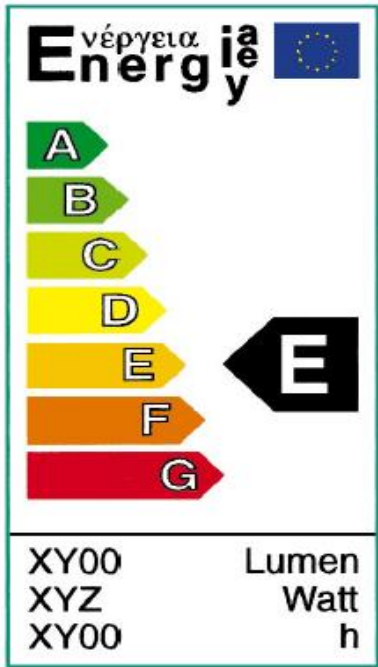


- “the dealer shall replace the existing labels on products on display, both in shops and online, with the rescaled labels within 14 working days after the date specified in the relevant delegated act for starting the display of the rescaled label. The dealer shall not display the rescaled labels before that date.”

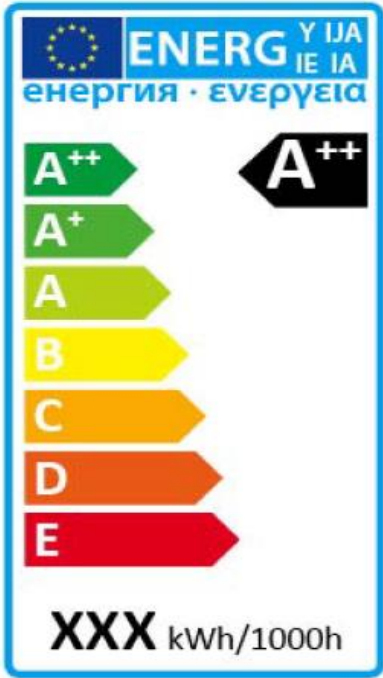
European Union, Energy Labelling Directive, 2017.

# Lighting Label is rescaling

1998 – 2013  
Original Label



2013 – 2021  
Current Label

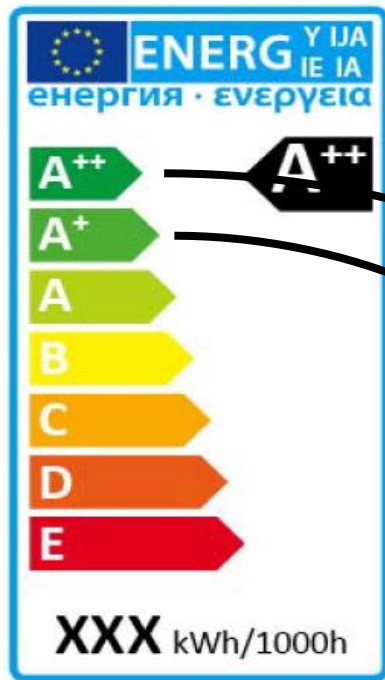


2021 – c. 2030  
Future Label



# Significant rescaling of the Energy Label

2013 – 2021, Current Label



2021 – c. 2030, Future Label



- Current A++ has EEI of 0.11 equates to 113 lm/W at 800 lm; new label class E is 110 to 135 lm/W
- Current A+ has EEI of 0.17 equates to 73 lm/W at 800 lm; new label class G is less than 85 lm/W

# Significant rescaling of the Energy Label

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- **1 Sept 2021** – 874/2012 Repealed & New Label on Boxes  
Regulation (EU) No 874/2012 is repealed and New Label required
- **1 June 2022** – Stickers to Replace Old Labels  

Products with the old label that are still on the market 9 months (Note: LightingEurope says the final version is 18 months) after application of the regulation must be replaced with a rescaled label (sticker)
- **Entry + 5 Years (Nov 2024?)** – Review the regulation  
Article 8 - Review shall assess energy-efficiency classes and the possibility of circular economy requirements. Issue a revised proposal (if appropriate) to the Consultation Forum.



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# Refrigerants

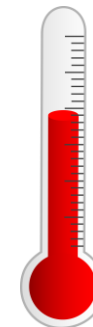
# Refrigerants used in Refrigerators & ACs

- HCFCs are ozone-depleting substances controlled under Montreal Protocol
- HFC replaced HCFCs but now many countries phasing out under Kigali Amendment to Montreal Protocol
- South Africa ratified the Amendment in August 2019
- HFC phase-out needs cooling appliances to move to low global warming refrigerant options

## Refrigerant Transition under the Kigali Amendment



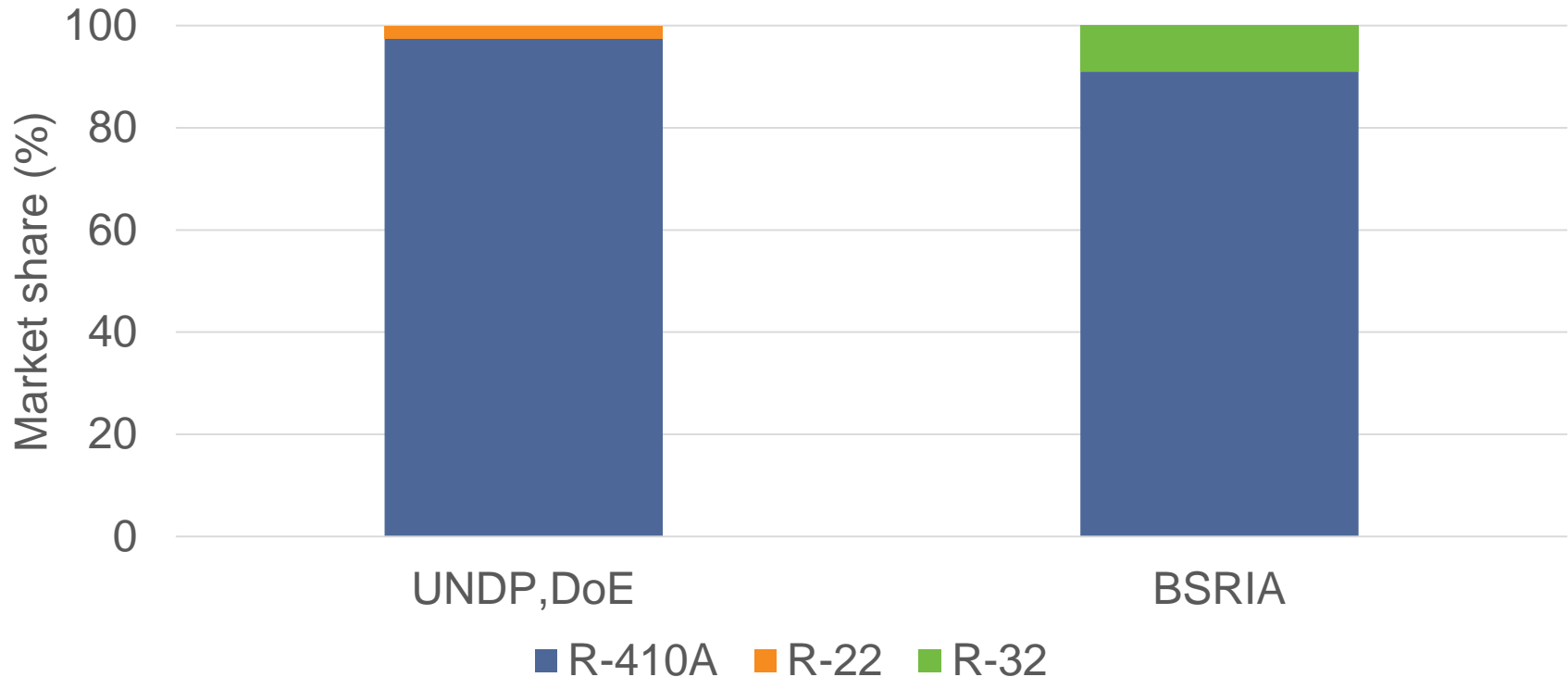
80%  
by  
2045



0.5C

# Common refrigerants

## Refrigerants in ACs – South Africa



- ACs - R-22 (HCFC), R410A (high GWP HFC), R-32 (lower GWP)
- Refrigerators – R 134 (high GWP HFC), R-600a (natural refrigerant)

# Considerations

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- Consider incorporating requirements on the refrigerants and foam blowing agents used in cooling appliances
  - Environmental impact - Limit the direct emissions from cooling appliances
  - Contribute towards meeting Kigali Amendment targets
- ACs
  - Facilitate the transition to lower GWP refrigerants e.g. R-32 and natural refrigerants from R-410A
  - Eliminate R-22 units from the market
- Refrigerators – Products using R600a refrigerant already widely available *e.g.*, standard refrigerant in EU markets
  - Consider training local stakeholders for the design, manufacture, servicing and disposal of appliances containing R600a

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# Thank you. Any questions?

For more information visit [www.clasp.ngo](http://www.clasp.ngo) or contact:

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