

第八届清华大学-国际能源署联合研讨会

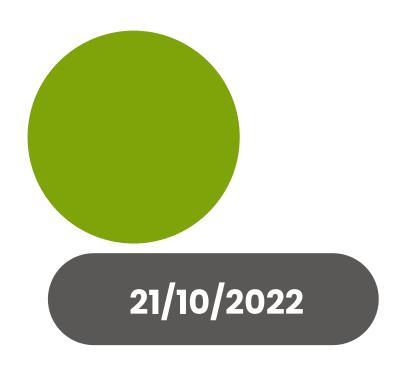
The 8th IEA-Tsinghua Joint Workshop

建筑领域碳中和路径和建筑供暖脱碳

Making Buildings Zero-Carbon Ready by 2030 – Near-term Solutions for Heating Systems

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欧洲供暖与电力, 政策主任



Heating and cooling matters



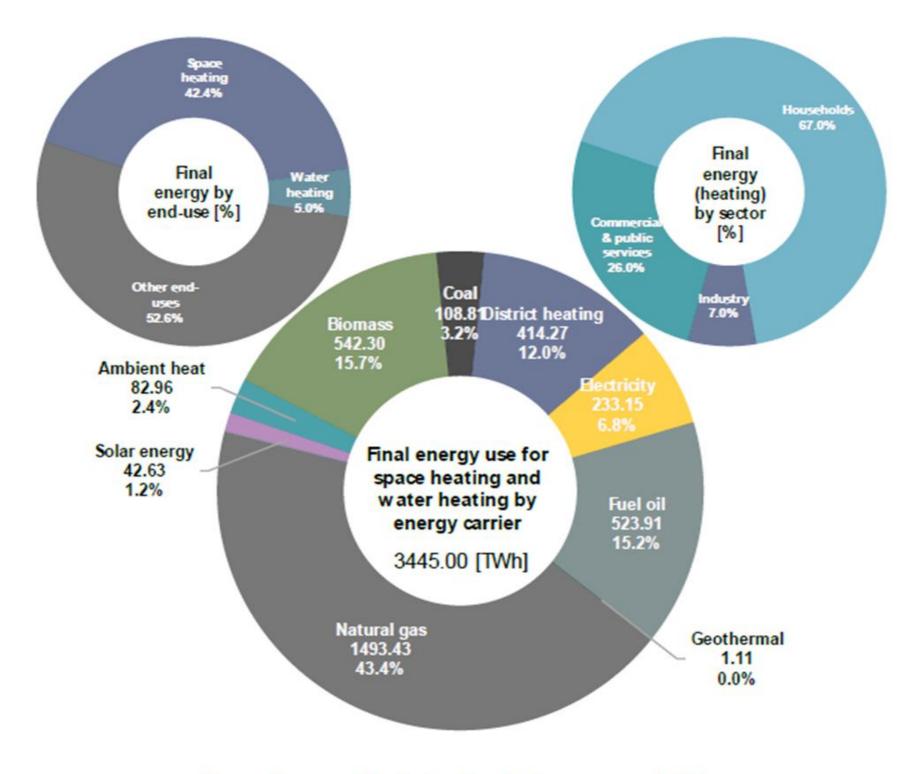
The size of the challenge:

The EU consumes **half** of its energy for heating and cooling purposes, for space and water heating.

The main consumer of thermal energy is households and commercial/public buildings.

Natural gas is the leading energy source for space and water heating.

Only 23% of renewable energy used in heating and cooling.



Share of renewables in heating (primary energy) [%]

Renewable 23.1% Nonrenewable 76.9%

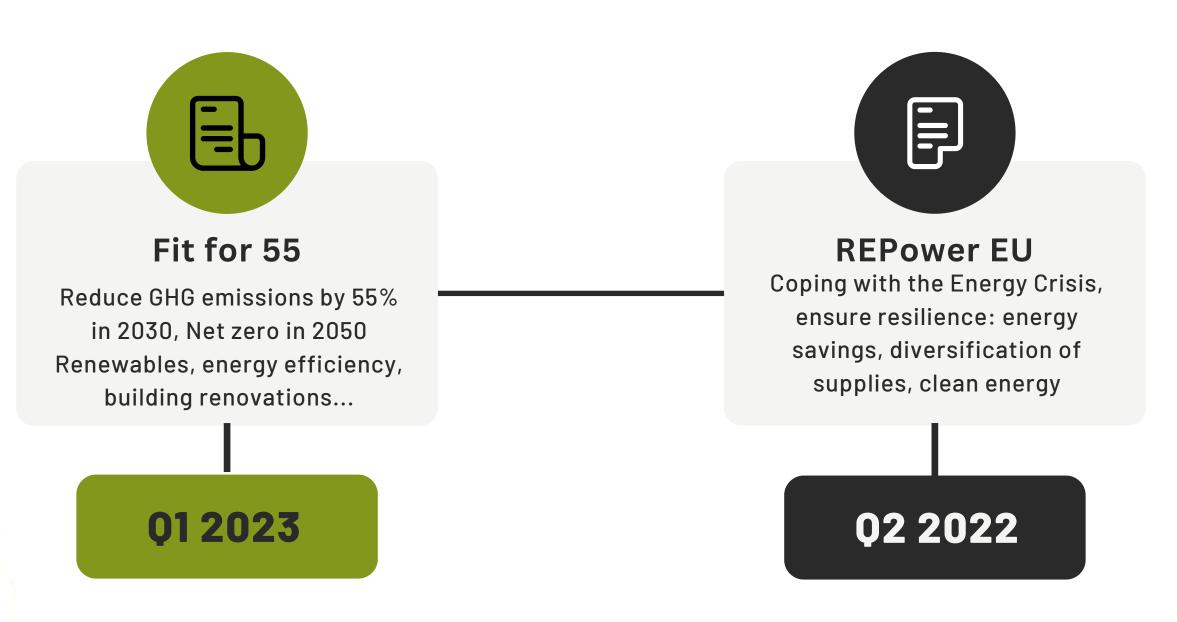


Two major EU Energy initiatives ongoing



A timid yet tangible shift towards more recognition of the importance of H&C decarbonisation and the role of DHC for building decarbonization in the European legislative agenda

- Recognition of waste heat
- Push for municipal energy planning
- Connection of buildings to DHC
- DHC decarbonisation blueprint



- 30 mio newly installed heat pumps in 2030
- 10 million units in the next 5 years
- Development & modernization of DHC with large scale HP + geothermal + solar thermal

We can do a lot more

DHC is one of Europe's most untapped clean heating & cooling solution.

From 13% today, it could supply up to 50% of the European heat demand in 2050.

A 10-Point plan to accelerate the EU heat transition



Develop a **robust EU Heating & Cooling Strategy** to align with the Climate Law and energy security imperative



Develop a holistic approach to building renovations: connecting with local renewable and sustainable waste heat sources



Introduce mandatory heat planning for local authorities



Rethink the **financing framework** to de-risk investments in sustainable district heating



Ban individual fossil-only boilers in new, refurbished and renovated buildings

A 10-Point Plan to accelerate the EU heat transition To Columbor 2012 Today's energy security crisis is a heating crisis. Heating accounts for 50% of EU energy demand, and 70% self comes from the Substitutions exist in Europe to phase out food shalls in heating, by rolling out remembate and suntainable water her tax course and technologies, including heat purpose. These existations are locally carend, climate-feeredy, ready to deploy and affordate. They make our energy system more resident and create local benefits for our economy, fooding transitions: as roomte share the REPowelfQ Lorgosal, we must complement emergency makes bear search or make the Report. The "Riffulfo package is an important step in this derection, but it is by no means emough to ready the fall potential of remeables and sustainables water heat southinns, bringing Europe on the path to climate muturally and emergy independence. The XX undersigned organization plant companies | use of the parabose to meet the dependence of the European Commission, Purliament and Member States, to implement, without delay, a 10-point plan for a successful heating and cooling transition. 1. Develop a robust Heating and Cooling Strategy was not fit for purpose to meet the dependence of the EU one of the purpose to meet the dependence of the EU one of the purpose to meet the dependence of the EU one of the purpose to meet the dependence of the EU one of the Purpose of the Purpose Commission to accelerate the end out of remember and controlling removables not considered to entire the column of previous and controlling removables and down hority technologies, such as heat supply in cities Europe's 2016 Heating and Cooling Strategy was not the end of the Purpose of t























Thank you, ask your question!