

The European heating energy label

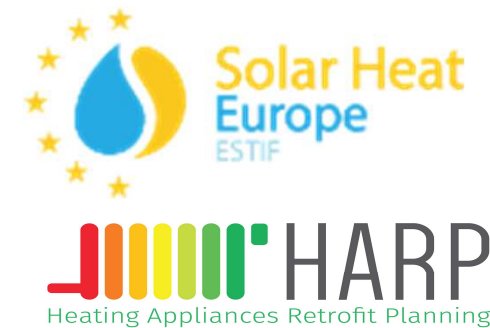
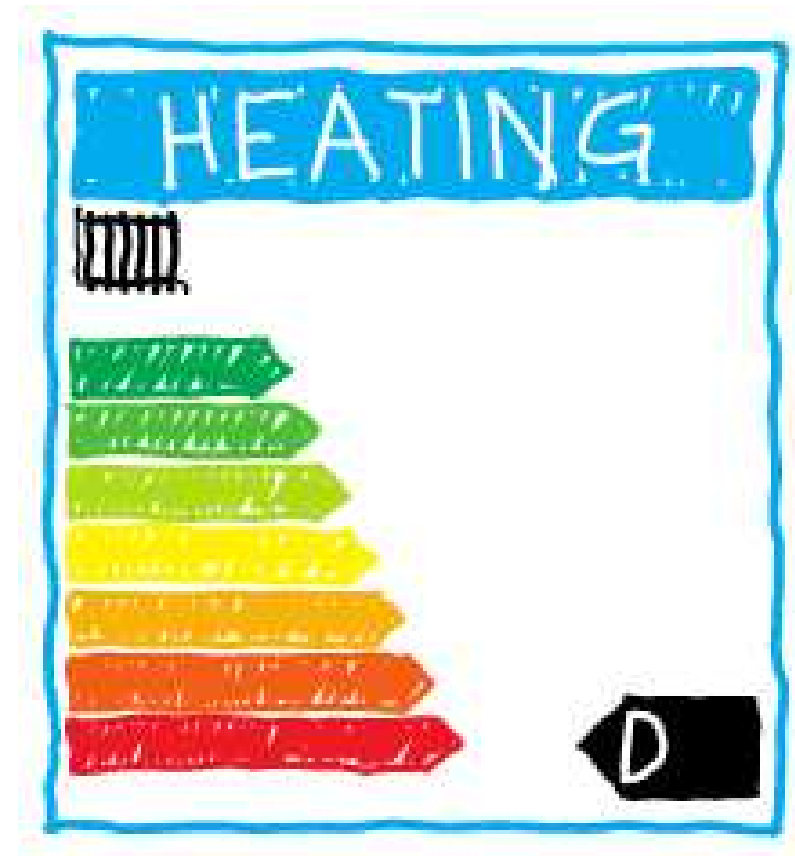


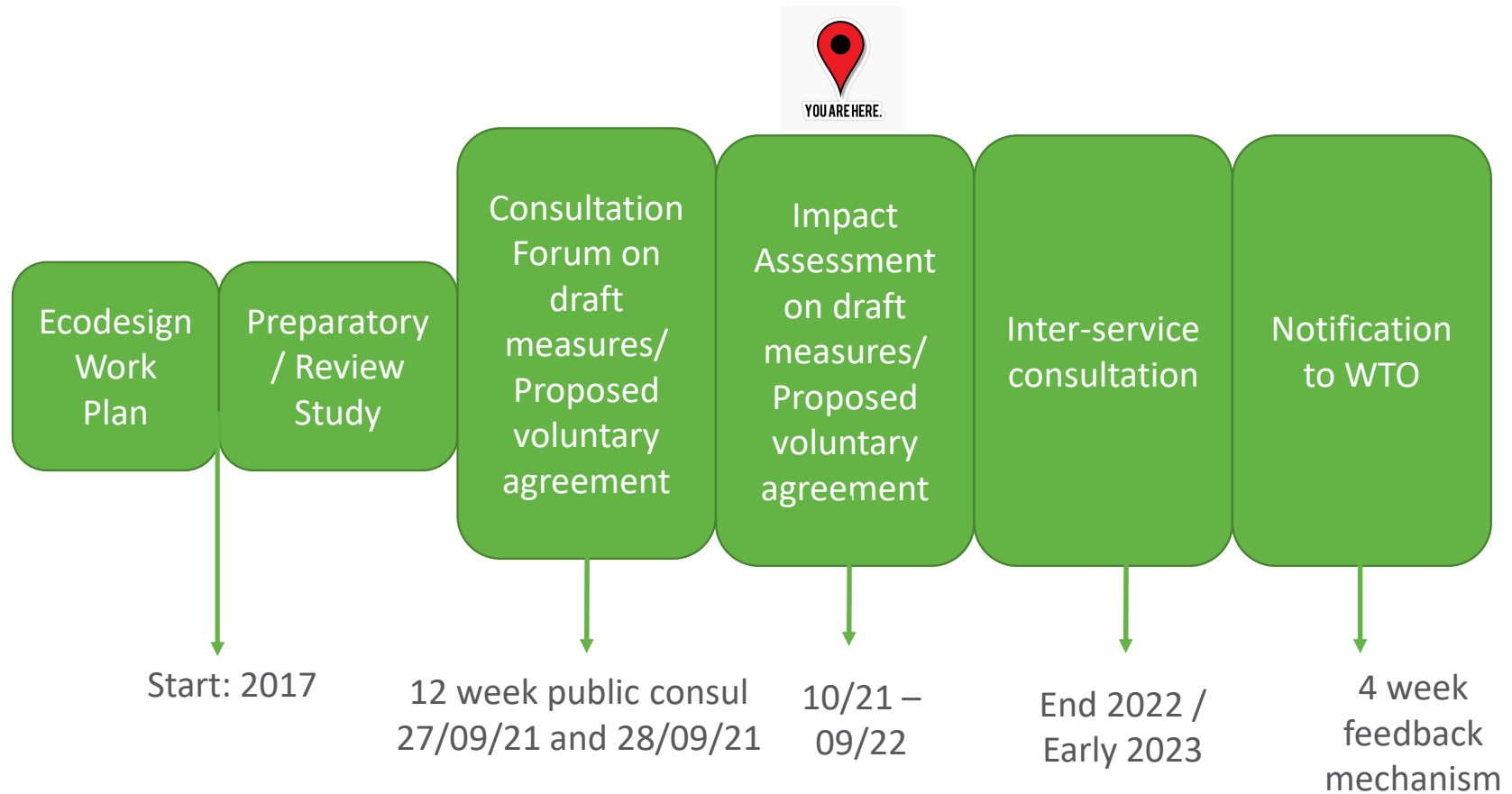
Pedro Dias, Secretary General

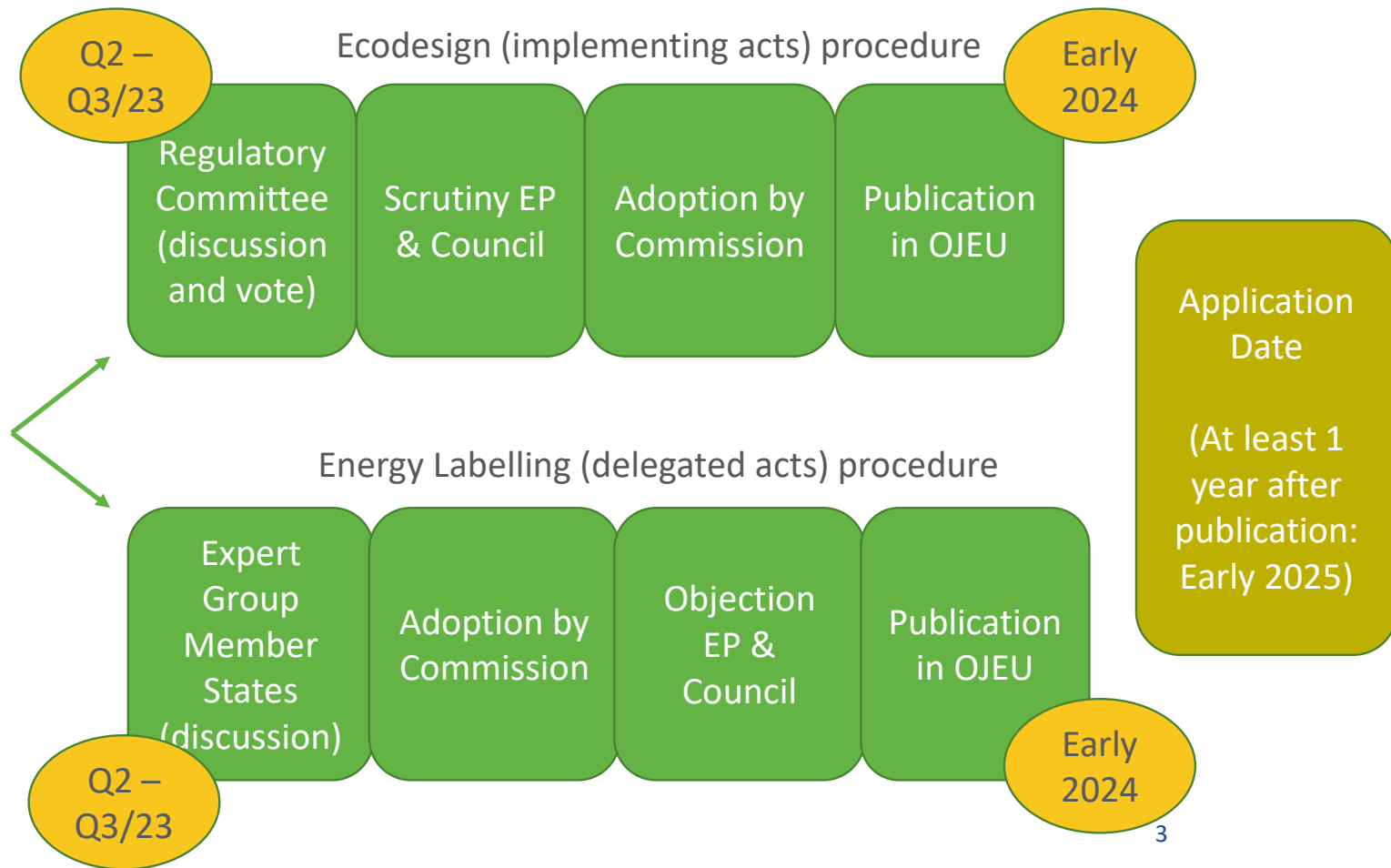
Solar Heat Europe


Final Conference HARP (Heating Appliances Retrofit Planning)

1st of July 2022, Milan







- **General**
 - Rescaling
 - Hydrogen and green fuels
 - Package label
 - New Labels
 - **Space Heaters**
 - New products: hybrids
 - Scope extension to 1 MW
 - **Water heaters**
 - New load profiles: 4XL
 - 3rd party conformity assessment
- 

New classes for Water Heaters

Seasonal space heating energy efficiency classes of heaters in medium-temperature (MT) and low-temperature (LT) applications, η in %

Seasonal space heating energy efficiency class	Seasonal space heating energy efficiency class MT regime	Seasonal space heating energy efficiency class LT regime
A	$\eta \geq 210$	$\eta \geq 290$
B	$180 \leq \eta < 210$	$240 \leq \eta < 290$
C	$150 \leq \eta < 180$	$215 \leq \eta < 240$
D	$120 \leq \eta < 150$	$190 \leq \eta < 215$
E	$100 \leq \eta < 120$	$172 \leq \eta < 190$
F	$90 \leq \eta < 100$	$155 \leq \eta < 172$
G	$\eta < 90$	< 155

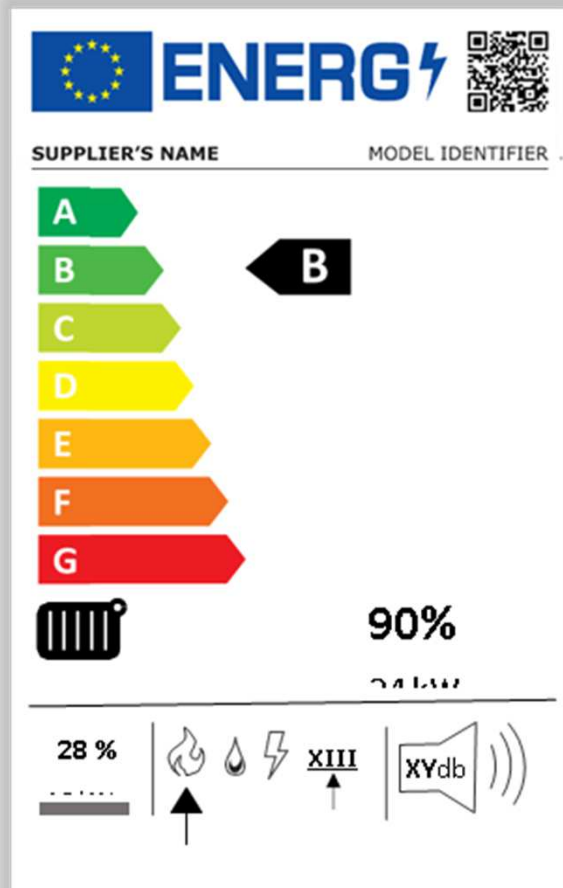
New classes for Water Heaters

Water heating energy efficiency classes by declared tapping profiles, η_{wh} in %

Class	Declared tapping profiles*		
	S	M	L-XL-XXL-3XL-4XL
A	$\eta_{wh} \geq 80$	$\eta_{wh} \geq 160$	$\eta_{wh} \geq 200$
B	$70 \leq \eta_{wh} < 80$	$120 \leq \eta_{wh} < 160$	$200 \leq \eta_{wh} < 160$
C	$55 \leq \eta_{wh} < 70$	$100 \leq \eta_{wh} < 120$	$160 \leq \eta_{wh} < 120$
D	$48 \leq \eta_{wh} < 55$	$90 \leq \eta_{wh} < 100$	$120 \leq \eta_{wh} < 100$
E	$44 \leq \eta_{wh} < 48$	$70 \leq \eta_{wh} < 90$	$100 \leq \eta_{wh} < 90$
F	$40 \leq \eta_{wh} < 44$	$45 \leq \eta_{wh} < 70$	$90 \leq \eta_{wh} < 45$
G	$\eta_{wh} < 40$	$\eta_{wh} < 45$	$\eta_{wh} < 45$

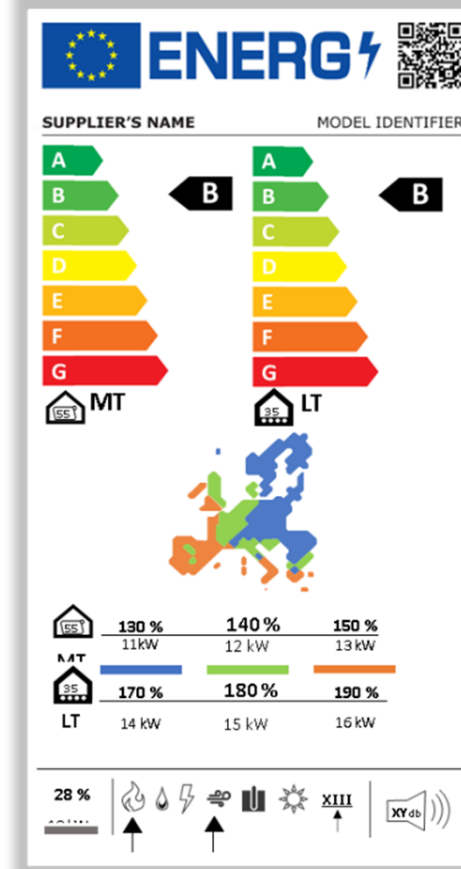
Proposal for new label format: Space Heaters

Fossil fuel, electric resistance and cogeneration space heater



I
II, III
IV
V, VI
VII

Electric heat pump space heaters, thermally driven heat pump space heaters, hybrid space heaters



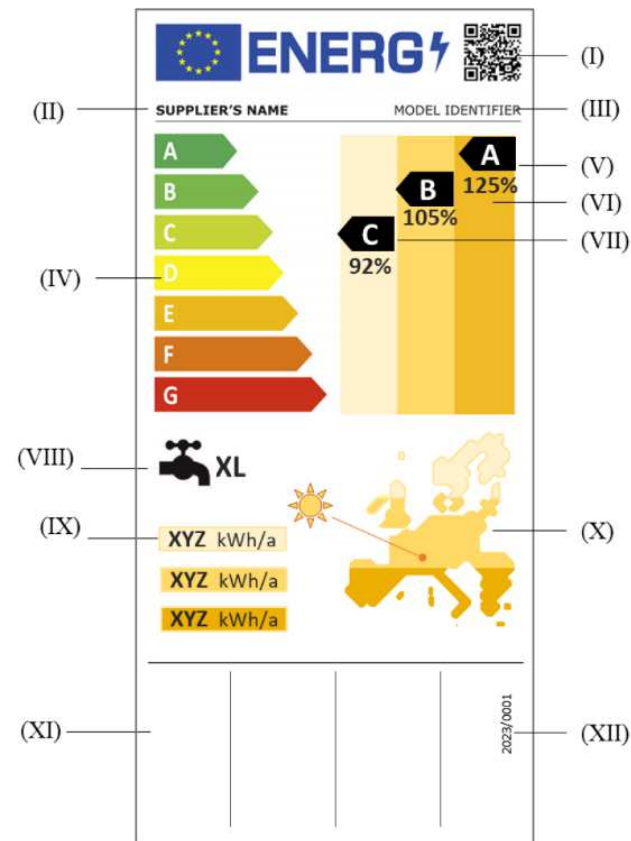
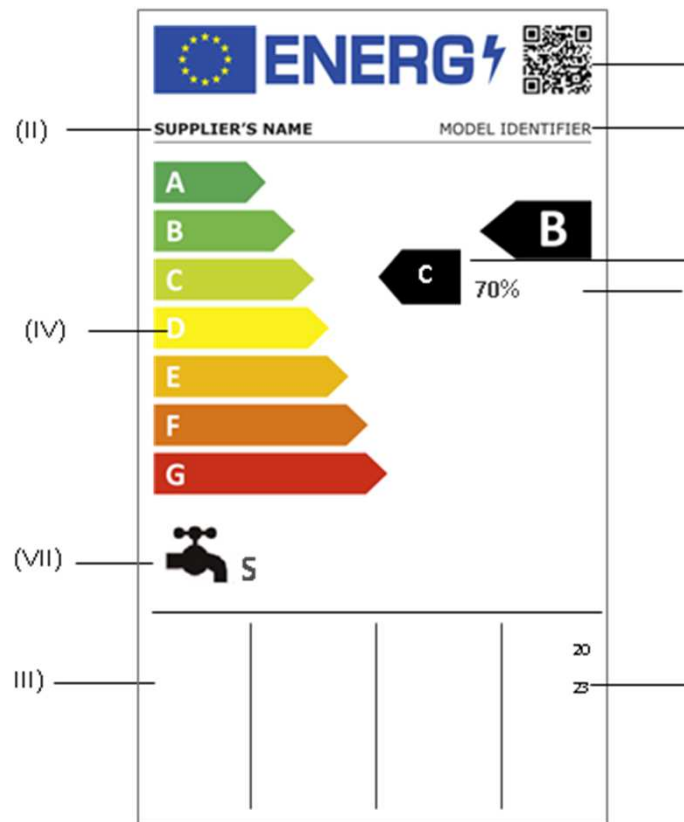
IX X X

Proposal for new label format

Water heaters with solar

Not climate dependent

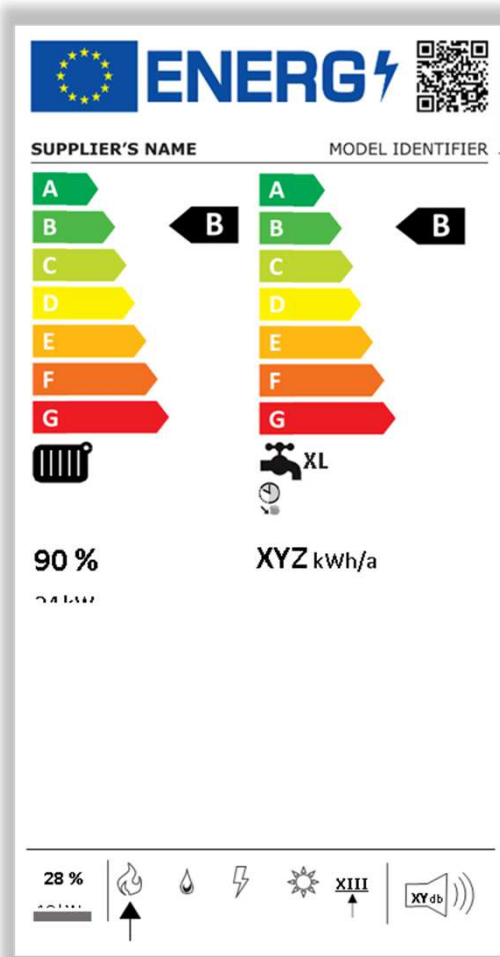
Climate dependent



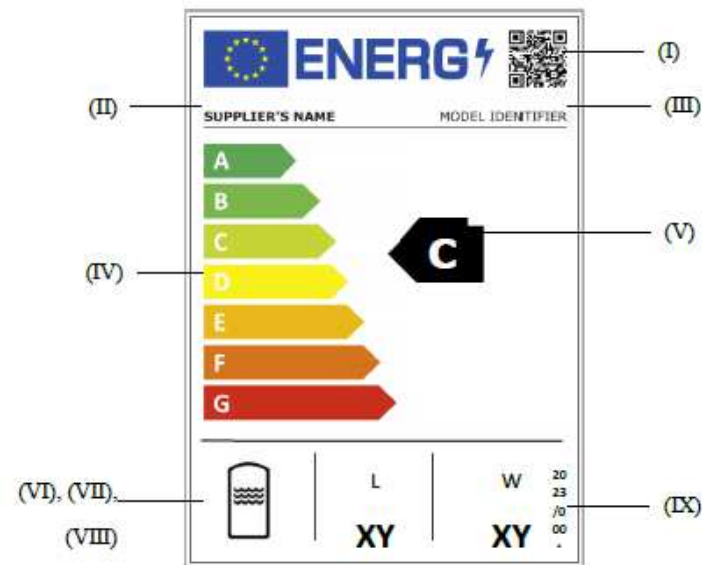
Proposal for new label format

Combi Heaters and tanks

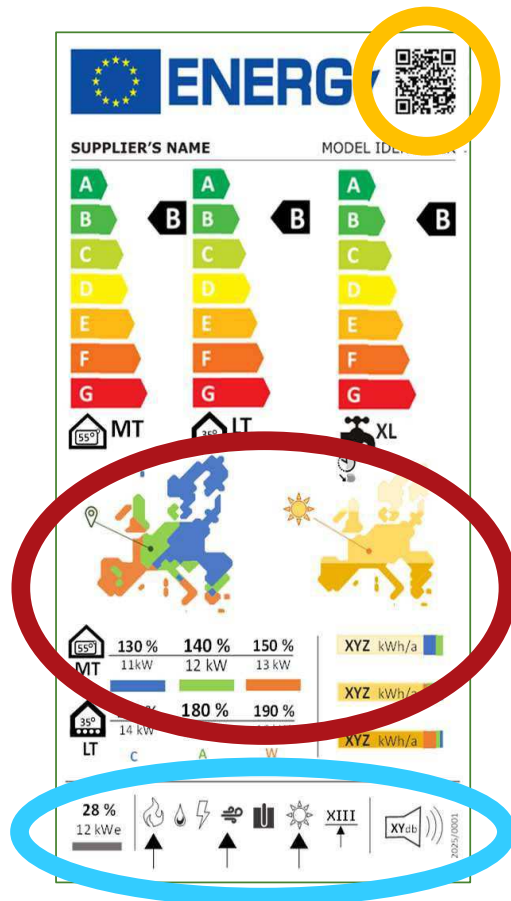
Fossil fuel,
electric
resistance and
cogeneration
combination
heater



Label hot water
storage tank



Proposal for new label format: Packages



QR code

- Is it required also for package label?
- Will it require the registration of the package? Where?

Clarity of label

- Current format under discussion
- Unclear which format will the new label take
- Complexity of including new elements (such as climate)

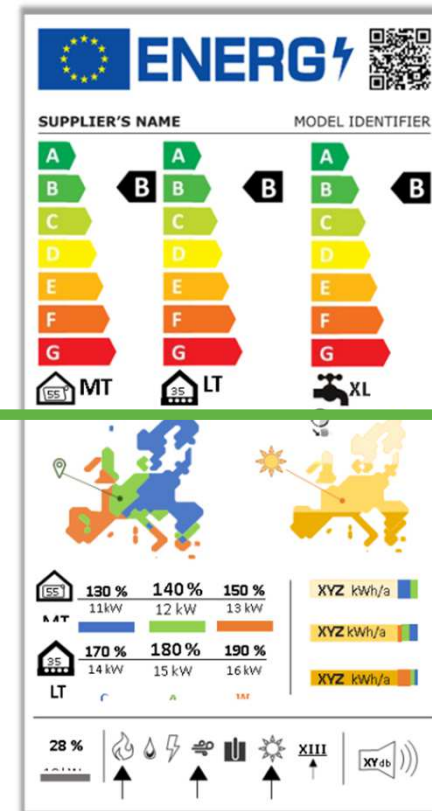
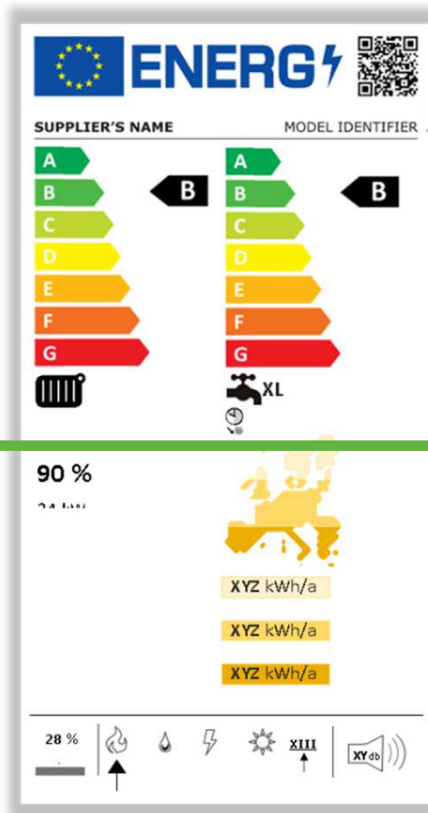
Product and package label

- Tentative conciliation between product and package label

Proposal for new label format: Solar Packages

Fossil fuel, electric resistance and cogeneration combination heater, solar assisted

Electric heat pump, thermally driven heat pump, hybrid combination heaters, solar-assisted

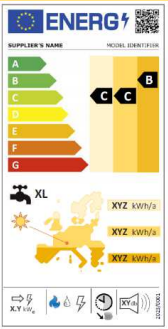


I
II
III
...



Changes on calculations

Lot	Calculation	Results
Water Heaters	Extremely complex <ul style="list-style-type: none">• Large no. of variables required• Need to recalculate for each change	Reliable calculation
Space heaters	Simple <ul style="list-style-type: none">• Few variables• Simple form	Poor <ul style="list-style-type: none">• Underestimating largely the solar thermal contribution

Topic	Current
<p>Thermosiphons</p>	<p>Grey zone</p> <ul style="list-style-type: none"> • Might require product label, if using a backup heater • Depends on interpretation at national level about emergency backup heater
<p>Climate zones</p> 	<p>Average only</p> <ul style="list-style-type: none"> • Label indicated based on average climate only • Some indication in fiche of values for other climate zones

Topic	Current
Retrofit label	Not possible <ul style="list-style-type: none">• Packages include only products/components placed in the market jointly
Solar panels: PVT (Photovoltaic-thermal)	Only as solar thermal <ul style="list-style-type: none">• PVT system can only be considered on its solar thermal part

Thank you for your attention!



Pedro Dias

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