EEDAL : LS:17
11th Energy Efficiency in Domestic Appliances and Lighting
17th International Symposium on Science and Technology of Lighting
June 1st-3rd, 2022, Toulouse, France

Market transformation for Heating & Cooling equipment in Europe: using benchmark and advice to involve stakeholders

SOPHIE ATTALI – GUIDE TOPTEN

Presenter's Short Biography

Expert in the field of energy policy and energy efficiency, especially in the area of energy consuming products. Work on many projects for various institutions: energy agencies, international agencies, utilities and NGOs. Honored with the European Women in Energy Award in 2020.

With 25 years of experience, my experience includes:

- Market transformation: product policies (labeling, MEPS, International Standards, Market Surveillance) their definition and implementation, market pull activities, technology and cooperative procurement, training, market surveillance, communication towards targeted stakeholders (manufacturers, retailers, large-scale public and private buyers, opinion relays including NGOs, end-users and the media).
- European institutional and policy framework (energy labelling, eco-design, energy services, low energy buildings).
- Institutional capacity building: organization of training sessions for newly established energy agencies or new personnel.
- Project coordination: Several major European projects gathering more than 15 countries.

guidetopten.fr

Our goals within H2020 funded project

HEATING AND COOLING
KNOWHOW AND SOLUTIONS

HACKS

- Work on the Heating and Cooling energy stakes in Europe - crucial but users are not aware
  - 50% of EU GHG emissions come from space and water heating
  - High number of installed systems old and inefficient
- Promote energy efficiency and sufficiency
  - Identify most energy efficient models (per technology)
  - Promote no/low costs measures to reduce energy demand, bills, improve comfort
- Runs from Sept 2019 to September 2022 (or March 2023)

Digression: The Topten approach

HACKS teams have been working together for the past 15 years applying the Topten methodology

- Topten goal: contribute to climate change mitigation by transforming markets towards more energy efficient products
- Energy efficiency differences between electrical appliances for the same service are still significant
- Topten facilitates product selection process by displaying, on its websites, in free access, the latest market information on best products
- Transparency has benefits for consumers, producers, retailers, policy makers, NGOs

Digression: The Topten approach

- Heating and cooling devices are different from standardised plug-in products because they interact with the building
  - Recommended super-performant but oversized products may consume more than poor performing smaller products
  - Consumers (rightly) rely on installers and don't choose themselves
  - Reducing energy needs is the most beneficial action – from collective and individual perspective
- Need to go further than "just" display best available products
- HACKS "Base line report" to map out the situation and prioritise pragmatic action

HACKS works on 2 axes

- For all consumers, especially for those who do not want to or cannot invest in a new system, it recommends strategies on how to improve comfort and air quality and lower energy bills with the existing system.

- For consumers ready to invest, it provides lists of most energy efficient products, enabling them to make informed decisions.
  - E.g. once decision taken to invest in a heat pump system, all other things being equal, there are large performance differences between products on the market → lifetime costs can increase twofold between products selected for their efficiency and least efficient models allowed on the market

Investment in new equipment

- 15 websites tailored to national context + 1 European platform
  www.topten.eu/hacsk

Investment in new equipment

- Lists of Best Available Technology – BAT - products

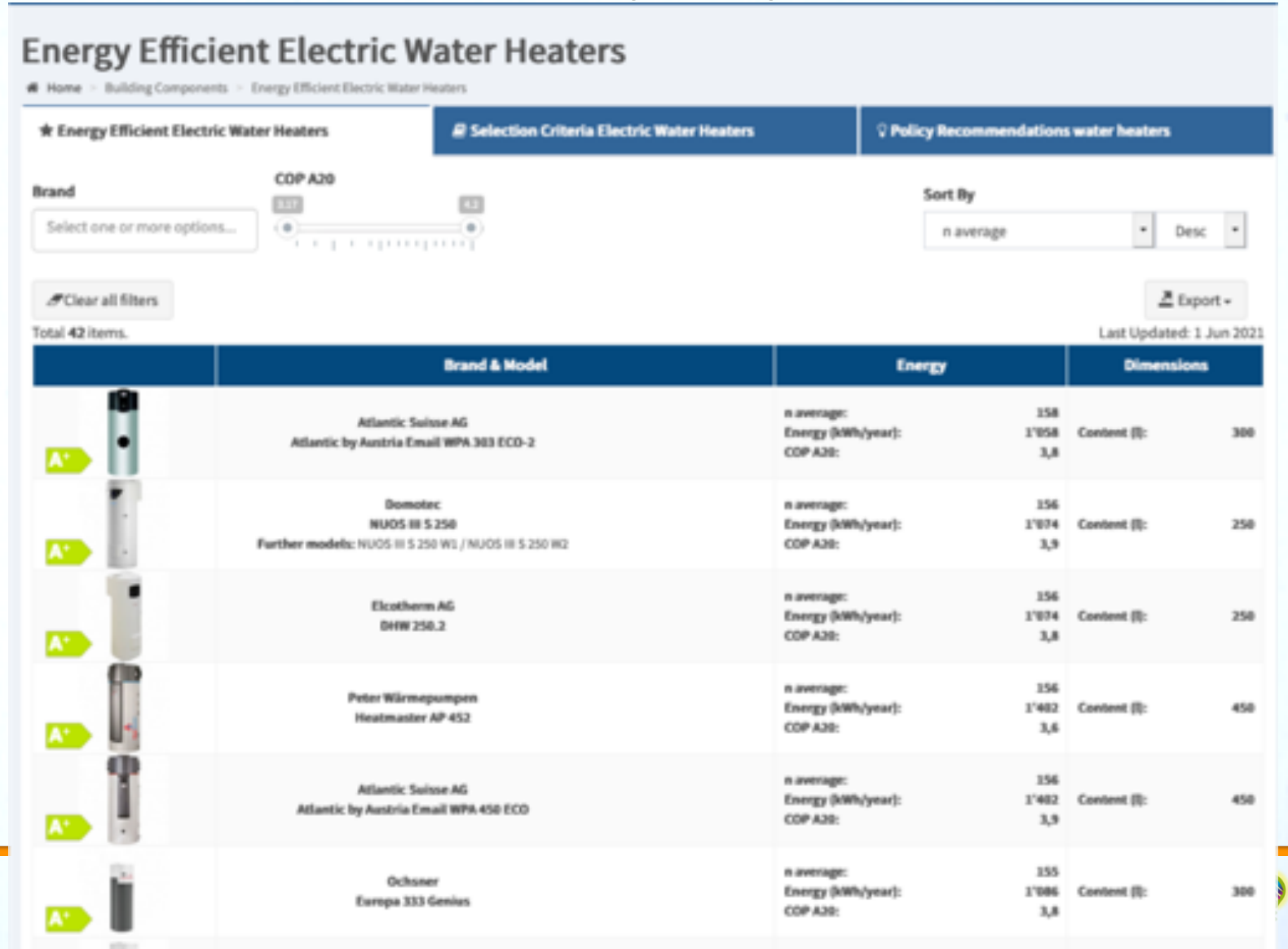
	**Air Conditioning Units** Single split Multi split		**Comfort Fans** To the product list
	**Electric Water Heaters** To the product list		**Circulation Pumps** To the product list
	**Solid Fuel Boilers** To the product list		**Local Space Heaters** To the product list
	**Heat Pumps** To the product list		**Taps & Shower Heads** Taps Shower Heads

BAT product lists

- Set of 8 Criteria papers gathering information on each product category: regulation, how do product works, how to select most efficient one, important topics for consumers (download from Topten.eu)
- Each HACKS team works on the most adapted product categories and adapts the selection criteria → Continuous market study to develop markings in the jungle of products

Precise list of efficient new equipment

- 15 websites tailored to national context + 1 European platform
  www.topten.eu/hacsk



Energy Efficient Electric Water Heaters

Home › Building Components › Energy Efficient Electric Water Heaters

★ Energy Efficient Electric Water Heaters | Selection Criteria Electric Water Heaters | Policy Recommendations water heaters

Brand: Select one or more options...

COP A20: 3.17 – 4.2

Sort By: n average | Desc

Clear all filters | Export

Total 42 items. Last Updated: 1 Jun 2021

	Brand & Model	Energy	Dimensions
A+	Atlantic Suisse AG Atlantic by Austria Email WPA 303 ECO-2	n average: 158 Energy (kWh/year): 1'058 COP A20: 3,8	Content (l): 300
A+	Domotec NUOS III S 250 Further models: NUOS III S 250 W1 / NUOS III S 250 W2	n average: 156 Energy (kWh/year): 1'074 COP A20: 3,9	Content (l): 250
A+	Elcotherm AG DHW 250.2	n average: 156 Energy (kWh/year): 1'074 COP A20: 3,8	Content (l): 250
A+	Peter Wärmepumpen Heatmaster AP 452	n average: 156 Energy (kWh/year): 1'402 COP A20: 3,6	Content (l): 450
A+	Atlantic Suisse AG Atlantic by Austria Email WPA 450 ECO	n average: 156 Energy (kWh/year): 1'402 COP A20: 3,9	Content (l): 450
A+	Ochsner Europa 333 Genius	n average: 155 Energy (kWh/year): 1'086 COP A20: 3,8	Content (l): 300

Product detail view

Atlantic Suisse AG Atlantic by Austria Email WPA 303 ECO-2

Home › Electric Water Heaters › Atlantic Suisse AG Atlantic by Austria Email WPA 303 ECO-2

Energy Class

A+

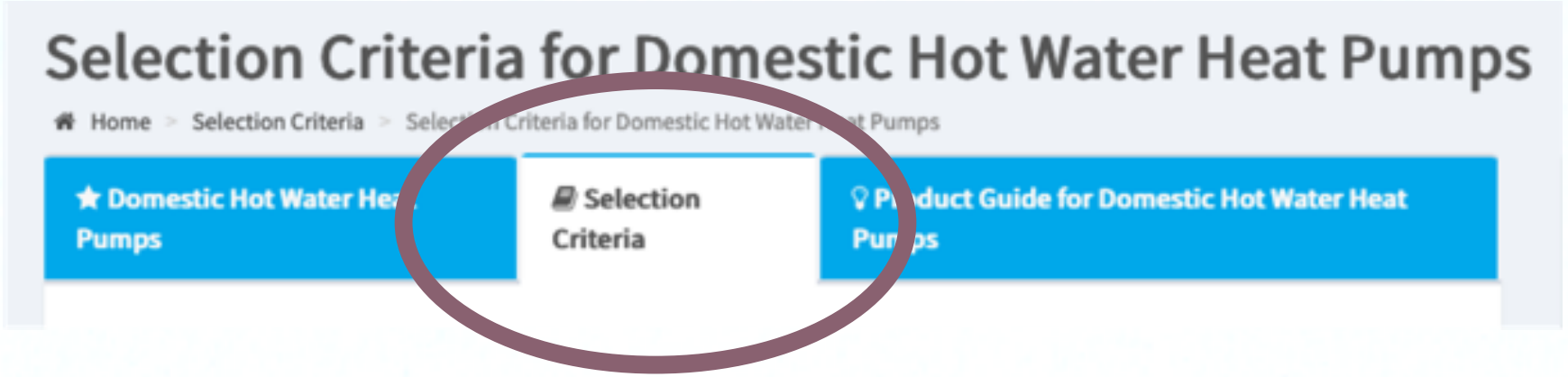
Go back to the product list

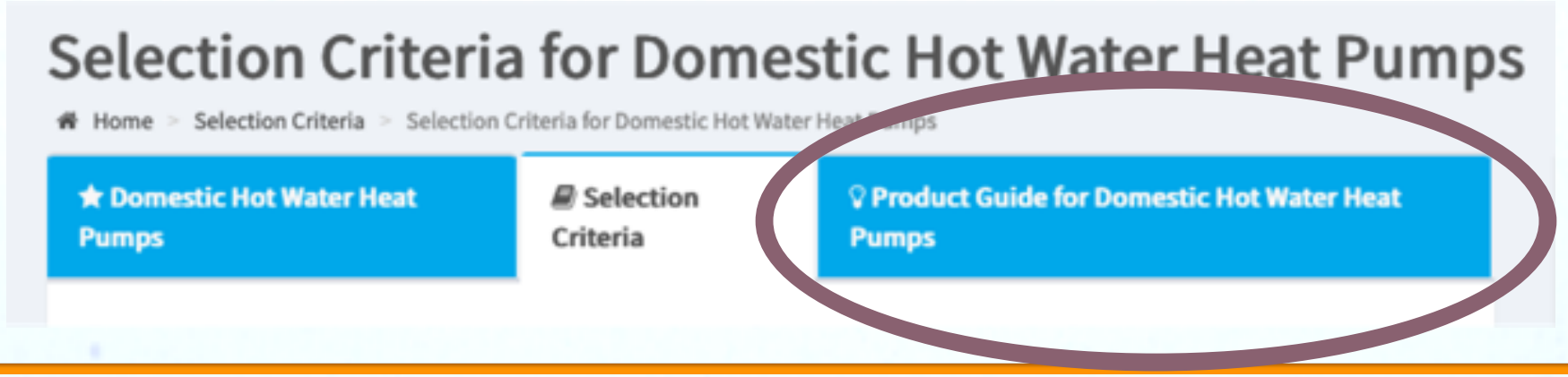
Atlantic Suisse AG Atlantic by Austria Email WPA 303 ECO-2

Purchase and operating cost | Product Details

Brand	Atlantic Suisse AG
Model	Atlantic by Austria Email WPA 303 ECO-2
Efficiency class	A+
n average	158
n cold	158
n warm	158
Energy (kWh/year)	1'058
Energy (kWh/year) cold	1'058
Energy (kWh/year) warm	1'058
COP A20	3,8
Heat source	ambient air
Electric heating (kW)	2,0
Additional heat exchanger	yes
Load profile	XL
Ambient temperature (°C)	15°C

Methodology and Advice published





HACKS Advice pages

- In the Advice pages
  - Encourage upstream consultation of impartial energy advisers → building renovation
  - Links to certified installers
  - Propose alternative solutions – especially to avoid installing cooling equipment

- Catalogue of key topics for the HACKS teams to provide advice on heating and cooling
  - Concepts of comfort and air quality
  - Solutions for reducing the use of heating and cooling
    - Contextual information
    - Relating to the equipment itself
    - Relating to users' behaviour
  - Advice for choosing highly efficient HAC equipment
  - Advice for using HAC equipment in an efficient way

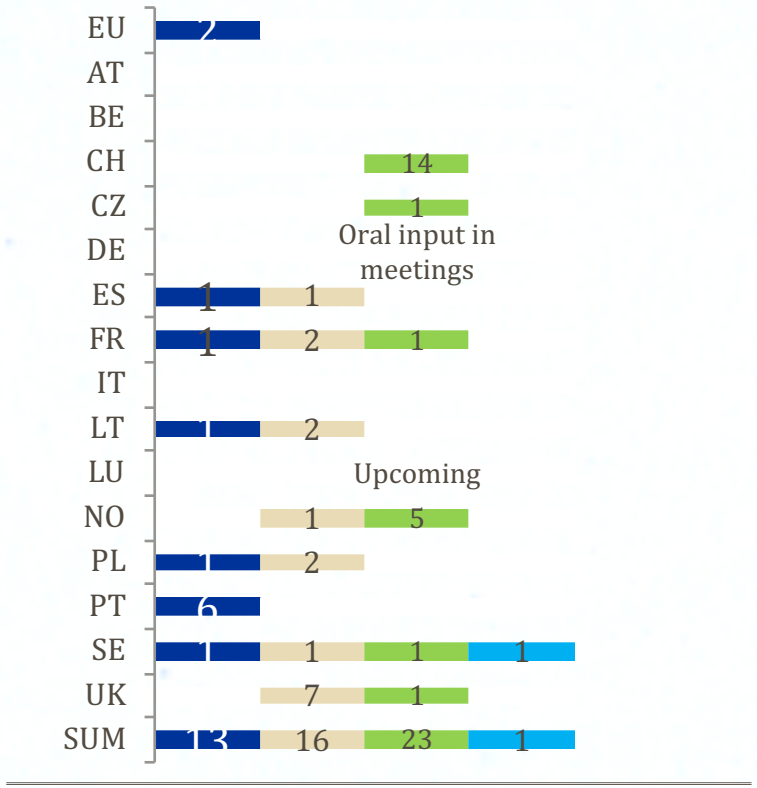
HACKS Calculator

- Help consumers and installers to get a first generic assessment of current heating system.
- Compare performance with alternative new systems
  - Enter simple personal data on their homes (dwelling area, climate zone, number of inhabitants, current heating system, production of sanitary hot water, etc.)
  - select alternative heating systems (more efficient)
  - select possible home insulation measures (reduce the energy demand)
  - and compare the results in terms of energy needs, energy consumption, costs and CO2 emissions.
- The calculator shows that insulation measures are often more beneficial than only changing the heating system

English version and access to other customised versions: https://calculator.topten.eu/?country=uk

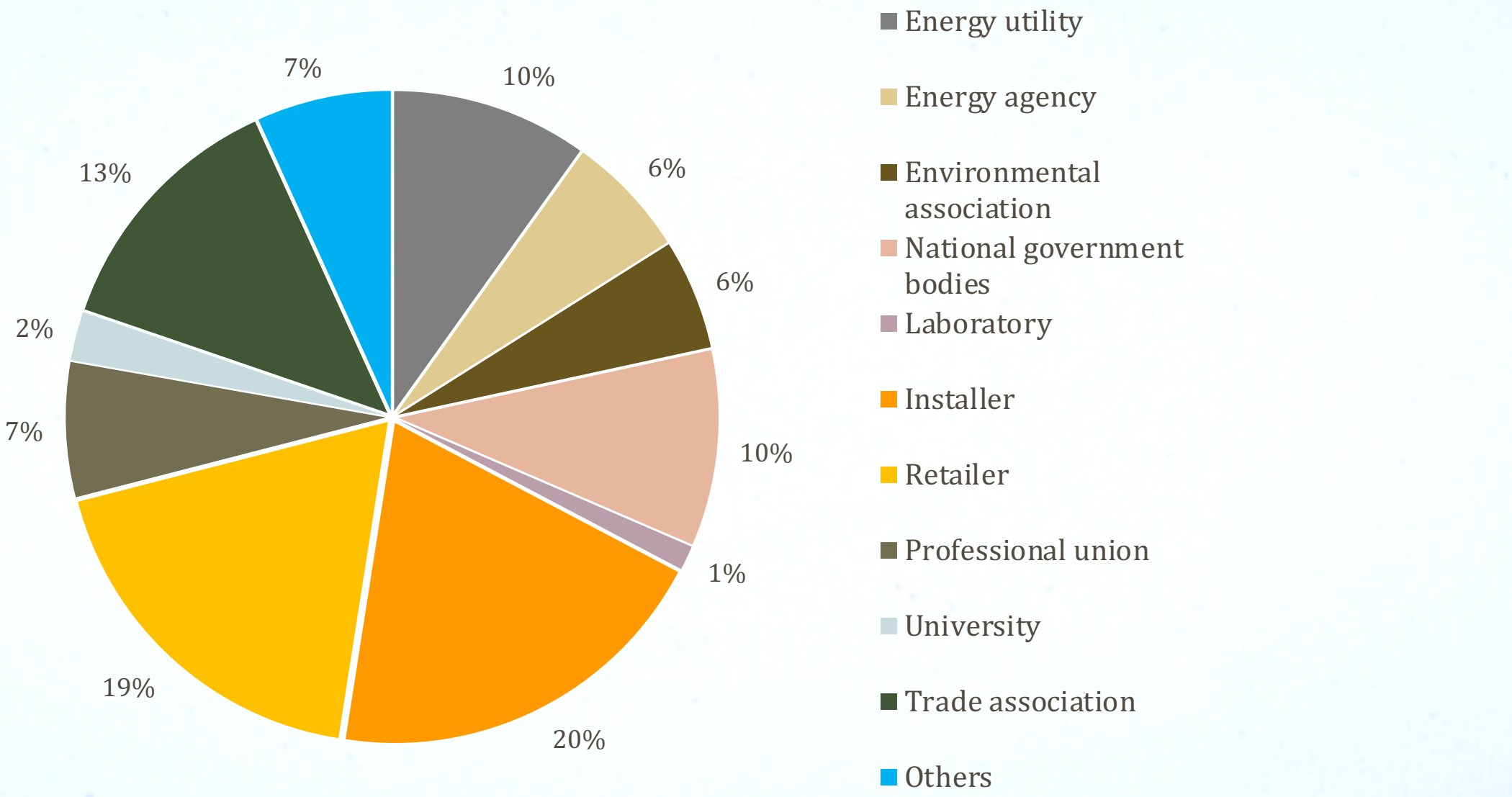
HACKS websites are the basis

- For many communication activities: reach visitors and involve them
- For policy recommendations



- For partnerships with stakeholders / multipliers

180 partnerships with a wide variety of multipliers that use the HACKS content



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Thank you !

IEEE

R2P2

ARMIR Association Rayonnement Industrie Mesure Recherche