

Bad Mitterndorf, 14.11.2014

VAILLANT GROUP

VHKS OÖ:

„Zuerst der Kühlschrank - nun die Heizung“
Technische und rechtliche Folgen einer EU-Verordnung
(Energy related Products - ErP)

Prof. Dr. Georg Patay



ErP- die Idee dahinter

Herrn Junckers Vision: Big on the big things, small on the small things

A New Start for Europe: My Agenda for Jobs, Growth, Fairness and Democratic Change

Strasbourg, 15 July 2014

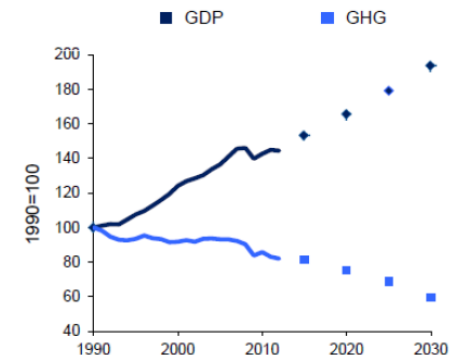


"As candidate for President of the European Commission, I see it as my key task to rebuild bridges in Europe after the crisis. To restore European citizens' confidence."

*"My agenda will focus on **ten policy areas**. My emphasis will be on concrete results in these ten areas. Beyond that, I will leave other policy areas to the Member States where they are more legitimate and better equipped to give effective policy responses at national, regional or local level, in line with the principles of subsidiarity and proportionality."*

***"I want a European Union that is bigger and more ambitious on big things,
and smaller and more modest on small things."***

Decoupling GDP from greenhouse gas emissions (GHG), 1990-2030



Presentation of J.M. Barroso to the European Council, 20-21 March 2014

Das europäische Ziel aus 2007: 20-20-20



Energieeffizienz gewinnt zunehmend an Bedeutung und muss durch EU-(ErP) und nationale (EED) Gesetze umgesetzt werden.

Nicht nur Europa ist aktiv bei der CO₂ Reduktion



The image displays two energy efficiency labels. The left label is from Brazil, featuring the INMETRO logo and a color-coded scale from A (green) to E (red), with a black arrow pointing to 'A'. It also includes a box for 'XYZ kWh/mês' and mentions 'Mais eficiente' and 'Menos eficiente'. The right label is from Australia, featuring a star graphic and the text 'The more stars the more energy efficient'. It displays 'ENERGY RATING' in large letters, followed by 'Energy consumption 670 kWh per year' in a red box. Both labels include small text at the bottom regarding government standards and website links.

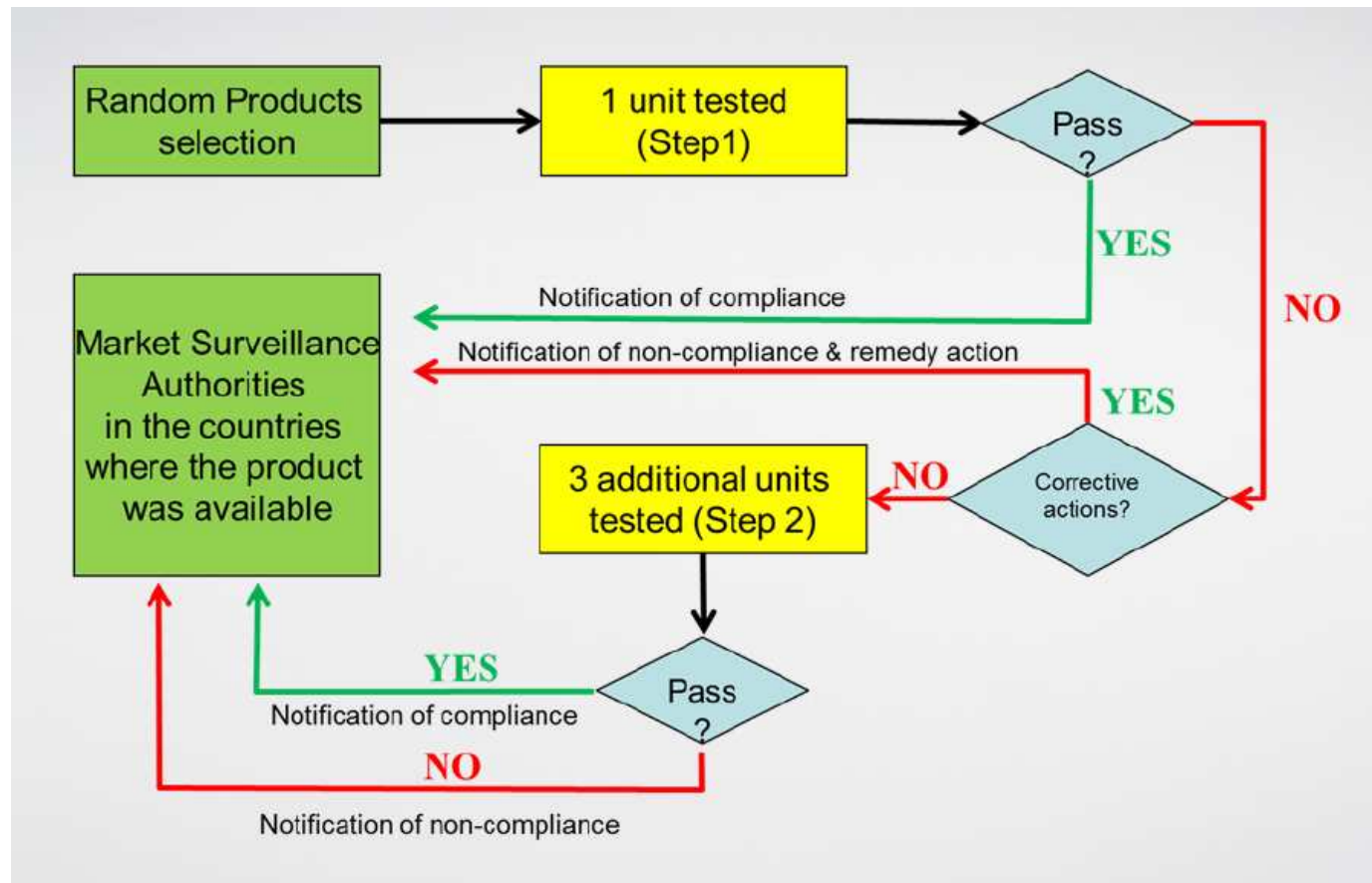
Brasilien

Australien

Energielabels und Mindeststandards mittlerweile weltweit

- EU-Markt sollte als einstiger Vorreiter nicht überholt werden
- Zusammenarbeit und Koordination international

ErP Marktüberwachung und Konsequenzen



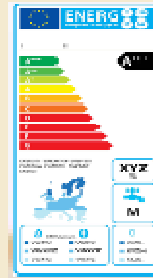
Sanktion: Verbot des „in Verkehr bringens“

Produktgruppen, die unter die ErP- und ELD Richtlinie fallen

Lot 1: Heizkessel und Kombiheizkessel
Lot 2: Warmwasserbereiter
 Lot 3: PCs und Monitore
 Lot 4: Drucker, Kopierer und Multifunktionsgeräte
 Lot 6: Stand-by-Verluste
 Lot 7: Batterieladegeräte und externe Stromversorgungen
 Lot 8: Bürobeleuchtung
 Lot 9: Straßenbeleuchtung
Lot 10: Raumklima-Anlagen
Lot 11: Elektrische Motoren inkl. Heizungspumpen
 Lot 12: Gewerbliche Kühl- und Gefrieranlagen
 Lot 13: Private Kühl- und Gefrierschränke
 Lot 14: Private Geschirrspül
Lot 15: Kleine Heizgeräte für Festbrennstoff
 Lot 16: Wäschetrockner
 Lot 17: Staubsauger
 Lot 18: Settop-Boxen mit komplexer Funktion
 Lot 19: Haushaltsbeleuchtung
Lot 20: Einzelraumheizgeräte

 Lot 31: Produkte in Motor-Systeme, die nicht von Lot 30 erfasst werden

 Lot E1: Kühl- und Gefriergeräte
 Lot E2: Transformatoren
 Lot E3: Ton- und Bildausrüstung
 Lot E4: Industrielle und Labor-Brenner und Öfen
 Lot E5: Werkzeugmaschinen
 Lot E6: Klima- und Belüftungsgeräte

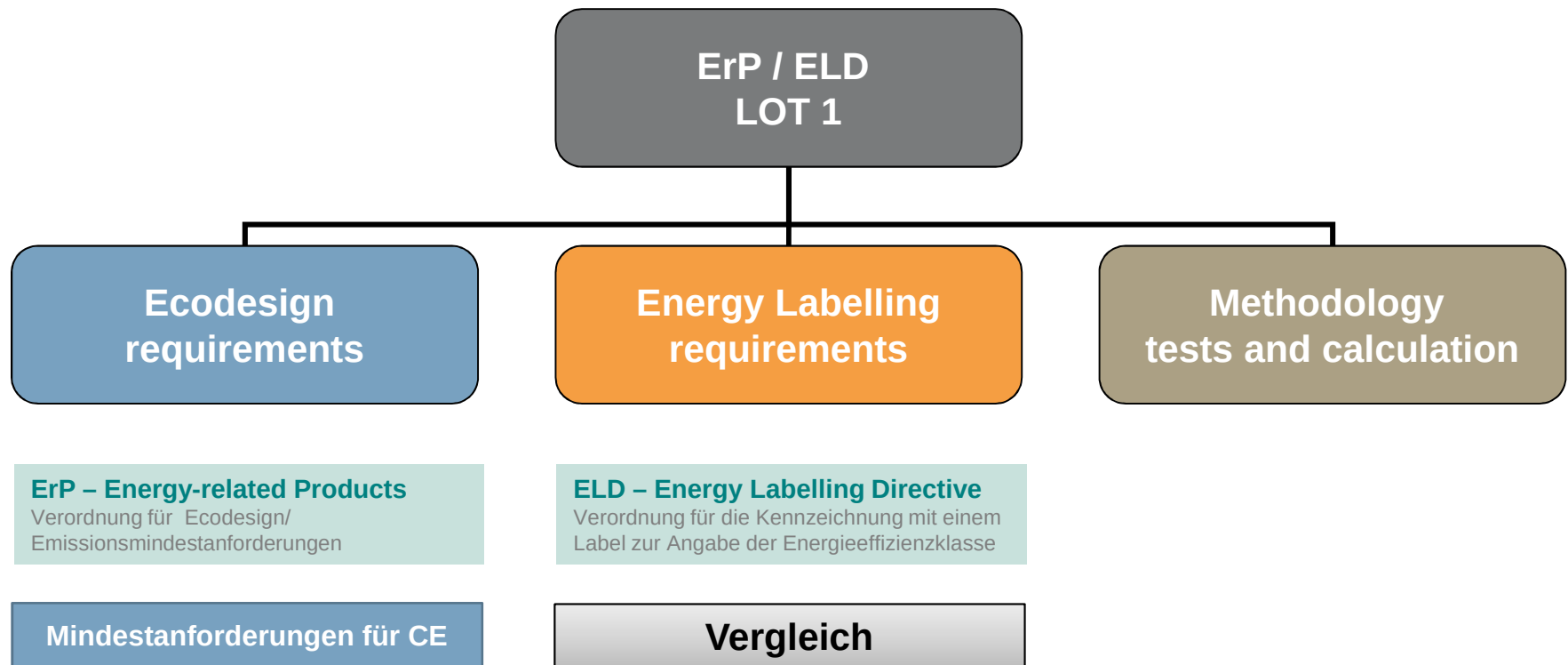


Ziele der ErP Richtlinie

- Verbesserung der Primärenergieeffizienz und Definition von EU Mindestanforderungen
- Verbesserung der Umwelteigenschaften
- Reduzierung von nationalen Handelshemmnissen
- Standardisierung von Produkten in Europa

Alle energierelevanten Produkte werden zukünftig durch ErP Richtlinien reguliert, die Heizungsindustrie ist hiervon stark betroffen.

Struktur der Ecodesign- und Label Richtlinie



Produkte LOS (LOT) 1 und 2

Hydraulische Wärmeerzeuger < 70 kW

Gas - Öl - Elektro



Warmwasserbereiter < 70 kW / 2000 l

Gas - Öl - Elektro - Solar



Produkte LOS 15 – geplant

Festbrennstoffkessel bis 70 kW

die eine wasserbasierte Zentralheizung zum Zwecke der Raumheizung betreiben

Kombination von Festbrennstoffkessel bis 70 kW

mit Zusatzheizung, Regelung und Solaranlage

- Biomassekessel

Pelletkessel



Hackgutkessel

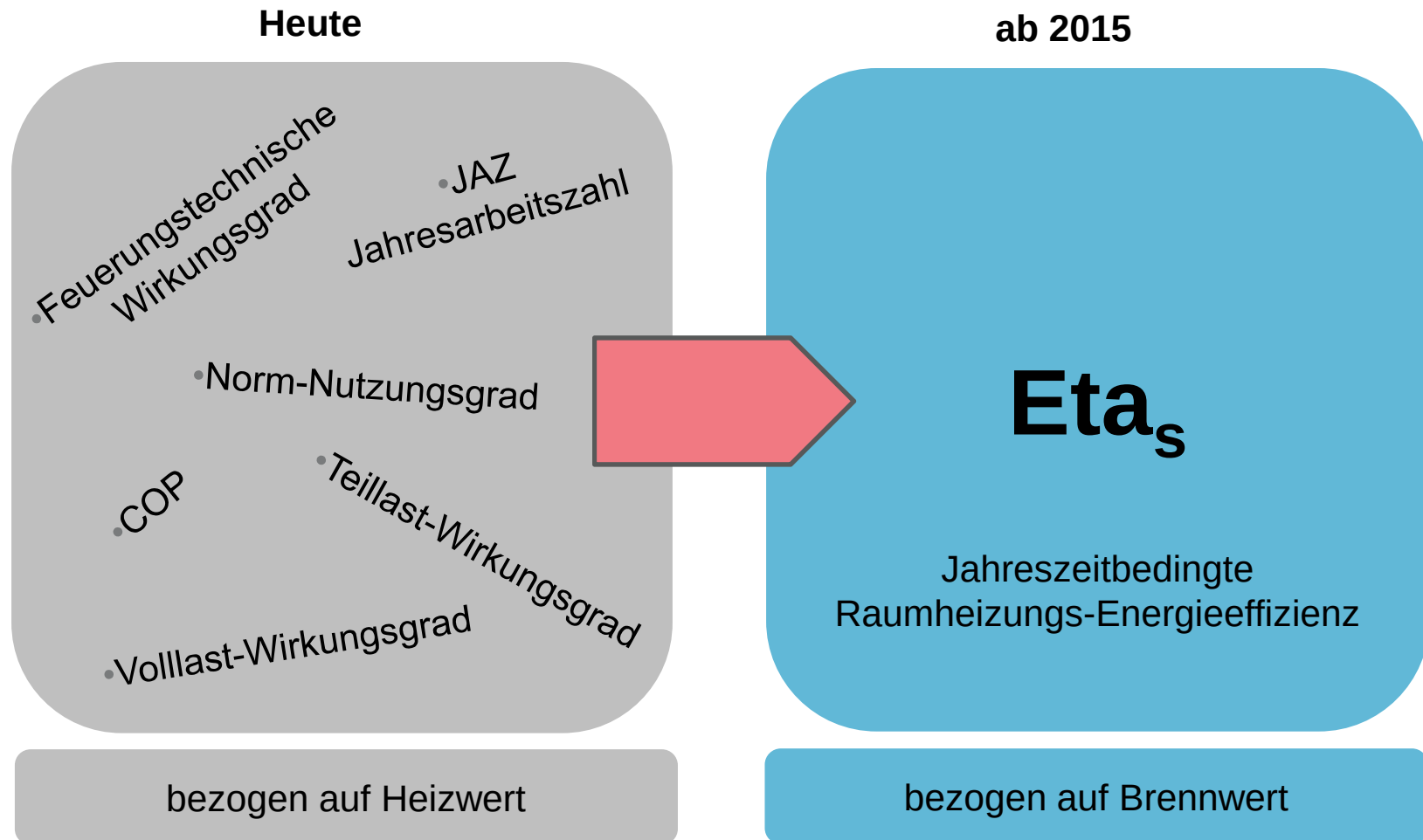


Scheitholzessel



- Kohle-/Kokskessel

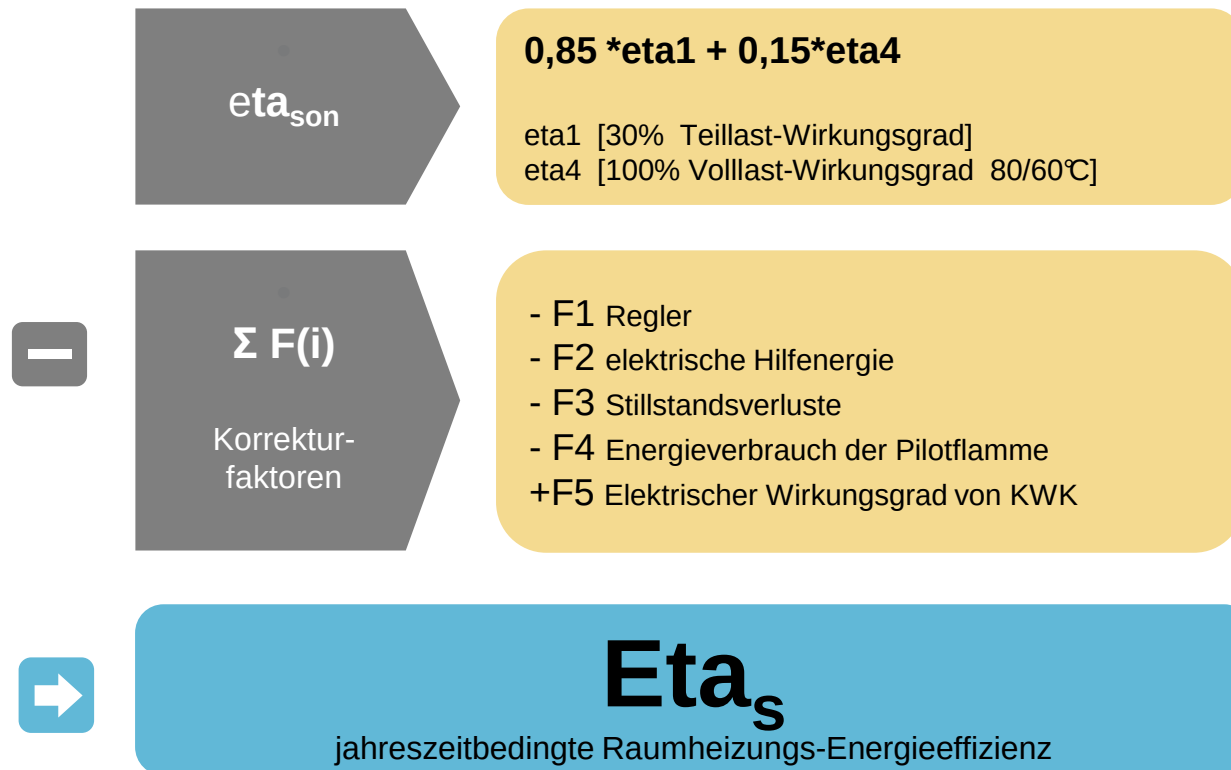
Eta_s – saisonaler Wirkungsgrad die neue Bemessungsgrundlage



➤ **Eta_s soll die Vielzahl heutiger Wirkungsgrade ersetzen**

Eta_s – saisonaler Wirkungsgrad die neue Bemessungsgrundlage

$$\text{Eta}_s^* = \text{eta}_{\text{son}} - \Sigma F(i)$$



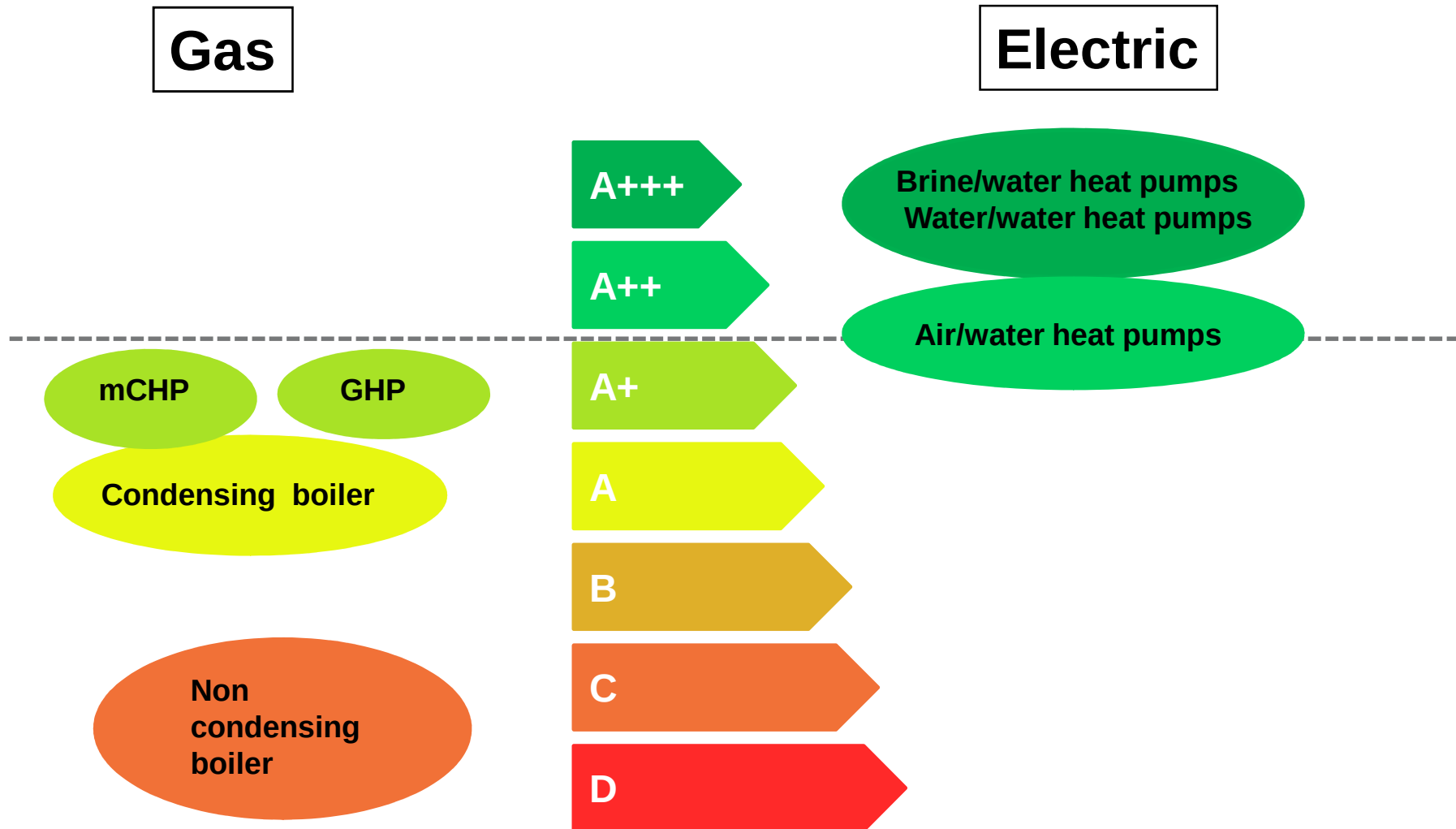
*) Berechnung für fossile Wärmeerzeuger

Effizienzklassen je LOT – best in class

Eta _s		LOT 1		LOT1 - NTWP		LOT 15
A++		125		150		125
A+		98		123		98*)
A		90		115		90
B		82		107		82
C		75		100		75
D		36		61		36
E		34		59		34
F		30		55		30
G		< 30		< 55		< 30

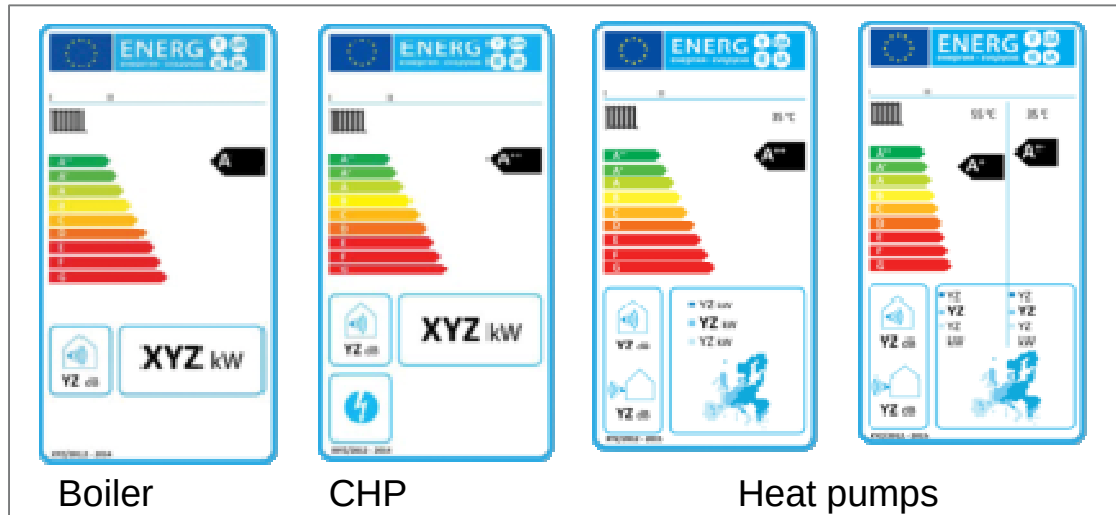
*) Geplant, noch nicht fix

Beispiel für die Klassifizierung von Gas bzw. Stromsystemen

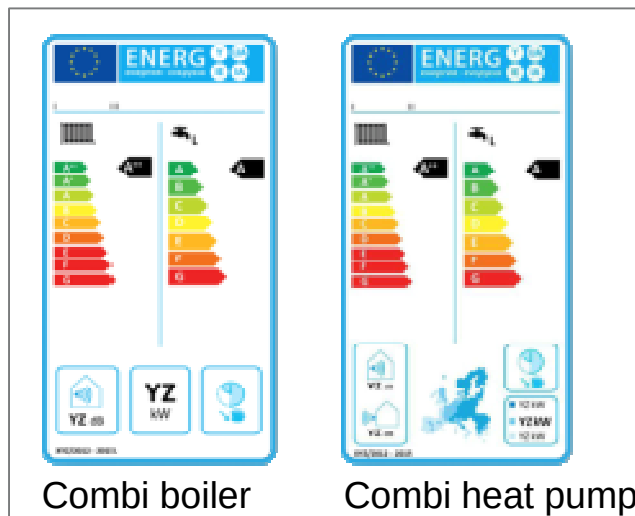


LOT 1 Product labels for heating – overview

Heating only



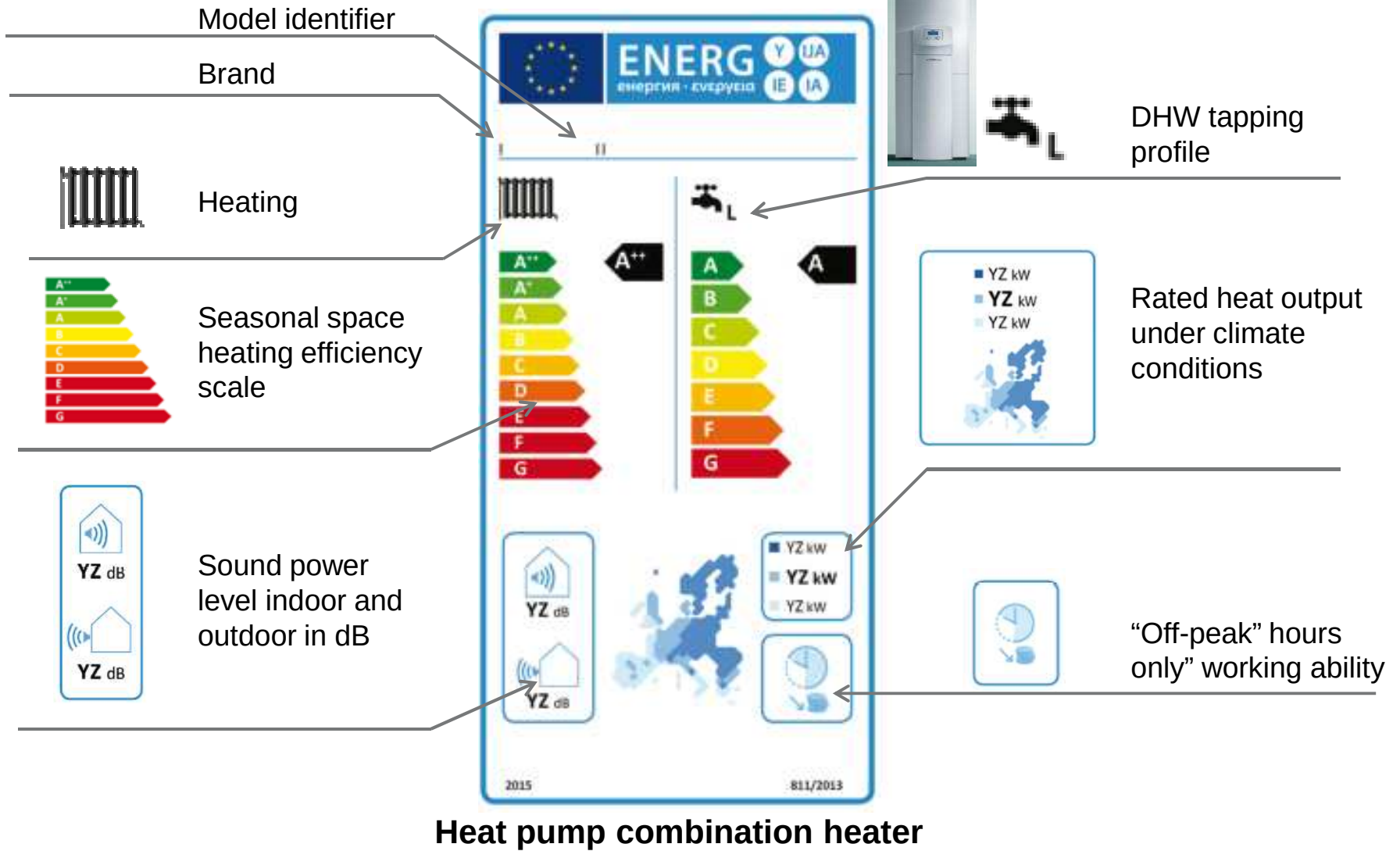
Heating
and DHW



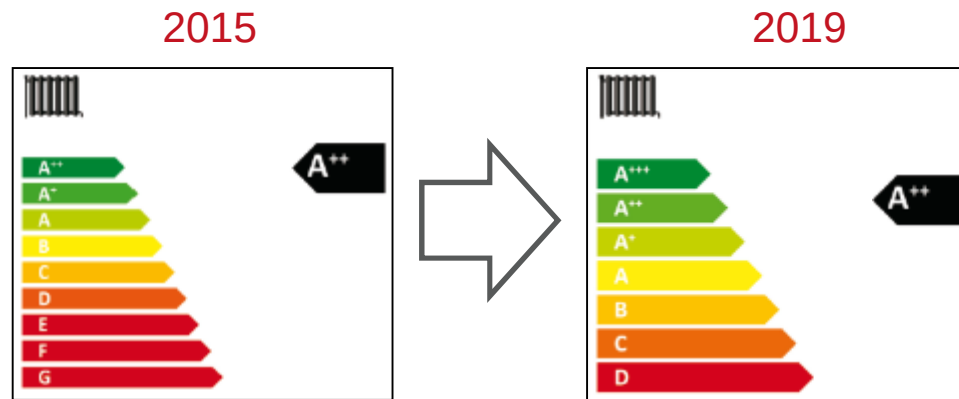
6 different product labels for LOT 1

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LOT 1 – Combination heaters



LOT 1 – Space heaters: Reclassification of labels 2015



Space heater in seasonal **space heating** energy efficiency class changing from A++ → G in 2015, to A+++ → D in 2019

LOT 1 – Combination heaters: Reclassification of labels 2015 → 2019



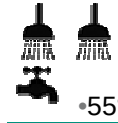
Combination heaters in seasonal **space heating** energy efficiency class changing from A++ → G in 2015 to A+++ → D in 2019.

Water heating energy efficiency class changing from A → G in 2015 to A+ → F, in 2019

Space heater and combination heater labels redesigned in 2019

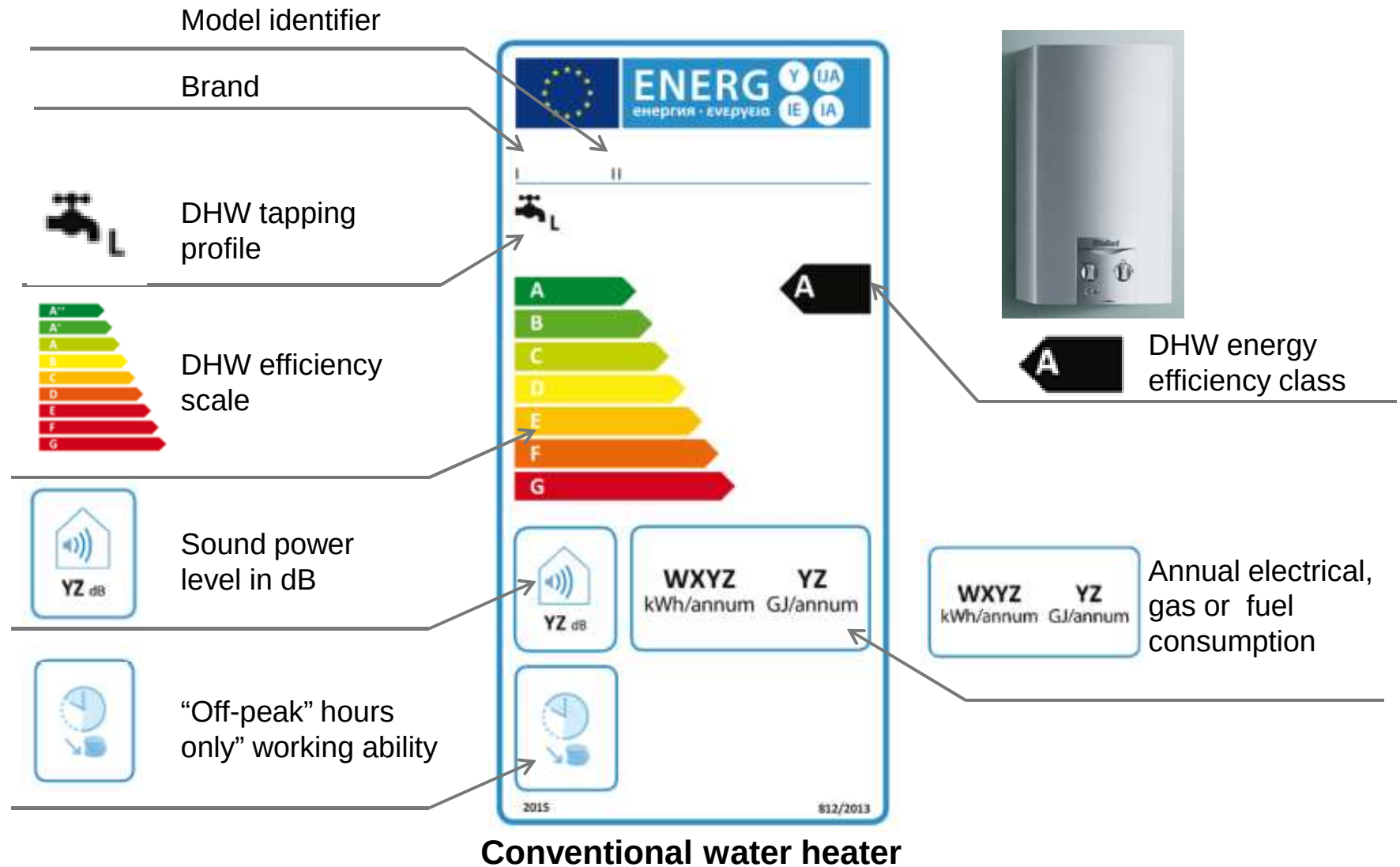
LOT 2: Tapping profiles (D.H.W.) definition

Declared load profile	Typical usage							
3XS	Small single basin at 35 °C							
XXS	Single basin at 35 °C							
XS	Electric shower							
S	Shower and single basin at 35 °C							
M	Showers and sink at 55 °C							
L	Bath, shower and sink at 35 °C							
XL	Multiple baths and showers							
XXL	Simultaneous baths and showers							

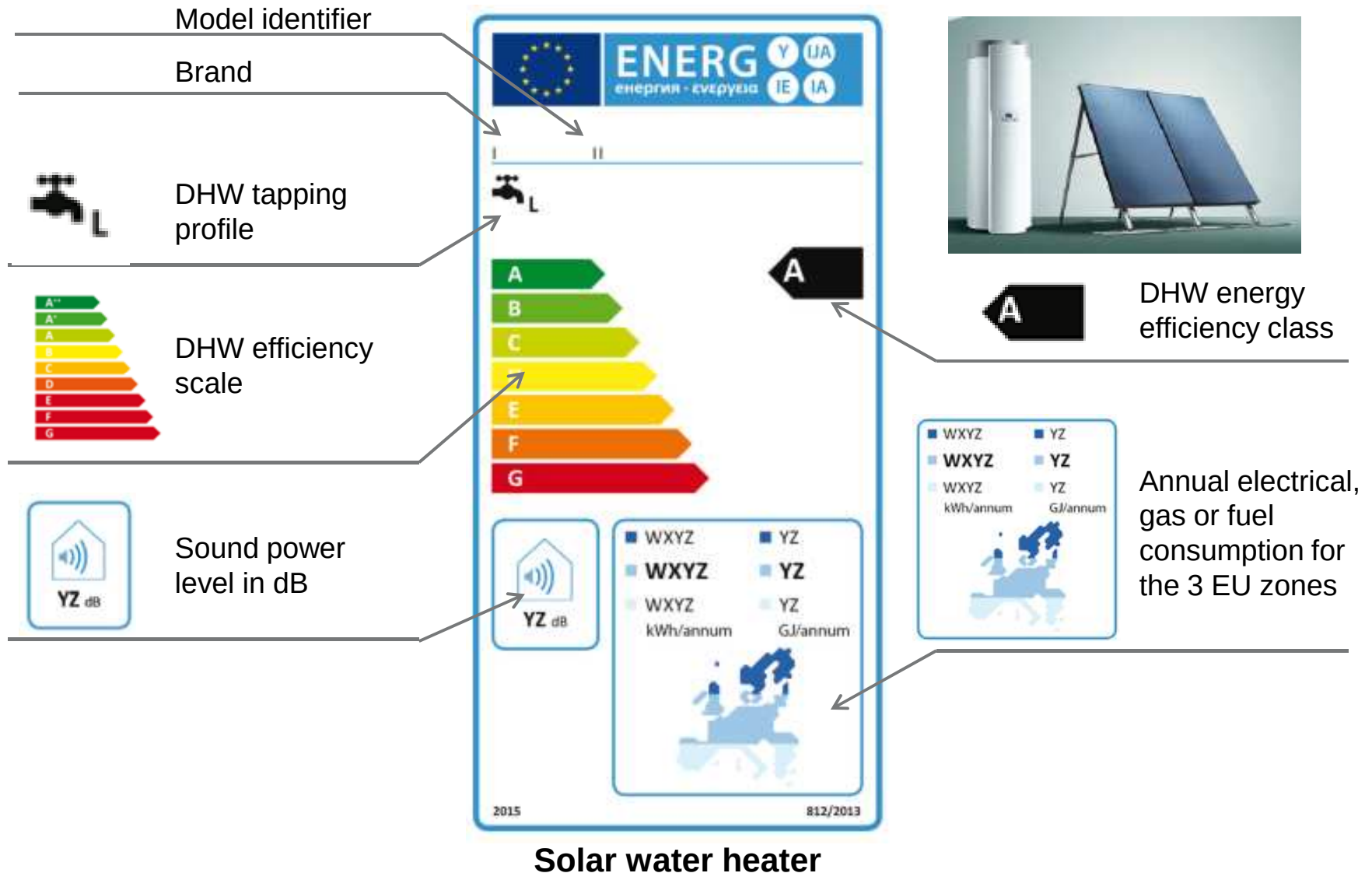
	 •25°C	 •25°C	 •35°C	 •55°C	 •55°C	 •55°C	 •55°C	 •55°C
Q _{ref} in kWh/d	0.345	2.100	2.100	2.100	5.845	11.655	19.070	24.523
	3XS	XXS	XS	S	M	L	XL	XXL
(l/min)	2	2	4	5	6	10	10	16

Tapping profiles allow to compare different appliances for D.H.W. output

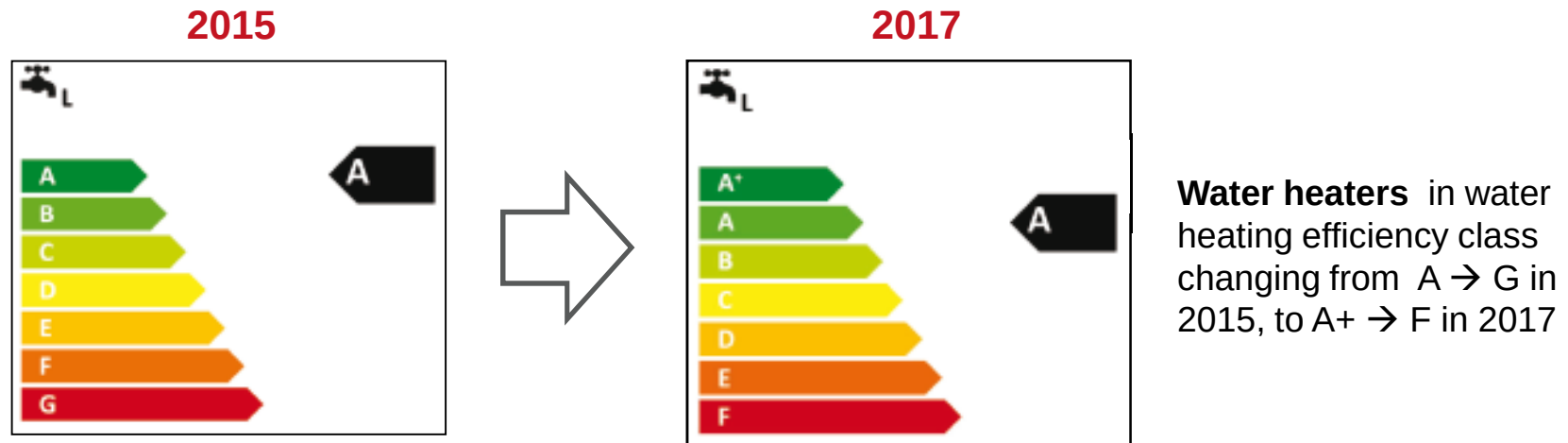
LOT 2 – Water heaters



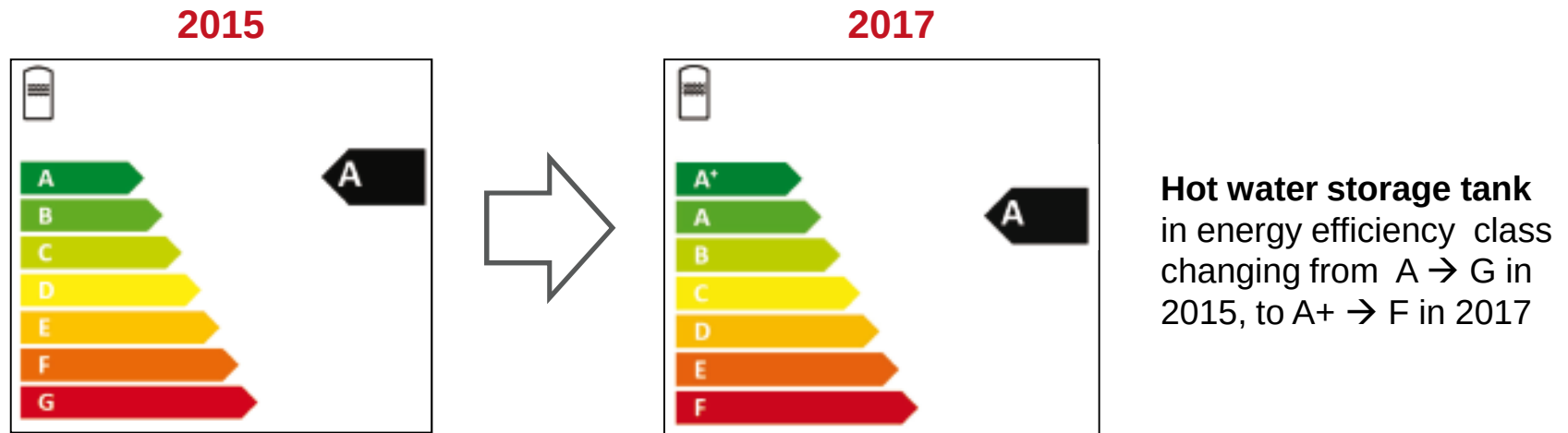
LOT 2 – Water heaters



LOT 2 – Water heaters: Reclassification of labels 2015 → 2017



LOT 2 – Hot water storage tanks: Reclassification of labels 2015 → 2017



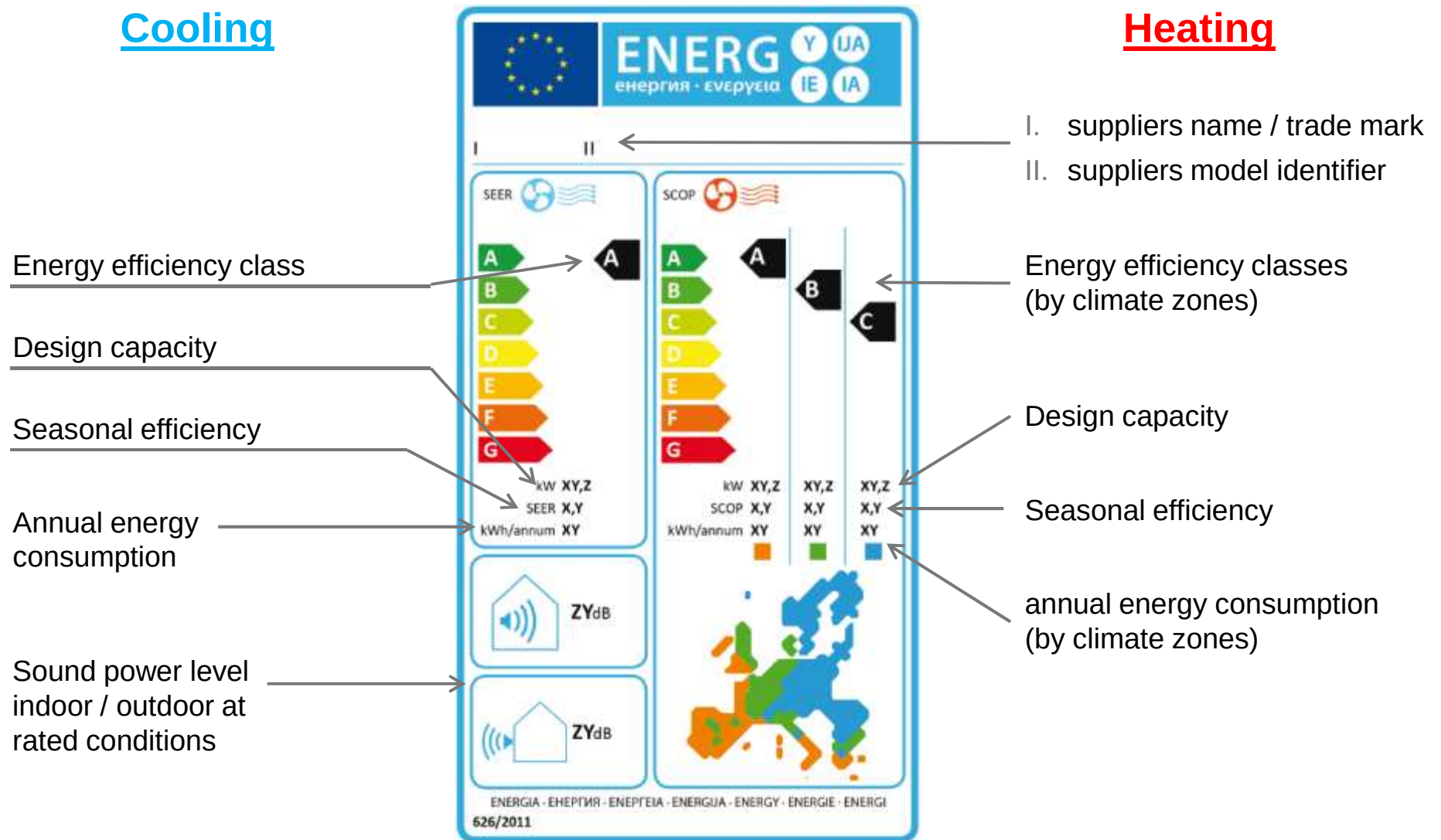
Water heater labels redesigned in 2017

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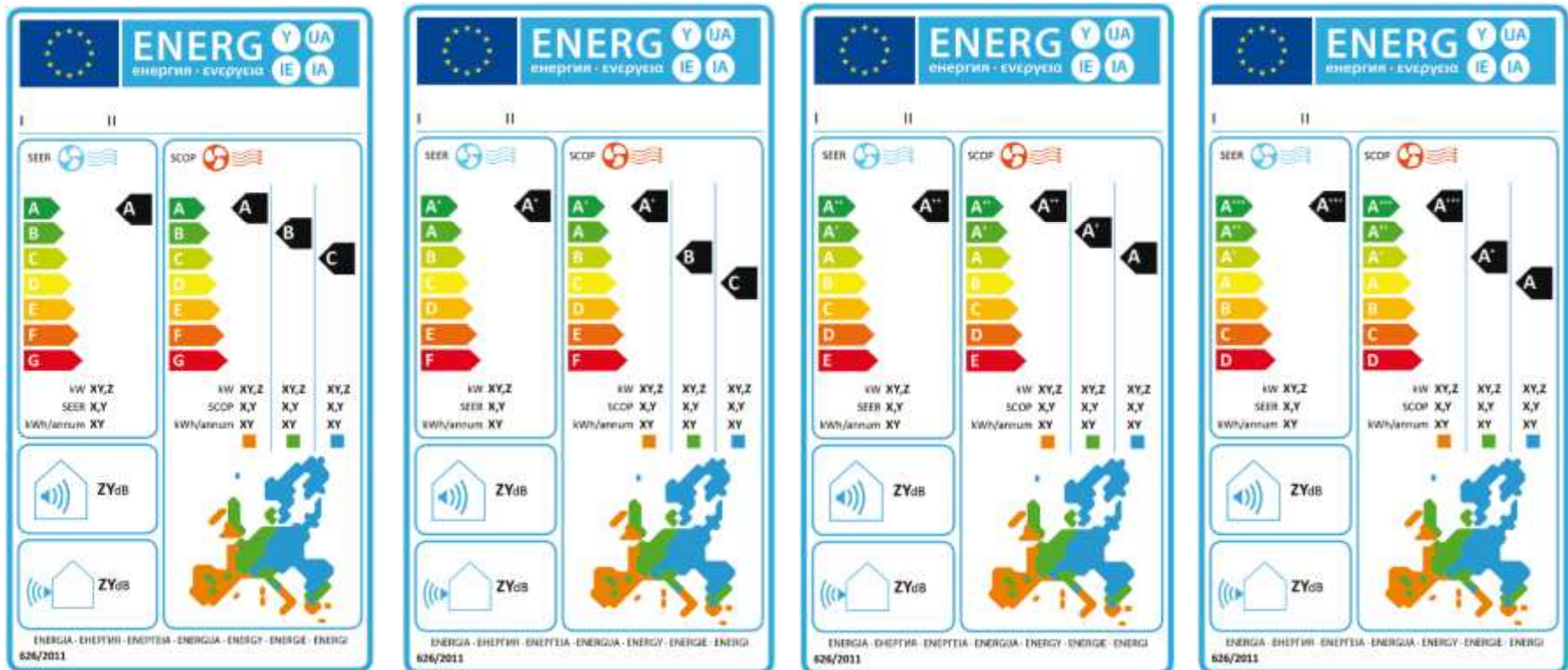
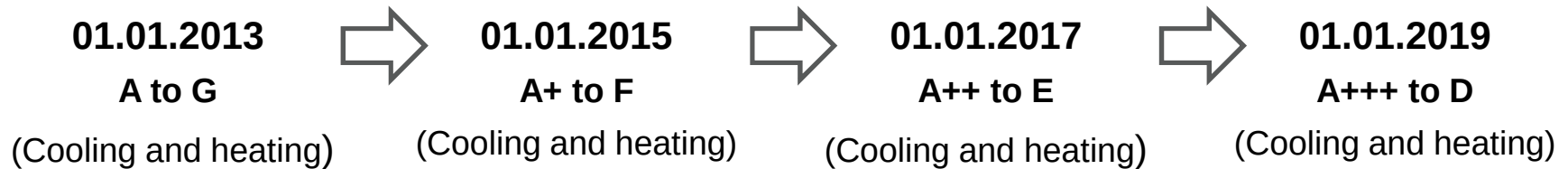
LOT 10: Label for reversible air conditioners (except single / double duct)

Cooling

Heating



LOT 10: Reclassification of labels (except single / double duct)



Re-classification of LOT 10 labels, every other year until 2019

Systemlabel

Komponenten der Pakete



Temperatur
Regler



Solarspeicher



Solkollektoren

Produkte mit Energielabel



mKWK



Kombigerät
Kompaktgerät



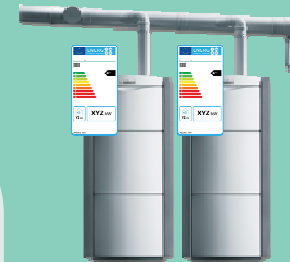
Gaskessel



Ölkessel



Wärmepumpe



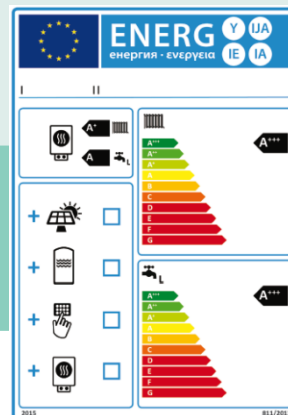
Kaskadenkessel



Zusatz (Hybrid)
Wärmepumpe

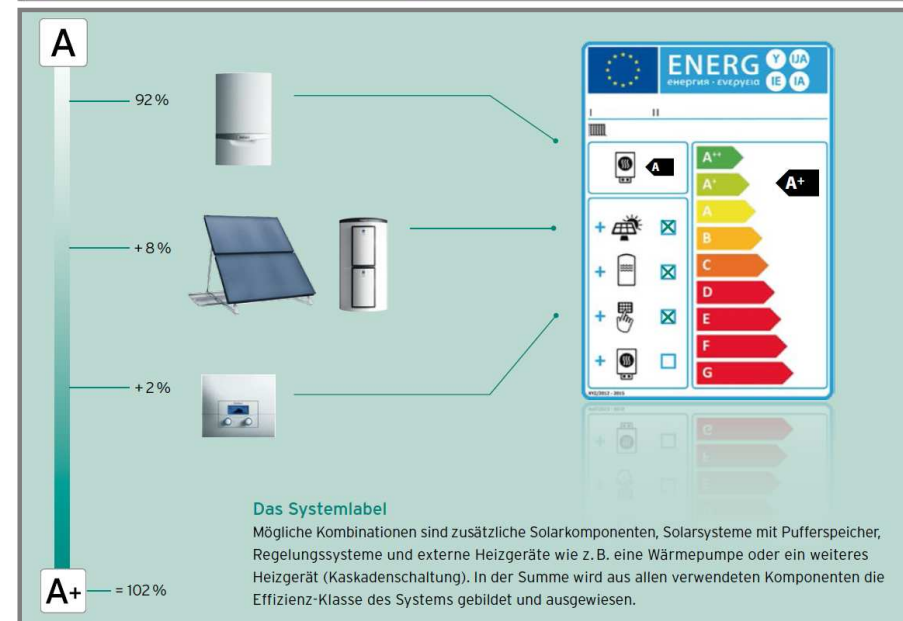
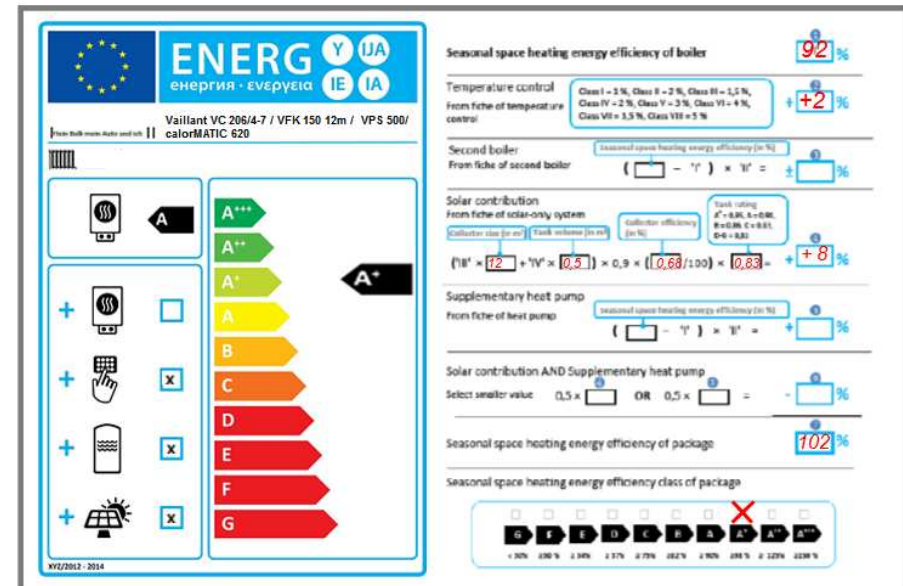
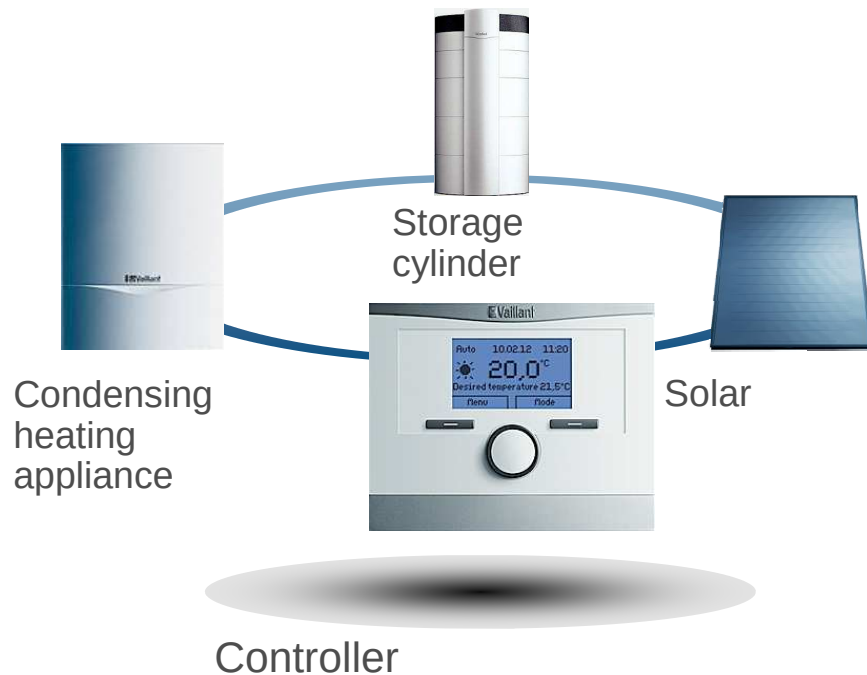


Zusatz-Heizgerät
Gas / Öl / Elektro



Paketlabel

Kalkulation des Systemlabel



Verantwortung: Hersteller/Händler und Installateur

Verantwortung: Hersteller

product fiche boiler

2. Space heaters
- 1.1. The information in the product fiche of the space heater shall be provided in the following order and shall be included in the product brochure or other literature provided with the product:
 - (a) supplier's name or trademark;
 - (b) supplier's model identifier;
 - (c) the seasonal space heating energy efficiency class of the model, determined in accordance with point 1 of Annex II;
 - (d) the rated heat output, if applicable plus rated heat output of supplementary heater, in kW, rounded to the nearest integer, for best pump space heaters under average climate conditions;
 - (e) the seasonal space heating energy efficiency in %, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII, for best pump space heaters under average climate conditions;
 - (f) the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of GCV, rounded to the nearest integer and calculated in accordance with points 3 and 4 of Annex VII, for best pump space heaters under average climate conditions;
 - (g) the sound power level L_{pA} , indoor measured, in dB, rounded to the nearest integer;
 - (h) any specific precautions that must be taken when the space heater is assembled, installed or maintained;
- in addition, for cogeneration space heaters:
 - (i) the electrical efficiency in %, rounded to the nearest integer;
- in addition, for best pump space heaters:
 - (i) the rated heat output, if applicable plus rated heat output of supplementary heater, in kW, under colder and warmer climate conditions, rounded to the nearest integer;
 - (j) the seasonal space heating energy efficiency in % under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII;
 - (k) the annual energy consumption in kWh in terms of final energy and/or in GJ in terms of GCV, under colder and warmer climate conditions, rounded to the nearest integer and calculated in accordance with point 4 of Annex VII;
 - (l) the sound power level L_{pA} , outdoor measured, in dB, rounded to the nearest integer;
- in addition, for low temperature heat pumps:
 - (a) an indication that the low temperature heat pump is only suitable for low temperature applications;
- 1.2. One fiche may cover a number of space heater models supplied by the same supplier.

product fiche component

3. Temperature control
- 1.1. The information in the product fiche of the temperature control shall be provided in the following order and shall, in addition to the product brochure or other literature provided with the product:
 - (a) supplier's name or trademark;
 - (b) supplier's model identifier;
 - (c) the class of the temperature control;
 - (d) the compliance of the temperature control to seasonal space heating energy efficiency in %, rounded to the nearest integer;
- 1.2. The fiche may cover a number of temperature control models supplied by the same supplier.

* provided for boiler
and component

package product fiche

Seasonal space heating energy efficiency of boiler

Temperature control: Class I = 1 %, Class II = 2 %, Class III = 3.5 %, Class IV = 2 %, Class V = 3 %, Class VI = 4 %, Class VII = 3.5 %, Class VIII = 2 %

From fiche of temperature control: $\left(\frac{\text{Class}}{100} \right) \times 100 = \text{Value} \%$

Second boiler

From fiche of second boiler: $\left(\frac{\text{Class}}{100} \right) \times 100 = \text{Value} \%$

Solar contribution

From fiche of solar-only system: $\left(\frac{\text{Collector size (m}^2\text{)}}{\text{Peak rating (kW)}} \right) \times 100 = \text{Value} \%$

Supplementary heat pump

From fiche of heat pump: $\left(\frac{\text{Seasonal space heating energy efficiency (in %)}}{100} \right) \times 100 = \text{Value} \%$

Solar contribution AND Supplementary heat pump

Select smaller value: $0,5 \times \text{Value} \text{ OR } 0,5 \times \text{Value} = \text{Value} \%$

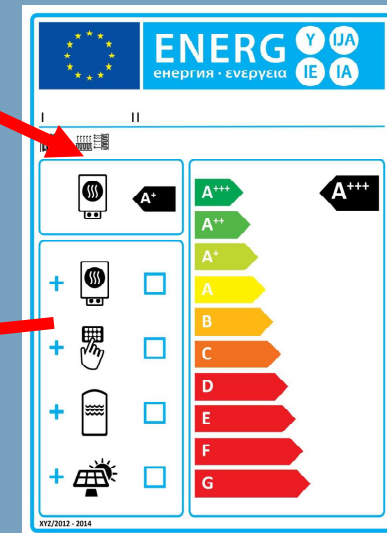
Seasonal space heating energy efficiency of package

Seasonal space heating energy efficiency class of package: $\left(\frac{\text{Value}}{100} \right) \times 100 = \text{Value} \%$

Boiler and supplementary heat pump installed with low temperature heat emitters at 35 °C: $\left(\frac{\text{Value}}{100} \right) \times 100 = \text{Value} \%$

any offer for a package
must includes energy
efficiency

Package
label



displaying the
packages label

Das neue Energy-Label: Überall sichtbar und stets präsent



Pflicht, nicht Kür:

Label und Datenblatt

Zu jedem Produkt oder System gehören künftig das Energy Label und die technischen Daten.

Die Vaillant Energy Labelling Software wird die Vaillant Fachpartner bei der Berechnung der Pakete künftig unterstützen.



Angebote für Geräte und Systeme*



Broschüre | Flyer**



Homepage**

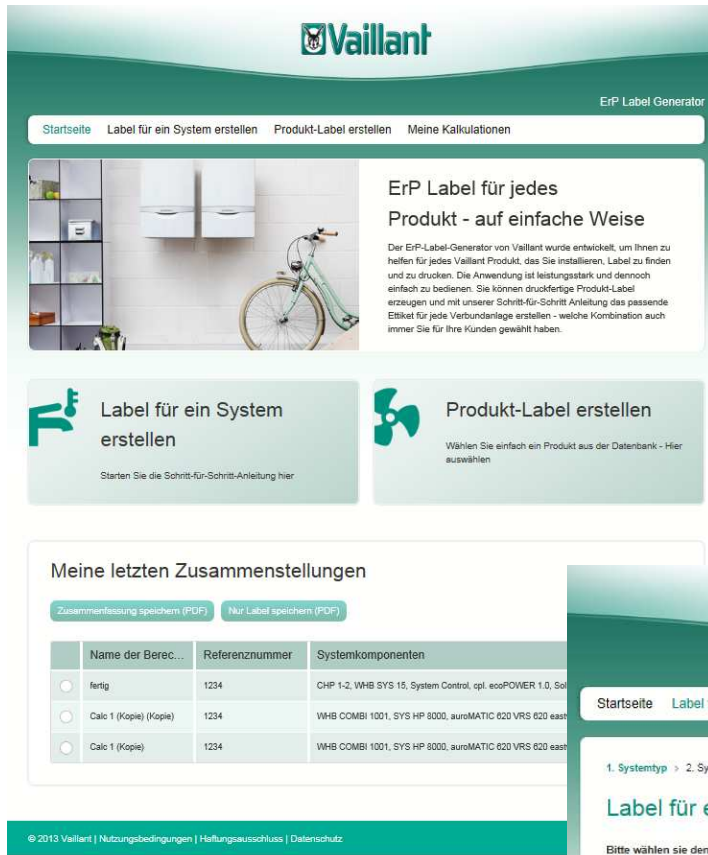


Anzeigen**



Poster**

Software-Unterstützung für den Installateur



Vaillant ErP Label Generator

Startseite | Label für ein System erstellen | Produkt-Label erstellen | Meine Kalkulationen

ErP Label für jedes Produkt - auf einfache Weise

Der ErP-Label-Generator von Vaillant wurde entwickelt, um Ihnen zu helfen für jedes Vaillant Produkt, das Sie installieren, Label zu finden und zu drucken. Die Anwendung ist leistungsstark und dennoch einfach zu bedienen. Sie können druckfertige Produkt-Label erzeugen und mit unserer Schritt-für-Schritt-Anleitung das passende Etikett für jede Verbundanlage erstellen - welche Kombination auch immer Sie für Ihre Kunden gewählt haben.

Label für ein System erstellen
Starten Sie die Schritt-für-Schritt-Anleitung hier

Produkt-Label erstellen
Wählen Sie einfach ein Produkt aus der Datenbank - Hier auswählen

Meine letzten Zusammenstellungen

Zusammenfassung speichern (PDF) | Nur Label speichern (PDF)

Name der Bere...	Referenznummer	Systemkomponenten
☐ fertig	1234	CHP 1-2, WHB SYS 15, System Control, opt. ecoPOWER 1.0, So...
☐ Calc 1 (Kopie) (Kopie)	1234	WHB COMBI 1001, SYS HP 8000, autoMATIC 620 VRS 620 east...
☐ Calc 1 (Kopie)	1234	WHB COMBI 1001, SYS HP 8000, autoMATIC 620 VRS 620 east...

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Vaillant

Startseite | Label für ein System erstellen | Produkt-Label erstellen | Meine Kalkulationen

1. Systemtyp > 2. Systemkomponenten > 3. Berechnungsergebnis

Label für ein Heizungssystem erzeugen

Bitte wählen sie den Anlagentyp für den Sie ein Label erzeugen wollen

☐ System für Heizung

☐ System zur Brauchwassererwärmung

☐ System für Heizung und Brauchwassererwärmung

Abbrechen | Weiter

DAS WICHTIGSTE IN KÜRZE

Warum
ENERGIESPAREN

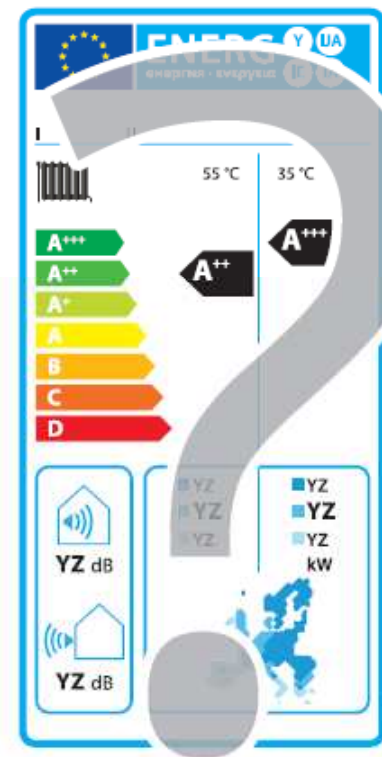
Was
HEIZKESSEL UND SPEICHER

Wann
AB 26. SEPTEMBER 2015

Wie
ENERGIELABEL

 MEHR UNTER
WWW.HEIZUNGS.ORG/FAQ

ENERGIELABEL FÜR HEIZSYSTEME

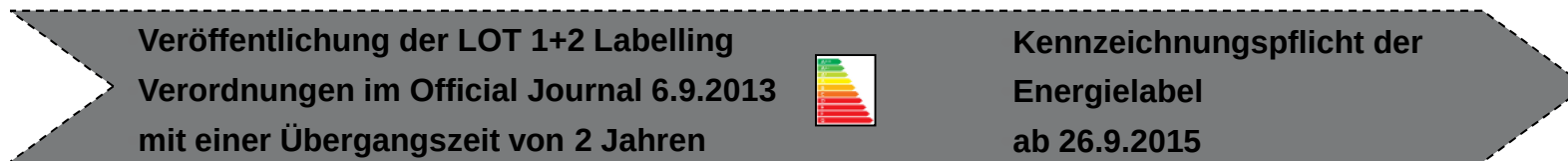


WAS SIE **AB 26.9.2015**
BEACHTEN MÜSSEN!

Zeitplan

➤ LOT 1:

• 26. September 2015



➤ Keine Übernahme in nationales Recht erforderlich!

➤ LOT 15 geplant:

• 1.HJ 2016





ErP Konsequenzen

**Non condensing gas boiler
with the exception of B1*)**

Non condensing oil boiler ≤ 86 %ns



26.09.2015

High NO_x gas boiler

(There is still the exception rule B1, but the NO_x emission
 ≤ 56 mg/kWh must be achieved)



26.09.2018

*) Exception rule: for open flue boilers (type B1) connected to a shared chimney in existing multi family houses ≤ 10 kW system boiler, ≤ 30 kW combi boiler

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Danke für Ihre Aufmerksamkeit!

