

Heat pumps – action plan to accelerate roll-out across the EU

Fields marked with * are mandatory.

Introduction

Rolling out heat pumps is central to the clean-energy transition and to achieving carbon neutrality in line with the goals set in the [European Green Deal](#). All policy scenarios underpinning the ‘Fit for 55’ legislative proposals show a significant uptake of heat pumps in all sectors, and notably in buildings. To meet the 2030 targets and deliver the needed fast decarbonisation of heat, installing boilers in new buildings and replacing fossil-fuel boilers by newer ones should be discontinued as soon as possible.

The [REPowerEU plan](#) calls for prioritising investments in renewables and energy efficiency to reduce fossil-fuel imports and for doubling current roll-out rates of heat pumps in buildings. It also calls for a faster roll-out of large heat pumps for district heating and cooling networks.

There is an urgent need to shift to renewable and efficient heating and cooling technologies in buildings, industry and networks. The European Commission [report on the competitiveness of clean energy technologies](#) indicates that the roll-out of all types of heat pumps needs to accelerate further: from heat pumps for single-family houses, large multi-apartment buildings, tertiary buildings and heat networks, to high-temperature heat pumps for industrial applications. The [Green Deal Industrial Plan](#) points to heat pumps as one of the key technologies to meet EU climate-neutrality goals in the [Net-Zero Industry Act](#) to underpin industrial manufacturing.

Achieving these objectives builds on the framework set by:

- the [Renovation Wave](#);
- the ongoing reviews of heating and cooling product-specific regulations under the [Ecodesign and Energy Labelling](#) framework; and
- the ongoing legislative revision of the [Energy Performance of Buildings Directive](#) (EPBD), the [Renewable Energy Directive](#) (RED) and the [Energy Efficiency Directive](#) (EED), which are part of the ‘Fit for 55’ package.

Purpose of the communication

This initiative will focus on accelerating the roll-out of heat pumps. It will take the form of a strategic communication, with an integrated approach across policy areas. It will seek to draw up an action plan with specific measures to address the main barriers and to strengthen the pull factors for a faster roll-out of heat pumps. The action plan will consider: (i) regulatory and non-regulatory instruments and enabling tools; (ii)

financing, communication and skills-use aspects; and (iii) multiple levels of action (EU, national and local or regional).

The below aspects will underpin the action plan to accelerate the roll-out of heat pumps across the EU.

1. A **platform/accelerator/partnership** of the Commission, Member States, the sector itself, financial institutions and training providers across the whole heat-pump value chain, including on research and innovation, scaling up manufacturing, creating the right national conditions including a favourable electricity /gas price ratio, and cross-cutting standardisation and interoperability aspects to ensure that heat pumps can be widely rolled out without undermining power-grid stability.

2. Focus on **communication** and a dedicated heat-pump skills partnership. There is a need to raise awareness about heat pumps to support their uptake. Consumers, businesses and small industries should have easy access to information on existing heat-pump solutions and on the heat-pump readiness of their buildings, industrial plants and networks, etc.

3. Updated **legislative rules** will aim to ensure a sufficiently strong policy signal for the heat-pump market, including by phasing out stand-alone boilers by 2029. These rules include the recast EPBD and EED, the Article 122 emergency measure on permitting for renewables, the revised RED, the revision of electricity market design legislation, the Net-Zero Industry Act and the Critical Materials Act, and the Commission's proposals for the recast of the Energy Taxation Directive and for a regulation on fluorinated greenhouse gases.

4. More accessible **financing**. To facilitate access to all relevant EU funding programmes, the action plan will map financing possibilities for the roll-out of heat pumps at individual level, and for heating networks supplied by large heat pumps as part of heating and cooling strategies at local and regional level, especially for the less wealthy, like people affected by energy poverty. In this respect, the action plan will also specifically consider the need to boost whole-energy-system approaches in building renovation to prioritise investment in integrated energy-upgrade projects in buildings.

How can I participate

Please complete this questionnaire on the Commission's website. A synopsis report of this public consultation and a summary of the results of all consultations will be published on this page together with the Communication itself. Please note that to ensure a fair and transparent consultation process, only responses received through our online questionnaire will be considered and included in the report summarising the responses.

Questions marked with * are mandatory.

NB: There is a session timeout for the submission of your contribution after 60 minutes; this is an automatic security feature. In order to avoid any loss of data, do not forget to use the "Save as Draft" option on the top right side of your screen before the 60 minutes expire. You can subsequently resume work on your contribution, and submit once completed.

About you

* Language of my contribution

- Bulgarian
- Croatian
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- Hungarian
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- Lithuanian
- Maltese
- Polish
- Portuguese
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* I am giving my contribution as

- Academic/research institution
- Business association
- Company/business
- Consumer organisation
- EU citizen
- Environmental organisation
- Non-EU citizen
- Non-governmental organisation (NGO)
- Public authority

- Trade union
- Other

* First name

Valérie

* Surname

PLAINEMAISON

* Email (this won't be published)

valerie.plainemaison@efiees.eu

* Organisation name

255 character(s) maximum

EFIEES - European Federation of Intelligent Energy Efficiency Services. It is the EU voice of private energy service companies (ESCOs) and their national associations.

* Organisation size

- Micro (1 to 9 employees)
- Small (10 to 49 employees)
- Medium (50 to 249 employees)
- Large (250 or more)

Transparency register number

255 character(s) maximum

Check if your organisation is on the [transparency register](#). It's a voluntary database for organisations seeking to influence EU decision-making.

* Country of origin

Please add your country of origin, or that of your organisation.

This list does not represent the official position of the European institutions with regard to the legal status or policy of the entities mentioned. It is a harmonisation of often divergent lists and practices.

- Afghanistan
- Djibouti
- Libya
- Saint Martin
- Åland Islands
- Dominica
- Liechtenstein
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- Albania
- Algeria
- American Samoa
- Andorra
- Angola
- Anguilla
- Antarctica
- Antigua and Barbuda
- Argentina
- Armenia
- Aruba
- Australia
- Austria
- Azerbaijan
- Bahamas
- Bahrain
- Bangladesh
- Barbados
- Belarus
- Belgium
- Belize
- Benin
- Bermuda
- Bhutan
- Bolivia
- Dominican Republic
- Ecuador
- Egypt
- El Salvador
- Equatorial Guinea
- Eritrea
- Estonia
- Eswatini
- Ethiopia
- Falkland Islands
- Faroe Islands
- Fiji
- Finland
- France
- French Guiana
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- French Southern and Antarctic Lands
- Gabon
- Georgia
- Germany
- Ghana
- Gibraltar
- Greece
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- Lithuania
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- Macau
- Madagascar
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- Malaysia
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- Malta
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- Micronesia
- Moldova
- Monaco
- Mongolia
- Montenegro
- Montserrat
- Morocco
- Mozambique
- Myanmar/Burma
- Namibia
- Saint Vincent and the Grenadines
- Samoa
- San Marino
- São Tomé and Príncipe
- Saudi Arabia
- Senegal
- Serbia
- Seychelles
- Sierra Leone
- Singapore
- Sint Maarten
- Slovakia
- Slovenia
- Solomon Islands
- Somalia
- South Africa
- South Georgia and the South Sandwich Islands
- South Korea
- South Sudan
- Spain
- Sri Lanka
- Sudan
- Suriname
- Svalbard and Jan Mayen
- Sweden

- Bonaire Saint Eustatius and Saba
- Bosnia and Herzegovina
- Botswana
- Bouvet Island
- Brazil
- British Indian Ocean Territory
- British Virgin Islands
- Brunei
- Bulgaria
- Burkina Faso
- Burundi
- Cambodia
- Cameroon
- Canada
- Cape Verde
- Cayman Islands
- Central African Republic
- Chad
- Chile
- China
- Christmas Island
- Clipperton
- Guadeloupe
- Guam
- Guatemala
- Guernsey
- Guinea
- Guinea-Bissau
- Guyana
- Haiti
- Heard Island and McDonald Islands
- Honduras
- Hong Kong
- Hungary
- Iceland
- India
- Indonesia
- Iran
- Iraq
- Ireland
- Isle of Man
- Israel
- Italy
- Jamaica
- Nauru
- Nepal
- Netherlands
- New Caledonia
- New Zealand
- Nicaragua
- Niger
- Nigeria
- Niue
- Norfolk Island
- Northern Mariana Islands
- North Korea
- North Macedonia
- Norway
- Oman
- Pakistan
- Palau
- Palestine
- Panama
- Papua New Guinea
- Paraguay
- Peru
- Switzerland
- Syria
- Taiwan
- Tajikistan
- Tanzania
- Thailand
- The Gambia
- Timor-Leste
- Togo
- Tokelau
- Tonga
- Trinidad and Tobago
- Tunisia
- Türkiye
- Turkmenistan
- Turks and Caicos Islands
- Tuvalu
- Uganda
- Ukraine
- United Arab Emirates
- United Kingdom
- United States

- Cocos (Keeling) Islands
- Colombia
- Comoros
- Congo
- Cook Islands
- Costa Rica
- Côte d'Ivoire
- Croatia
- Cuba
- Curaçao
- Cyprus
- Czechia
- Democratic Republic of the Congo
- Denmark
- Japan
- Jersey
- Jordan
- Kazakhstan
- Kenya
- Kiribati
- Kosovo
- Kuwait
- Kyrgyzstan
- Laos
- Latvia
- Lebanon
- Lesotho
- Liberia
- Philippines
- Pitcairn Islands
- Poland
- Portugal
- Puerto Rico
- Qatar
- Réunion
- Romania
- Russia
- Rwanda
- Saint Barthélemy
- Saint Helena
Ascension and
Tristan da Cunha
- Saint Kitts and
Nevis
- Saint Lucia
- United States
Minor Outlying
Islands
- Uruguay
- US Virgin Islands
- Uzbekistan
- Vanuatu
- Vatican City
- Venezuela
- Vietnam
- Wallis and
Futuna
- Western Sahara
- Yemen
- Zambia
- Zimbabwe

The Commission will publish all contributions to this public consultation. You can choose whether you would prefer to have your details published or to remain anonymous when your contribution is published. **For the purpose of transparency, the type of respondent (for example, 'business association', 'consumer association', 'EU citizen') country of origin, organisation name and size, and its transparency register number, are always published. Your e-mail address will never be published.** Opt in to select the privacy option that best suits you. Privacy options default based on the type of respondent selected

* Contribution publication privacy settings

The Commission will publish the responses to this public consultation. You can choose whether you would like your details to be made public or to remain anonymous.

Anonymous

Only organisation details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published as received. Your name will not be published. Please do not include any personal data in the contribution itself if you want to remain anonymous.

Public

Organisation details and respondent details are published: The type of respondent that you responded to this consultation as, the name of the organisation on whose behalf you reply as well as its transparency number, its size, its country of origin and your contribution will be published. Your name will also be published.

I agree with the [personal data protection provisions](#)

Barriers to the roll-out of heat pumps in buildings, networks and industry

1. What are the key barriers that delay or prevent the roll-out of heat pumps in buildings in the EU?

(Please clarify in the comments if you are answering for a particular country)

Please rate the barriers, according to their importance:

	Very important	Important	Neutral	Slightly important	Not important at all	No opinion
* Demand side – High upfront costs (heat pump including additional installations such as water tanks, radiators, pipework, electrical system upgrades, drilling)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Demand side – High operating costs (including electricity bill, maintenance, repairs)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Demand side – Renovation hassle (e.g. building is not insulated, radiator system not ready for low flow temperature, obsolete piping and cabling, insufficient electrical capacity)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Demand side – Space/noise considerations (e.g. in multifamily buildings or in densely populated areas)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Supply side – Competition from cheaper, conventional fossil-fuel systems (e.g. gas boilers)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Supply side – Manufacturing constraints and supply-chain vulnerabilities (e.g. unavailable products for specific use cases, delivery delays)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Supply side – Shortage of skilled/certified installers	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Supply side – Capacity limitations of distribution grid and cumbersome connection process	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Energy market and pricing – Unfavourable network tariffs and taxation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Financing – Insufficient public support (e.g. grants, incentives)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Financing – Lack of simple, attractive and accessible private financing tools (e.g. loans)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

* Awareness – Lack of understanding of and trust in the technology (e.g. through one-stop shops, energy advisers)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Awareness – Insufficient awareness of heat pumps' potential for demand-side flexibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Awareness – Unfavourable coverage in the press/media, contradictory information about technology options	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Regulatory environment – Lack of rules on training and certification	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Regulatory environment – Restrictive codes and standards	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

300 character(s) maximum

The quality and availability of the workforce is crucial to massively deploy heat pumps, while training centres already have difficulties to recruit. The attractiveness of the needed jobs should be strengthened, rather than creating new training programmes or certification schemes.

2. What are the key barriers that delay or prevent the roll-out of heat pumps in district heating/cooling networks in the EU?
(Please clarify in the comments if you are answering for a particular country)

Please rate the barriers, according to their importance:

	Very important	Important	Neutral	Slightly important	Not important at all	No opinion
* Demand side – High upfront costs (capital expenditure)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Demand side – High operating costs (operating expenditure, e.g. for electricity, maintenance, repairs)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Demand side – Competition from cheaper, conventional fossil-fuel installations (e.g. gas boilers)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Demand side – District networks not ready for heat pumps (e.g. non-insulated networks, obsolete piping, networks only compatible with high temperature)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Supply side – Manufacturing constraints and supply-chain vulnerabilities (e.g. unavailable products for specific use cases, delivery delays)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Supply side – Shortage of skilled/certified installers	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Energy infrastructure – Limited capacity of the electricity distribution grid	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Energy infrastructure – Geographical constraints (e.g. lack of space in densely populated urban areas)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Energy market and pricing – Unfavourable network tariffs and taxation	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Financing – Insufficient public support (e.g. grants, incentives)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Financing – Lack of simple, attractive and accessible private financing tools (e.g. loans)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Regulatory environment – Lengthy permitting and administrative procedure	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* Awareness – Insufficient awareness of heat pumps’ potential for demand-side flexibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Awareness – Lack of awareness of successful business cases	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

300 character(s) maximum

Heating networks temperature can be lowered, provided that the buildings connected to the networks do not require a higher temperature. That's the case if the buildings are not enough isolated, and this is a key limiting factor. Noise and space constraints are also major limiting factors..

3. What are the key barriers that delay or prevent the roll-out of heat pumps in EU industry? (Please clarify in the comments if you are answering for a particular country)

Please rate the barriers, according to their importance:

	Very important	Important	Neutral	Slightly important	Not important at all	No opinion
* Demand side – High upfront costs (capital expenditure)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Demand side – High operating costs (operating expenditure, e.g. for electricity, maintenance, repairs)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Demand side – Competition from cheaper, conventional fossil-fuel installations (e.g. gas boilers)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Demand side – Technical limitations (e.g. shortage of space, lack of primary heat source, too high process temperature)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Supply side – Manufacturing constraints and supply-chain vulnerabilities (e.g. unavailable products for specific use cases, delivery delays)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Supply side – Shortage of skilled/certified installers	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Financing – Insufficient public support (e.g. grants, incentives)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Financing – Lack of simple, attractive and accessible private financing tools (e.g. loans)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Regulatory environment – Lengthy permitting and administrative procedure	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Awareness – Insufficient awareness of heat pumps' potential for demand-side flexibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Awareness – Insufficient internal technical knowledge (e.g. on the minimum heat demand requirements and the applicability of industrial heat pumps in existing processes)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

* Awareness – Lack of critical mass of successful projects in similar industrial processes (lighthouse projects)



Comments:

300 character(s) maximum

The energy crisis that triggered the Repower EU action plan highlighted vulnerabilities in EU's energy supply. A resilient manufacturing base is definitely needed to be maintained in Europe, especially on specific critical components, such as electronics and control systems.

Facilitating policies and measures to accelerate the roll-out of heat pumps

4. Which policies and measures do you think are most relevant to accelerate the roll-out of heat pumps in buildings in the EU?

Please rate them according to their relevance:

	Very relevant	Relevant	Neutral	Slightly relevant	Not relevant at all	No opinion
* Requirements on the energy performance of buildings (e.g. mandatory minimum energy-performance standards, zero-emission standards)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Requirements on the performance of technical building systems (e.g. minimum requirements on greenhouse-gas emissions of technical building systems, minimum requirements for use of renewable energy in heating and cooling of buildings)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Limitations on installations of new stand-alone fossil-fuel heating systems (e.g. via ecodesign minimum requirements)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Legal mandates / minimum targets for heat-pump installations in public buildings	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Ambitious ecodesign regulations for heat pumps (e.g. by introducing a minimum seasonal heating efficiency)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Introduction of a unified EU energy label to make it possible to compare different technologies	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Requirements for energy-efficiency obligation schemes to promote the uptake of heat pumps to comply with the energy-saving obligation	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Requirements for the roll-out of separate sub-metering for heat pumps	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Regulatory measures to strengthen compatibility, interoperability and communication of heat pumps with other building management systems or with the grid	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Mandatory training and certification on the use of climate-friendly refrigerants	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Incentivisation of heat pumps through green public procurement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

* National targets and roadmaps for rolling out heat pumps	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Incentives for replacing existing stand-alone fossil-fuel heating systems (e.g. gas boilers) with heat pumps	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Incentives for developing demand-side flexibility, including heat pumps and storage	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Strengthening carbon pricing to reflect external costs of fossil fuels, including through the new emissions trading system covering fuels used for combustion in the buildings, road transport and additional sectors	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Strengthening consumer information on / awareness of the importance of low-temperature radiators through an EU energy label	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increased market transparency for heat pumps via the EPREL energy-labelling database	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Introduction of information/advice on low-temperature heating in energy performance certificates	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

300 character(s) maximum

Installation of proper metering is key to measure actual energy consumption and performance. It often differs from theoretical/design performance. Existing certifications for refrigerants are enough. Further regulations could jeopardise the initial objective.

5. Which policies and measures do you think are most relevant to accelerate the roll-out of heat pumps in district heating/cooling networks in the EU?

Please rate them according to their relevance:

	Very relevant	Relevant	Neutral	Slightly relevant	Not relevant at all	No opinion
* Simplification and acceleration of permitting procedures for connection to distribution grids	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Minimum targets for district network operators on use of renewable energy	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increasing the capacity of the electricity grid and putting in place communication standards between heat pumps and the electricity grid to facilitate demand-side flexibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Promotion of large-scale heat pumps through green public procurement	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Financial support and incentives for the installation of heat pumps in district heating networks	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Strengthening carbon pricing to reflect external costs of fossil fuels, including through the new emissions trading system covering fuels used for combustion in the buildings, road transport and additional sectors	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* National targets and roadmaps for rolling out heat pumps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Comments:

300 character(s) maximum

National targets for heat pumps would most probably overincentivise heat pumps, against other renewable technologies. Technological neutrality is a major principle, enabling operators to adapt the optimal solution, among a wide range of them, according to each specific situation.

6. Which policies and measures do you think are most relevant to accelerate the roll-out of heat pumps in EU industry?

Please rate them according to their relevance:

	Very relevant	Relevant	Neutral	Slightly relevant	Not relevant at all	No opinion
* Simplification and acceleration of permitting procedures for connection to distribution grids	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Minimum targets for industries on use of renewable energy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Increasing the capacity of the electricity grid and putting in place communication standards between heat pumps and the electricity grid to facilitate demand-side flexibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Financial support and incentives for the installation of heat pumps in industrial facilities	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Strengthening carbon pricing to reflect external costs of fossil fuels, including through the new emissions trading system covering fuels used for combustion in the buildings, road transport and additional sectors	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* National targets and roadmaps for rolling out heat pumps	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

300 character(s) maximum

Economic and financing tools to accelerate the roll-out of heat pumps

7. Which economic and financing tools do you think are most relevant to accelerate the roll-out of heat pumps in buildings in the EU?

Please rate them according to their relevance:

	Very relevant	Relevant	Neutral	Slightly relevant	Not relevant at all	No opinion
* EU public funding – Steer funding from existing instruments towards rolling out heat pumps (e.g. incentives for replacing existing stand-alone fossil-fuel heating systems)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Private funding – Attractive and easily accessible private financing tools (e.g. low-interest loans, revolving funds, green leasing, energy service agreements, energy performance contracts)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Private funding – Incentivise and de-risk private-sector investment (e.g. leveraging revolving funds, guarantees)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Innovative financing – Explore innovative financing tools (e.g. including heat service contracts, on-bill schemes, crowdfunding, performance guarantees)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Taxation – Favourable pricing policies for purchasing heat pumps (e.g. tax reductions and deductions, etc.)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Taxation – Favourable tax rates for electricity compared to gas	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Taxation – Increased carbon pricing of fossil fuels through the Emissions Trading System, including through the new system covering fuels used for combustion in the buildings, road transport and additional sectors	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* Taxation – Provisions in the Energy Taxation Directive (e.g. introduction of new minimum rates that enable a direct comparison between more and less polluting fuels)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Comments:

300 character(s) maximum

Public support should be granted to solutions according to their energy efficiency, environmental and economic merits, and based on technological neutrality.

8. Which financing tools do you think are most relevant to accelerate the roll-out of heat pumps in district heating/cooling networks in the EU?

Please rate them according to their relevance:

	Very relevant	Relevant	Neutral	Slightly relevant	Not relevant at all	No opinion
* EU public funding – Steer funding from existing instruments towards rolling out heat pumps (e.g. incentives for replacing existing fossil-fuel systems)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Steer revenues from the Emissions Trading System towards rolling out heat pumps	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Incentivise and de-risk private-sector investment (e.g. leveraging revolving funds, guarantees)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Attractive and easily accessible private financing tools (heat-pump loans, revolving funds, green leasing, energy service agreements, energy performance contracting, etc.)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Innovative financing schemes for network operators and public authorities to invest in heat pumps (e.g. municipal bonds, heat service contracts, etc.)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Indirect financial incentives, e.g. lower insurance premiums	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

300 character(s) maximum

9. Which financing tools do you think are most relevant to accelerate the roll-out of heat pumps in EU industry?

Please rate them according to their relevance:

	Very relevant	Relevant	Neutral	Slightly relevant	Not relevant at all	No opinion
* EU public funding – Steer funding from existing instruments towards rolling out heat pumps (e.g. incentives for replacing existing fossil-fuel systems)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Steer revenues from the Emissions Trading System towards rolling out heat pumps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Incentivise and de-risk private-sector investment (e.g. leveraging revolving funds, guarantees)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Attractive and easily accessible private financing tools (heat-pump loans, green leasing, energy service agreements, energy performance contracting, etc.)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Innovative financing schemes for industries to invest in heat pumps, including heat service contracts	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Indirect financial incentives, e.g. lower insurance premiums	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

300 character(s) maximum

A technology-neutral and energy/emissions performance based approach to mobilise EU public funding for all renewable and recovered energies should be the driving principles for public funding,

10. Which are the most important types of EU funding to support the roll-out of heat pumps in buildings, district heating /cooling networks and in industry in the EU?

Please rate the types of funding, according to their importance:

	Very important	Important	Neutral	Slightly important	Not important at all	No opinion
* Funding for research and innovation actions (e.g. via Horizon Europe programme)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Funding for market-uptake actions (e.g. via LIFE-Clean Energy Transition programme)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Funding for large-scale demonstrators and big flagship projects (e.g. via the Innovation Fund)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Funding from national/regional funds (e.g. cohesion policy funds: European Regional Development Fund, Cohesion Fund, Just Transition Fund, Modernisation Fund)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Funding using revenues from the Emissions Trading System	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Manufacturing subsidies (e.g. via Important Projects of Common European Interest)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

300 character(s) maximum

Strengthening technical assistance and awareness to accelerate the roll-out of heat pumps

11. Which measures to strengthen technical assistance and awareness do you think are most relevant to accelerate the roll-out of heat pumps in buildings in the EU?

Please rate them according to their relevance:

	Very relevant	Relevant	Neutral	Slightly relevant	Not relevant at all	No opinion
* National/regional communication campaigns targeting consumers presenting available technical solutions for various use cases	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Community-led information campaigns at local level, for example by fostering communication between installers, consumers and energy advisers	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Access to tailored advice (e.g. one-stop shops) for households, especially vulnerable ones and those at risk of energy poverty	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Operational support for project conception, design and implementation	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* EU countries to exchange best practice and to support each other in drawing up national heat-pump action plans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Track progress on heat-pump roll-out targets at EU level and across all EU countries	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

300 character(s) maximum

All renewable and recovered energies must be promoted to achieve decarbonisation. Depending on the needs and characteristics of each situation, it may not be possible to install heat pumps.

12. Which measures to strengthen technical assistance and awareness do you think are most relevant to accelerate the roll-out of heat pumps in district heating /cooling networks in the EU?

Please rate them according to their relevance:

	Very relevant	Relevant	Neutral	Slightly relevant	Not relevant at all	No opinion
* Technical assistance for network operators in legal, planning, permitting, technical, administrative and financing matters (e.g. via ELENA grants)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Communication campaigns targeting network operators and public authorities on available heat-pump solutions for district heating/cooling networks	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Facilitate large-scale projects and interregional cooperation to scale up manufacturing of the most efficient technologies for large-scale heat pumps for district heating and cooling networks	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* EU countries to exchange best practice and to support each other in drawing up national heat-pump action plans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Track progress on heat-pump roll-out targets at EU level and across all EU countries	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Raise awareness through energy audits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

Comments:

300 character(s) maximum

13. Which measures to strengthen technical assistance and awareness do you think are most relevant to accelerate the roll-out of heat pumps in EU industry?

Please rate them according to their relevance:

	Very relevant	Relevant	Neutral	Slightly relevant	Not relevant at all	No opinion
* Technical assistance for industries in legal, planning, permitting, technical, administrative and financing matters (e.g. via ELENA grants)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Communication campaigns targeting businesses and small industries on available solutions for high-temperature heat pumps for industry	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Bring together the heat-pump sector (manufacturers, suppliers) with industrial sectors to develop tailor-made solutions for the specific needs of the industry and standardise them to reduce cost and risks	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Develop more energy-services companies to provide technical and/or financial support for the integration of heat pumps in existing processes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Facilitate large-scale projects and interregional cooperation to scale up manufacturing of the most efficient technologies for large industrial heat pumps	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* EU countries to exchange best practice and to support each other in drawing up national heat-pump action plans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Track progress on heat-pump roll-out targets at EU level and across all EU countries	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Raise awareness through energy audits	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

300 character(s) maximum

Heat pumps main actors should mobilise themselves to design specific solutions for industry, joining manufacturers and suppliers, and the operators (ESCOS) who can bring a specific added value in terms of actual operation performance

Improving skills and knowledge to accelerate the roll-out of heat pumps

14. Which measures to improve skills and knowledge do you think are most relevant to accelerate the roll-out of heat pumps in buildings, district heating/cooling networks and in industry in the EU?

Please rate them according to their relevance:

	Very relevant	Relevant	Neutral	Slightly relevant	Not relevant at all	No opinion
* Mapping of skills shortages in relevant sectors, including traditional and new skills (e.g. digitalisation, hybridisation, system optimisation, use of natural refrigerants)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Mutual recognition of skills and qualifications across EU countries in the context of free movement of workers	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* EU-wide recognition mechanisms of relevant professions, tasks or skills (e.g. certification, qualification, accreditation)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* National/regional dedicated training programmes for engineers and installers organised by educational institutions and/or training providers	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Identifying common core training aspects of relevance for rolling out heat pumps in national training curricula with relevance to building renovation and modernisation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
* Incorporating training and degree courses into formal higher education curricula to provide the relevant skills set	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

* Developing key modules of training materials that could fit into standardised core training with focus on the technologies in question that could be easily adjusted to national contexts	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Comments:

300 character(s) maximum

15. Which specific activities are most relevant to improve skills and knowledge for the roll-out of heat pumps in buildings, district heating/cooling networks and in industry in the EU?

Please rate them according to their relevance:

	Very relevant	Relevant	Neutral	Slightly relevant	Not relevant at all	No opinion
* National/regional certification programmes for e.g. engineers and installers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
* Training programmes organised by installers associations, funded by national/regional funds	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Obligation on heat-pump manufacturers and suppliers to train and certify engineers, installers and retailers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* National/regional train-the-trainers programmes for energy advisers, who act as recognised and trusted trainers for engineers and installers	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* One-stop shops at national /regional level that provide trusted advice to engineers and installers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
* National/regional registers (databases) of trained/certified engineers and installers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

* Free online courses in all EU languages collected on a common platform (e.g. BUILD Up Skills)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Fostering cooperation between players of the heat-pump value chain: engineers; installers; retailers; manufacturers; component, material and technology suppliers, etc.)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Development of practical training material providing information on best installation practice and common mistakes to avoid	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
* Development of practical training material providing information on training and certification programmes for heat-pump engineers and installers	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments:

300 character(s) maximum

The key question to solve the issue of scarcity of skilled workforce is how to make jobs more attractive. Training centers and programmes come as a second important element, while certification as such will not help reduce the lack of skilled workers

Facilitating system integration of heat pumps

16. Integration with local renewables: If you have a heat pump for your domestic or business needs, is it coupled to local renewable generation?

- Yes, solar photovoltaic generation
- Yes, solar thermal generation
- Yes, both solar photovoltaic and solar thermal generation
- No

Comments:

500 character(s) maximum

17. Integration with local storage: If you have a heat pump for your domestic or business needs, is it coupled to a local storage system?

- Yes, electric storage (battery)
- Yes, thermal storage (e.g. water tank)
- Yes, both thermal and electric storage
- No

Comments:

500 character(s) maximum

18. How would you assess the below factors that may deter you from installing a local renewable or storage system?

Please rate the factors, according to their importance:

	Very important	Important	Neutral	Slightly important	Not important at all	No opinion
Funding for research and innovation actions (e.g. via Horizon Europe programme)	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of standardised solutions	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of trustworthy/experienced installers	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Environmental issues with end-of-life disposal/recycling	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Grid connection issues (e.g. permitting, smart metering)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Safety-related issues (e.g. fire safety)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Space availability issues (e.g. roof space)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Maintenance hassle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Comments:

500 character(s) maximum

19. Integration with the grid: If you have a heat pump for your domestic or business needs, do you provide flexibility services (e.g. through demand response) to the local electricity grid?

- Yes
- No

If No, what is preventing you from doing so?

Please rate the factors, according to their importance

	Very important	Important	Neutral	Slightly important	Not important at all	No opinion
Demand response not enabled by national legislation	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Energy retailer does not offer such services	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other stakeholders (e.g. aggregators) do not offer such services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Unclear remuneration scheme	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Insufficient scale to offer flexibility services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Technical barriers (e.g. communication with the heat pump not possible, lack of interoperability)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Concerns about data protection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Conditions set by the local system operator or the energy regulator for offering flexibility services are too strict	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Comments (if applicable, please describe the setting in which these services are provided):

500 character(s) maximum

Increasing sustainability, resilience, competitiveness, innovation and transparency along the heat-pump value chain

20. How would you rate the below factors that may hamper the EU's capacity for innovation in relation to the heat-pump value chain?

Please rate the factors, according to their importance

	Very important	Important	Neutral	Slightly important	Not important at all	No opinion
Lack of support to academic and research institutions for research and innovation	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Limited large-scale manufacturing in the EU at present	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lack of financing for start-ups	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Process for EU-wide patents is too long and costly	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
No possibility to apply for a provisional patent at EU level, with minimal cost, securing short-term (e.g. 1-year) patent protection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Lack of technical and financial capacity to enter into future intellectual property disputes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Lack of standardisation (e.g. of data interface)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Lack of updated safety standards	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Comments:

500 character(s) maximum

21. How would you rate the potential of the individual sectors of the heat-pump value chain to increase the competitiveness and reduce the dependency of the EU industry?

Please rate the factors, according to their importance

	Very important	Important	Neutral	Slightly important	Not important at all	No opinion
Motors, compressors, accumulators, fans	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Heat exchangers	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electronics, chips, controllers, semiconductors	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Raw materials (e.g. copper, steel)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Piping, valves	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Natural refrigerants	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Module production	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>
Project engineering, procurement and construction	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Project operation and maintenance	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
System dismantling and recycling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Comments:

500 character(s) maximum

22. Would you consider it useful to introduce any of the below sustainability measures related to the production and/or lifecycle of heat-pump products/systems sold in the EU?

- Yes
- No
- No opinion

Comments:

500 character(s) maximum

23. Do you consider that supply-chain challenges could have a substantial impact on the availability of heat-pump solutions in the EU market from now until 2030?

- Certainly yes
- Likely
- Maybe
- Unlikely
- Certainly no
- No Opinion

Comments:

500 character(s) maximum

24. Do you consider that supply-chain challenges could have a substantial impact on the affordability of heat-pump solutions in the EU market from now until 2030?

- Certainly yes
- Likely
- Maybe
- Unlikely

- Certainly no
- No Opinion

Comments:

500 character(s) maximum

25. What measures do you think the EU heat-pump industry should take to ensure that businesses across the supply chain can meet demand?

500 character(s) maximum

26. What measures do you think EU countries, regions and local authorities should take to support the manufacturing and roll-out of heat pumps?

500 character(s) maximum

27. Do you consider that the EU's reliance on imported products/materials in the heat-pump sector may jeopardise a speedy roll-out of heat pumps?

- Yes
- No

Comments:

500 character(s) maximum

28. For which raw materials or specific intermediate components do the below situations apply – if any?

- a. EU suppliers depend on a single supplier / non-EU country for a critical percentage (e.g. 65% of the total trade volume)
- b. EU suppliers encounter trade barriers / non-tariff measures imposed by non-EU countries
- c. Specific measures of cooperation with non-EU countries (e.g. partnerships) should be taken (also for final products)

500 character(s) maximum

29. Please upload your file(s), if you have any further comments or specific contributions that are relevant for heat pump roll-out and are not covered by the questionnaire.

Only files of the type pdf,txt,doc,docx,odt,rtf are allowed

18ea670b-0062-465a-a85c-60be009ea0b7/Public_Consultation_Heat_Pump_Action_Plan_-_30_Aug_2023_-_EFIEES_-_Final_.pdf

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