Ecodesign and Energy Label

- Solar thermal applications -

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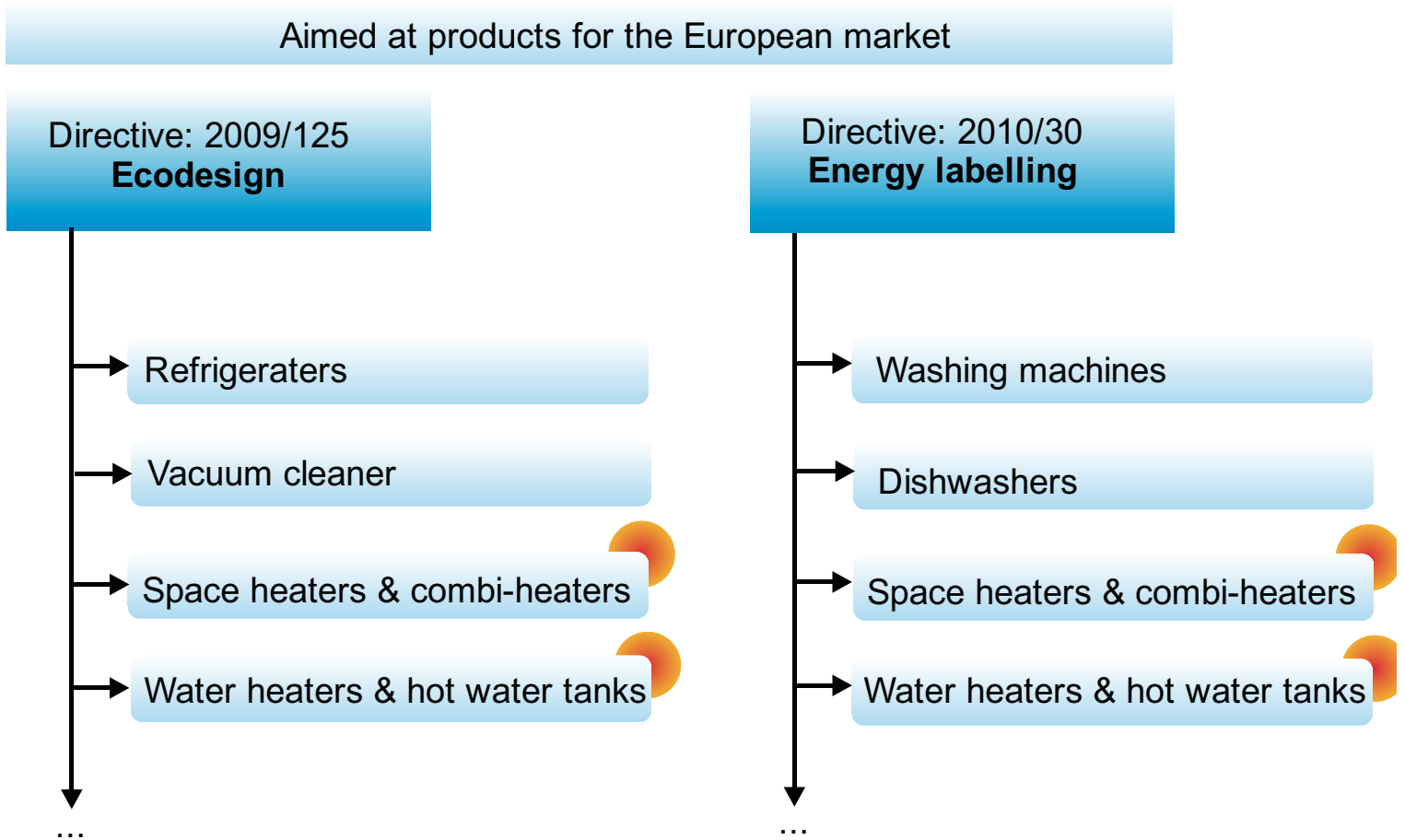
EU Regulatory Framework

- Solar thermal -



similarities and differences

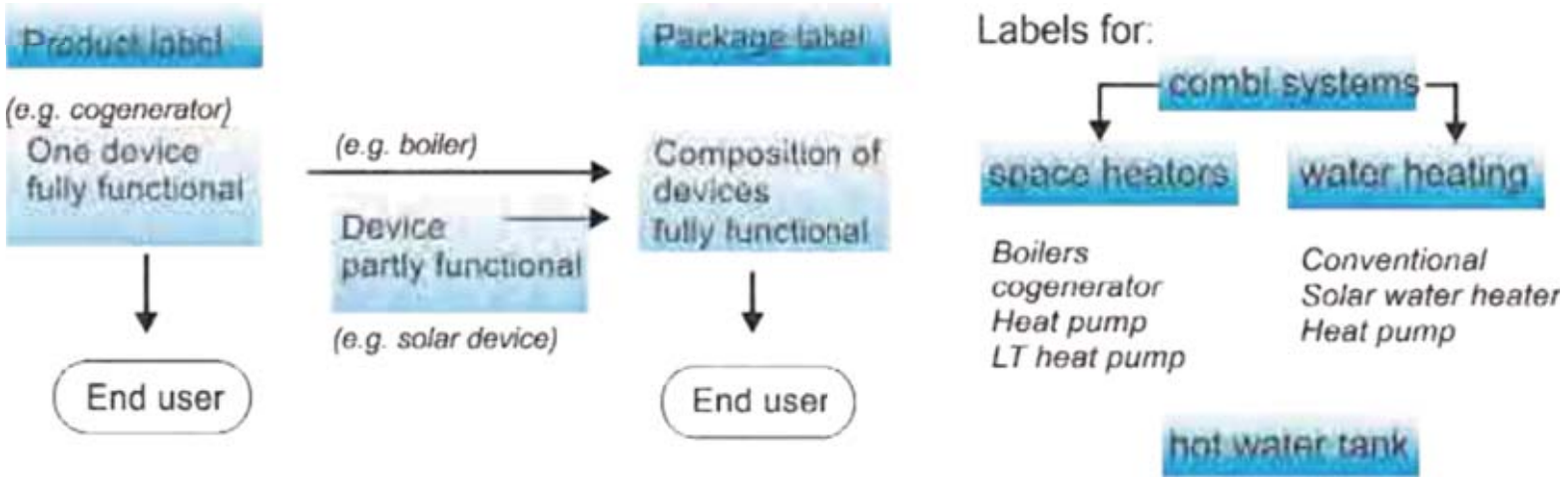
Ecodesign and Energy labeling

	Ecodesign	Energy labelling
Addressing:	Supply side	Demand side
Scope:	• Space heaters ≤ 400 KW • Combi heaters ≤ 400 KW • Water heaters ≤ 400 KW • Heat storage tanks ≤ 2000 l	• Space heaters ≤ 70 KW • Combi heaters ≤ 70 KW • Water heaters ≤ 70 KW • Heat storage tanks ≤ 500 l
Goal:	Phasing out none efficient products • Minimum efficiency or • Maximum heat lossses	Communicating efficiencies of products • Minimum label class • Maximum label class
Methods:	Same	Same

Excluded, heaters fired with:

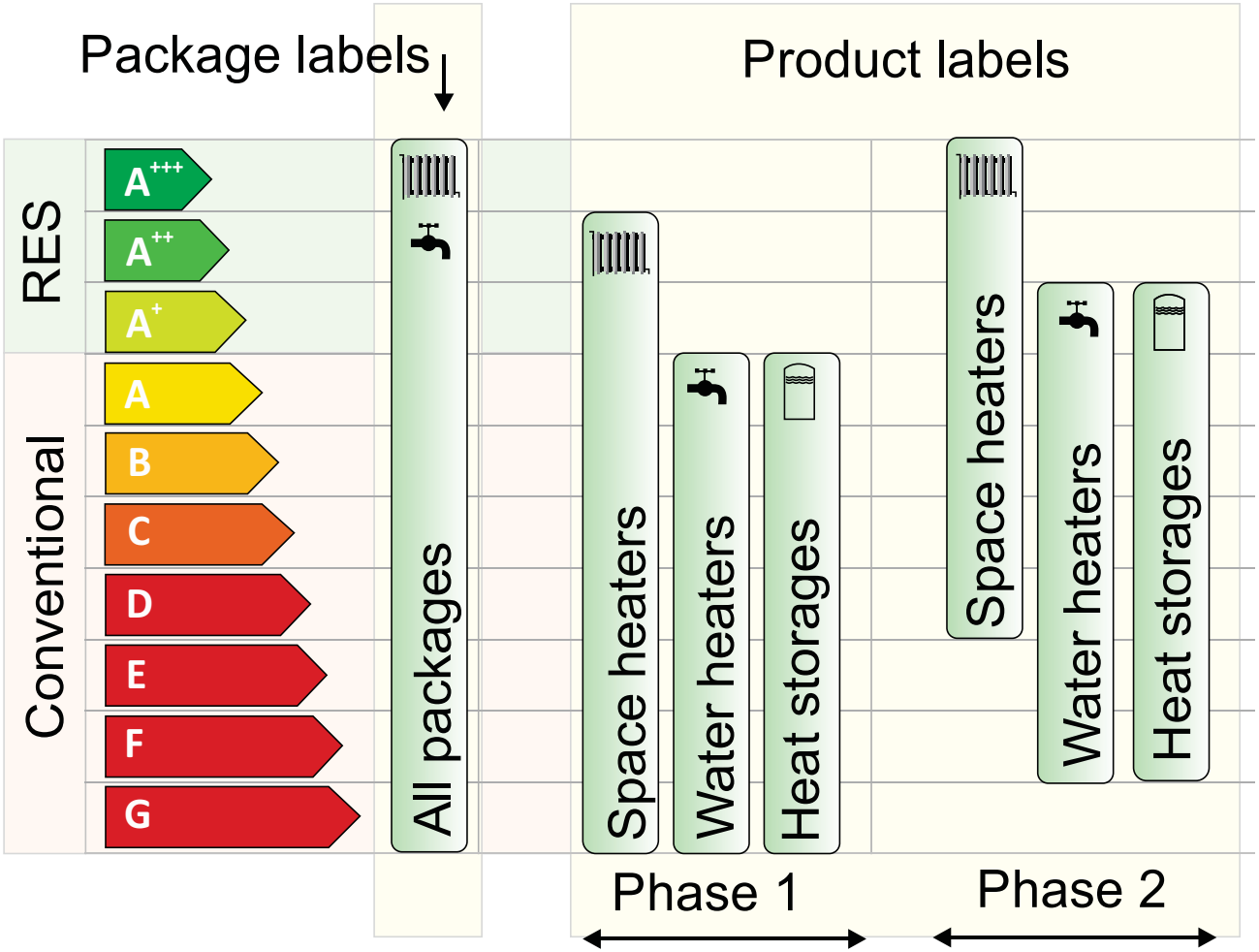
- solid fuels
- biomass based fuels

The labels

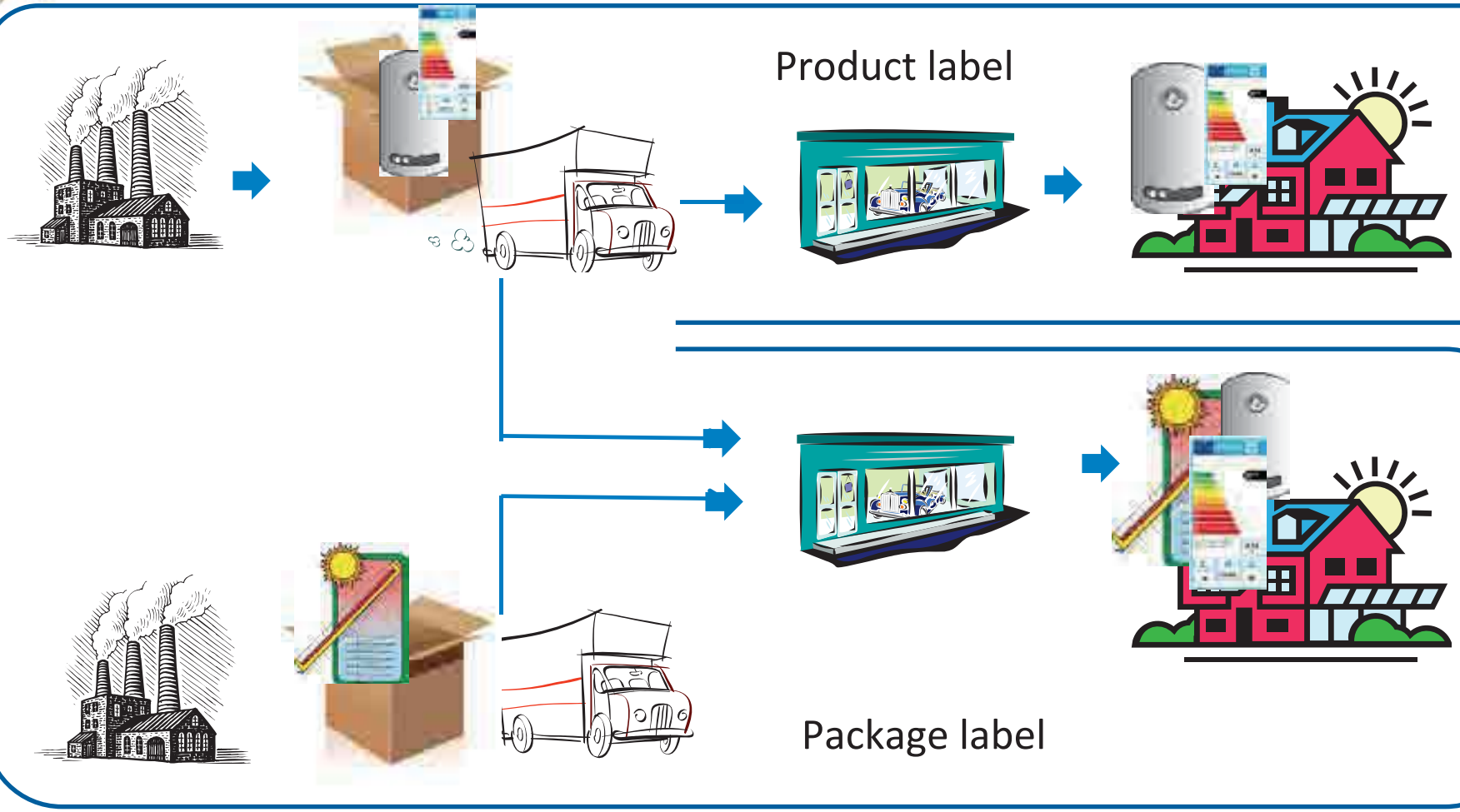


	Product label:	Package label:
Space heaters:	✗	☀
Water heaters:	☀	☀
Combi heaters:	See space heaters and water heaters	
Heat storage tanks:	☀	☀

Label classes



Label group procedures



Requirements on documentation

- Three types of documentation required:
  - Technical documentation, that is used to draft the
  - Data fiche, that is used to
  - Draft the label

	Technical documentation	Data fiche	Label
Contents:	Specifications and test results	All spec.'s needed to draft a label	Label class and additional info
Layout:	Contents prescribed on level of subjects	Contents explicitly prescribed Package labels: format also prescribed	Format explicitly prescribed
Availability	On request	To be provided	Displayed

Procedures and obligations

	Technical doc's	Data fiche	Label
Supplier (product label)	test, draft and keep available	draft and provide	draft, pack and communicate
Supplier (package label)	test, draft and keep available	draft and provide	(draft, pack and communicate)
Dealer (product label)			Put on product and communicate
Dealer (package label)		collect fiches, draft and provide	draft and communicate

Determination of performance

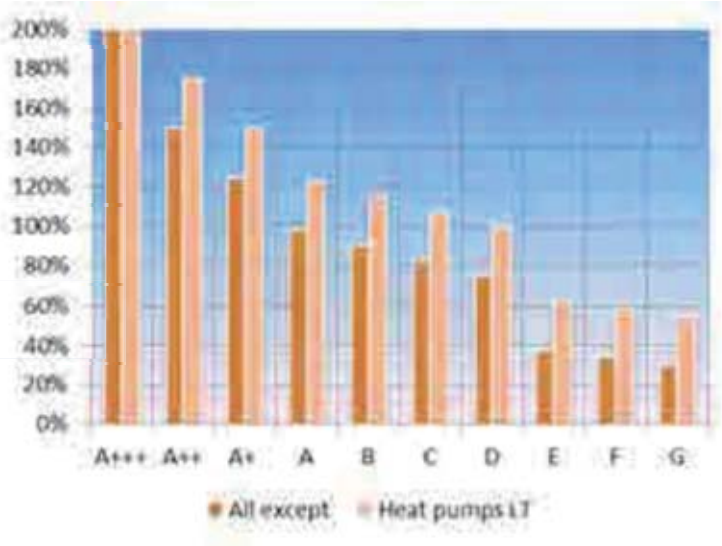
	Tests:	Calculations according to:
Space heaters	CEN-EN 12975-2 (collector) CEN-EN 12977-3/4[1] (storage)	Calculation scheme of the data fiche
Water heaters (ICS)	CEN-EN 12976-2 ('dst', system)	SOLICS in transitional [2] document
Water heaters	CEN-EN 12975-2 (collector) CEN-EN 12977-3/4 [1] (storage)	SOLCAL in transitional [2] document , based on CEN-EN 15316-4-3, B
Hot water tanks	CEN-EN 12977-3/4 [1] (storage)	transitional [2] document
Prod. Label WH	CEN-EN ? (sound power level)	

[1] not currently. Should nbe added
[2] to be translated in standards

Space heaters
- Package label -

- Most relevant inputs:
  - Rated heat output power
  - Collector area, storage volume, η_o , storage label class
- Results starting with best available boiler:
  - Main determinants: (1th) boiler power, (2th) A_{col}

System definition	Label class:
No solar thermal	A
10 m² solar device + 20 kW boiler	A⁺
15 m² solar device + 5 kW boiler	A⁺⁺



Solar water heater
- product label -

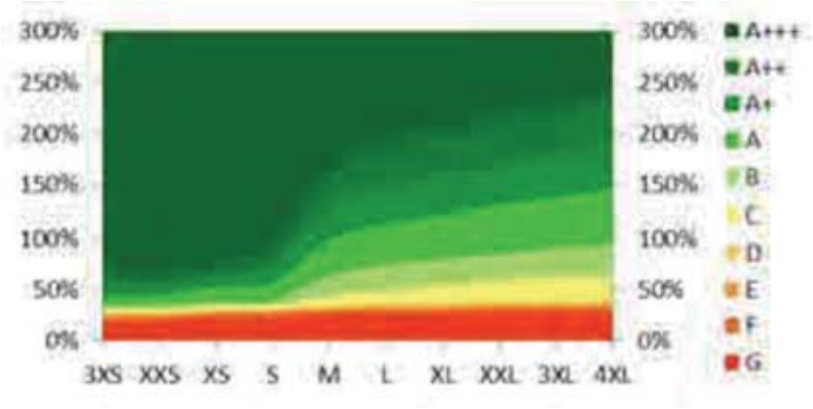
- Most relevant inputs:
  - Load profile ('heat demand')
  - Efficiency of backup (auxiliary) heater
  - Solar system performance
- Load profile 'M' (~130 l/day) and electrical backup heater:
  - Phase 1 is limited to 'A'

System definition	Label class:
No solar thermal	D
Fsolar = 50%	B
Fsolar = 70%	A

Solar water heaters
- package label -

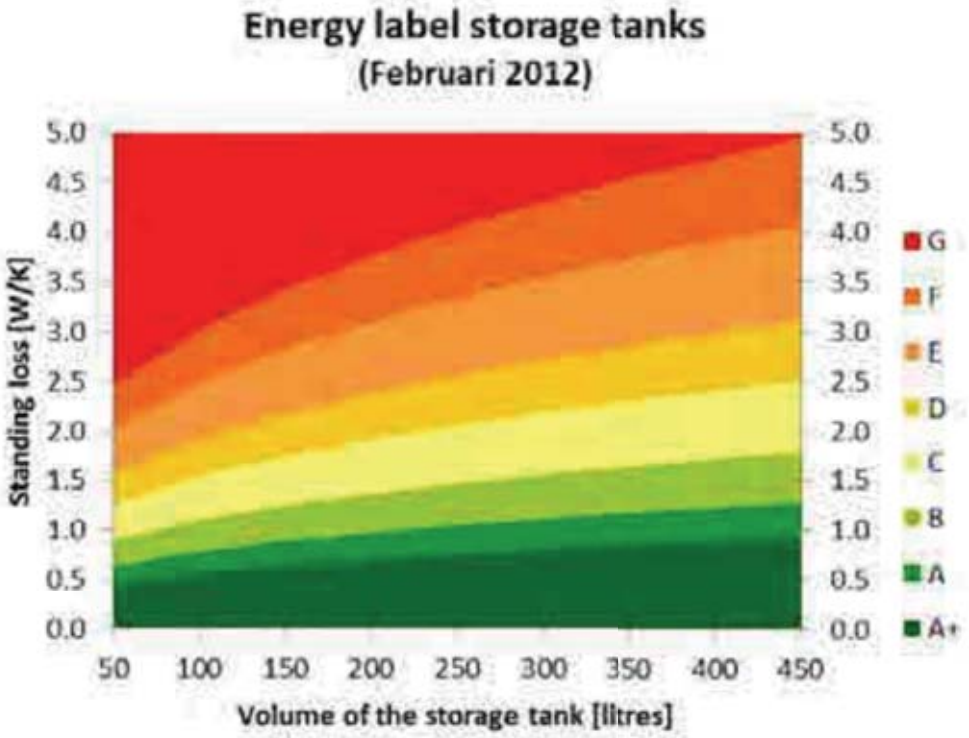
- Most relevant inputs:
  - Load profile ('heat demand')
  - Efficiency of backup (auxiliary) heater
  - Solar system performance
- Load profile 'M' (~130 l/day) and best backup heater:
  - Main determinants: solar fraction

System definition	Label class:
No solar thermal	A
Fsolar = 50%	A^{+}
Fsolar = 70%	A^{+++}



Hot water tanks
- product label -

- Typically current: ‘C’
- ‘A’ with (very) innovative techniques



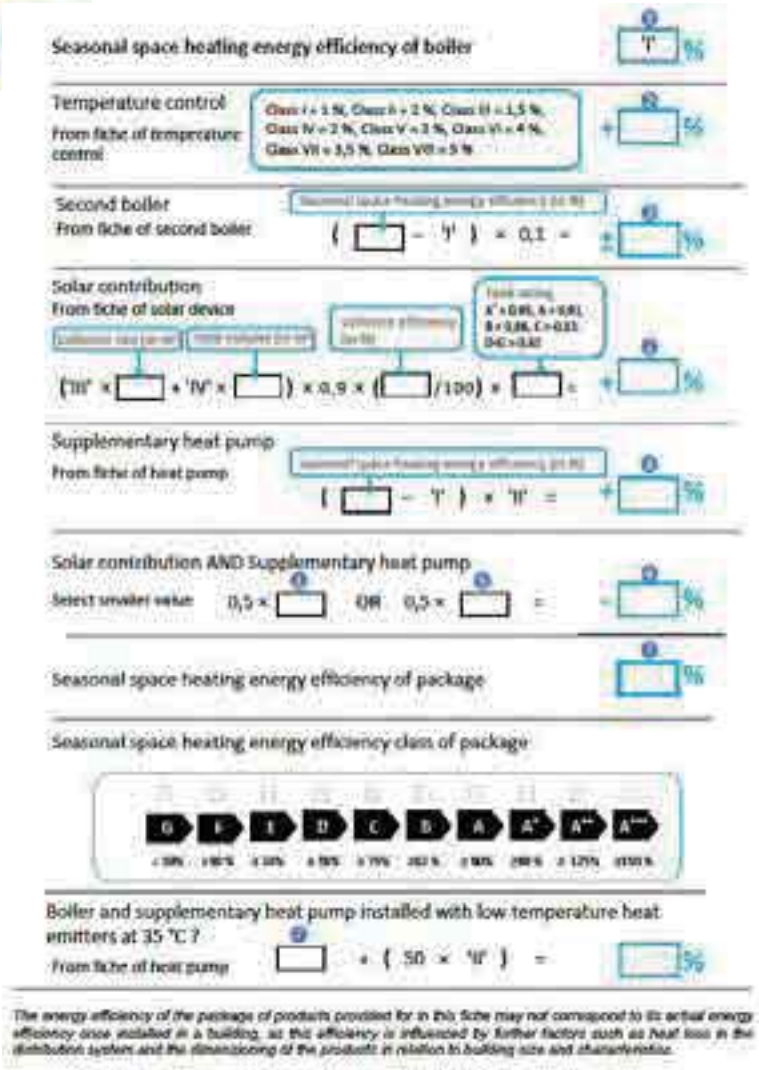
Where do we stand now?

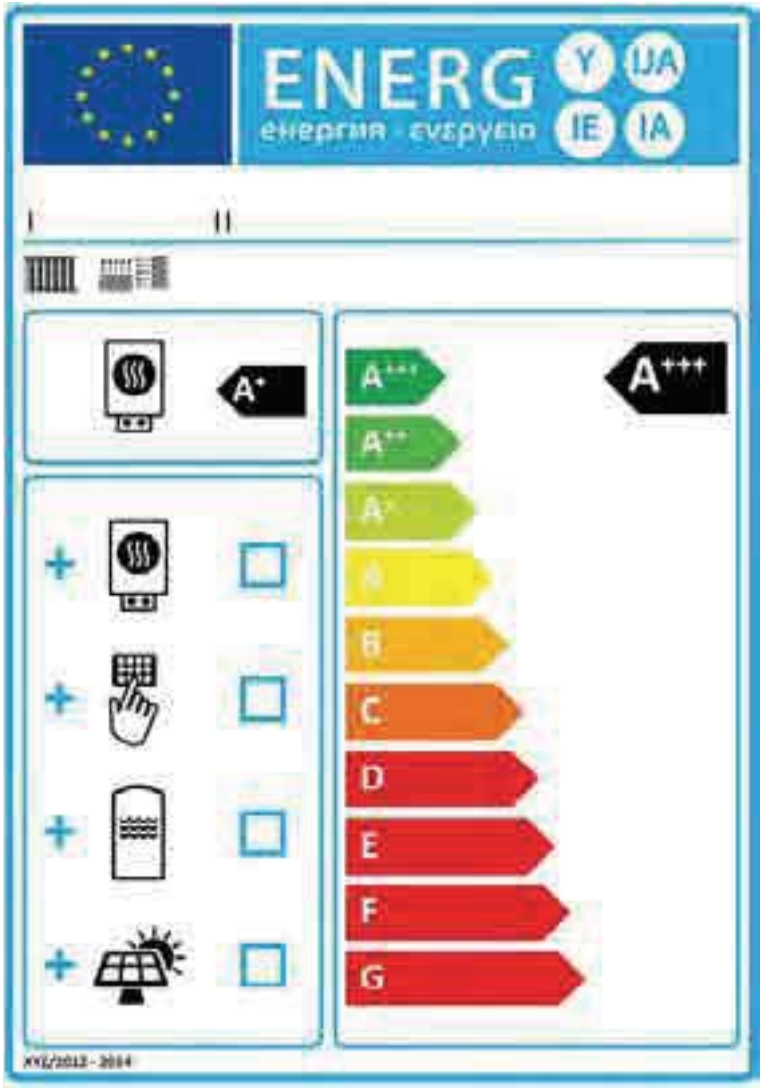
- Not a perfect tool:
  - Space heating: too simplified (challenge for next revision)
  - Product label Solar water heater: faulty (,but useful)
  - Bits and pieces still to repair (ESTIF / CEN mandate?)
- Excellent opportunity's:
  - Especially for solar thermal in general
    - Marketing / communication: “above A’, better than best boiler, publicity, “make e-heating better”, all technologies compared along the same scale, ….
  - But also for brands and types
    - Distinction in improvement of label class
    - Strategic choice of combination with conventional heater

Time line

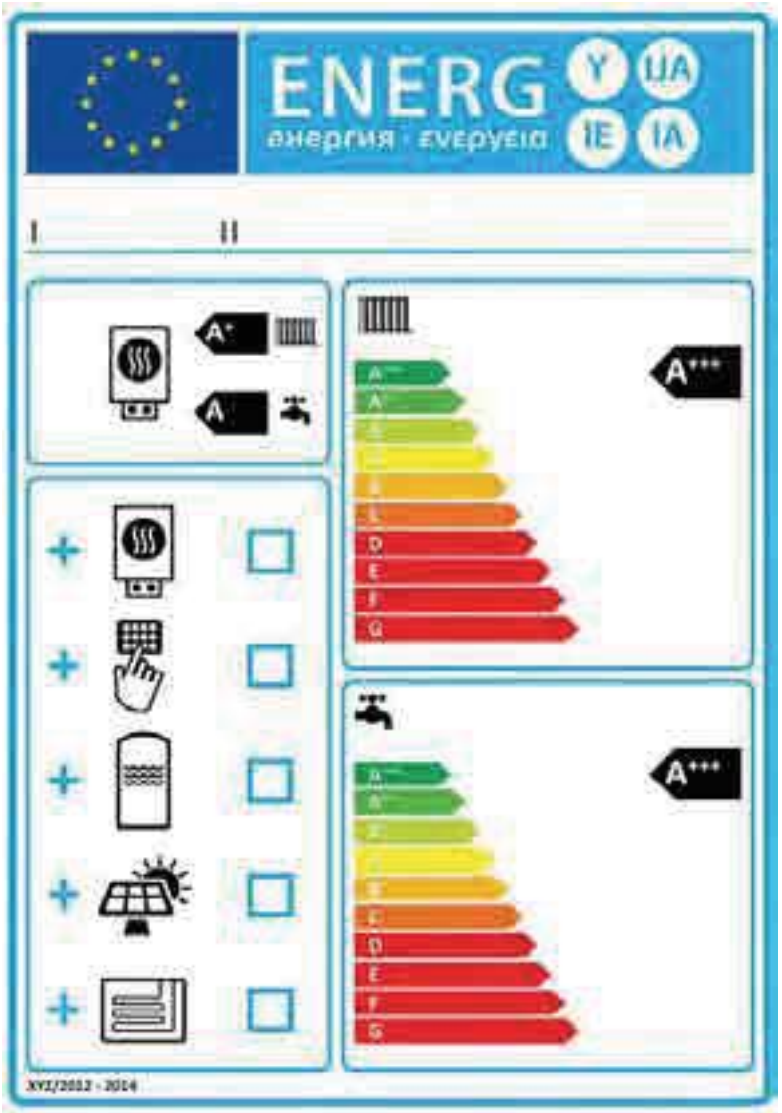
3th '13	4th '13	1th '14	2th '14	3th '14	4th '14	1th '15	2th '15
↑ Publication						Into force ↑	
←Remaining issues→							
← CEN mandate 495 ('harmonization +') →				← CEN mandate 495 ('formal part') →			
→ companies prepare: product range, testing, infra structure, sales strategy, marketing, .. ↑							
Excel / PHP tools (SCF)							
ESTIF SCF workshop↑							

Space heaters (package)
- fiche and label -

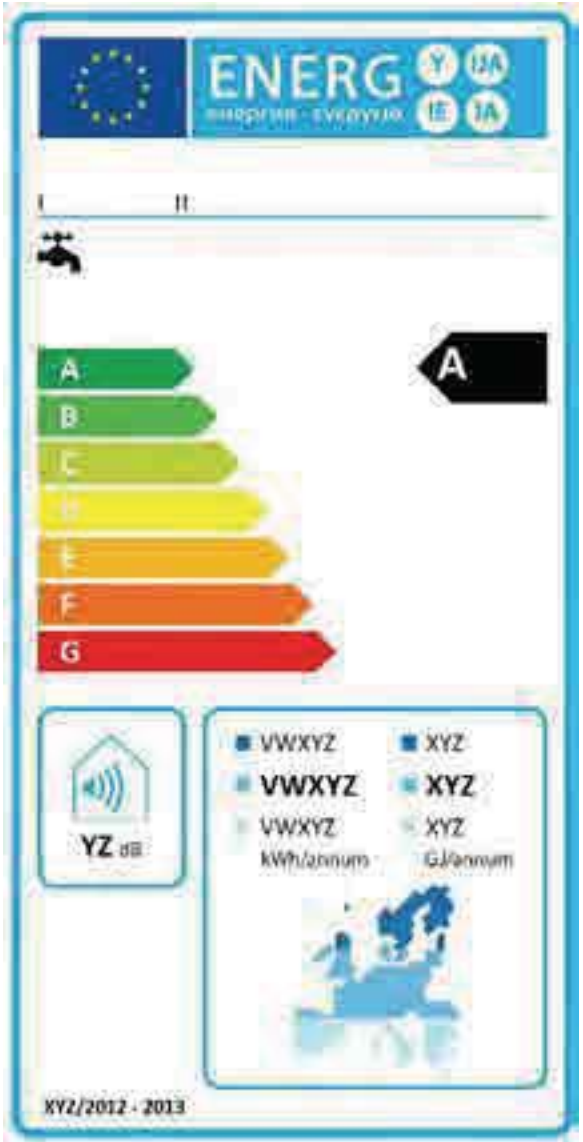




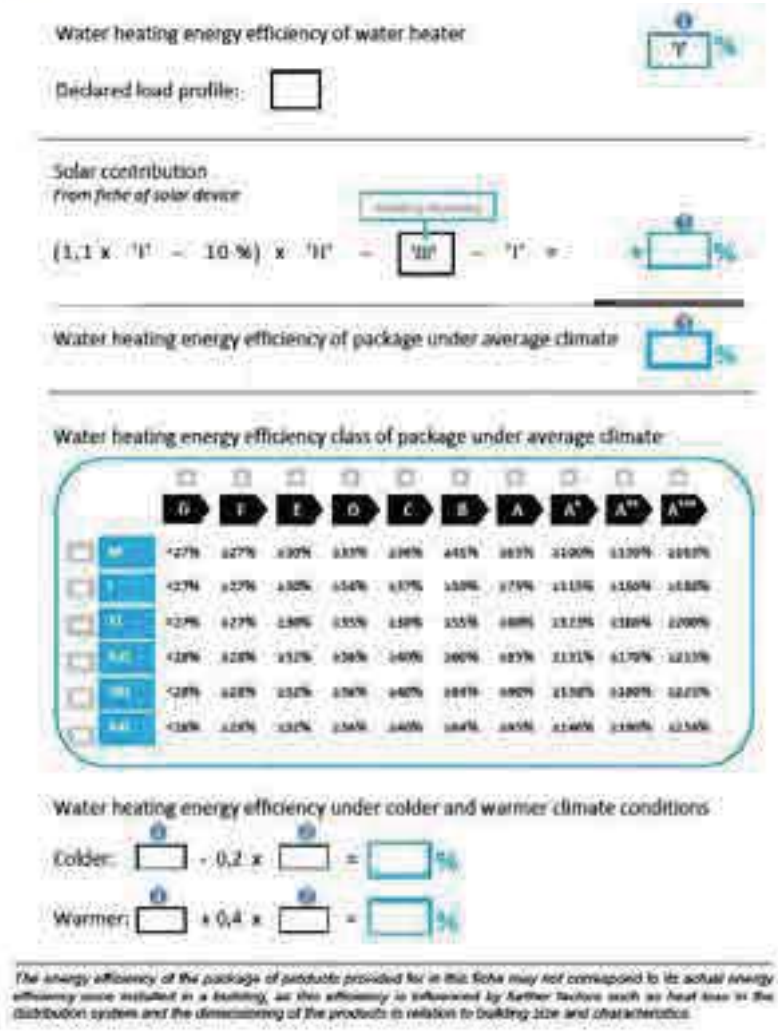
Combi heaters (package)

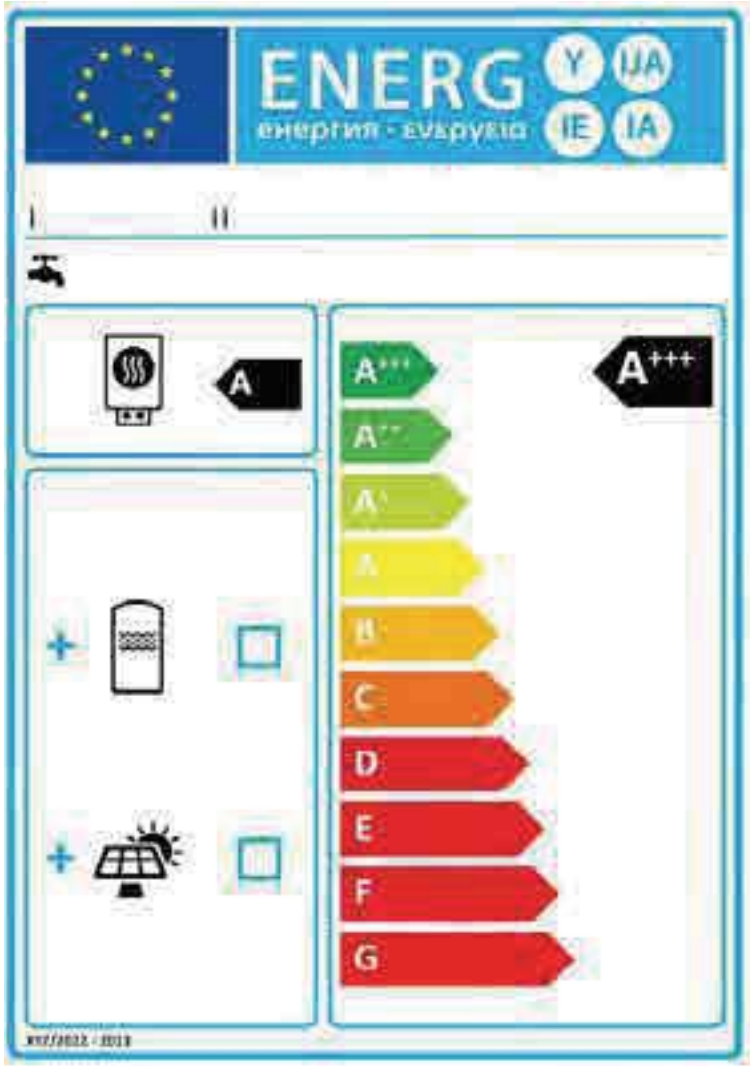


Water heaters (product)
- label -



Water heaters (package)





Hot water tank