

# DecarbHeat initiative

Technology is ready for a carbon free heating and cooling sector

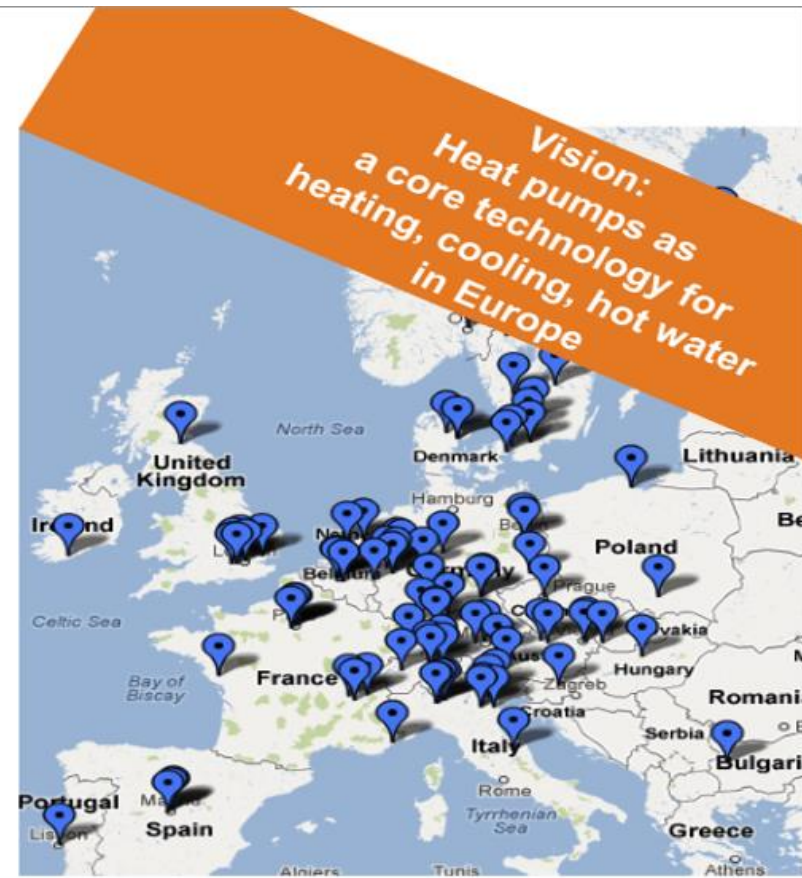


From Paris agreement to  
« DecarbHeat » initiative



# European Heat Pump Association (EHPA)

- 121 members from 22 countries (status 09/2017)
  - Heat pump manufacturers
  - Component manufacturers
  - National associations
  - Consultants
  - Research and test institutes
- EU-wide representative of heat pump industry
- Registered in Brussels



EHPA represents the majority of players in the European heat pump industry



# Paris agreement



December 2015: PARIS \_ COP21 (*Conference Of the Parties*)

Preventing « dangerous » human interference  
with the climate change

Paris agreement ratified by 174  
nations (out of 197 recognised by UN)

Canada ratified the  
agreement in October  
2016



Source: unfccc.int

# Paris agreement

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Keeping a global temperature rise this century well below 2° C ;  
better yet 1,5° C

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**Article 4** I. In order to achieve the long-term temperature goal set out in Article 2, Parties aim to reach global peaking of greenhouse gas emissions as soon as possible, recognizing that peaking will take longer for developing country Parties, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty.



0 greenhouse gas  
emissions by 2050



## EU targets

40% CO<sub>2</sub> emission by 2030 compared  
with 1990 emission level

# EU commitment

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F-GAS regulation

*Kyoto protocol*

Phase-down and  
Ban of HFC  
2030: 22% (2015)

Energy efficiency

Eco-design

Renewable energy  
directives

Less consumption  
More renewable

Energy performance  
of building directive

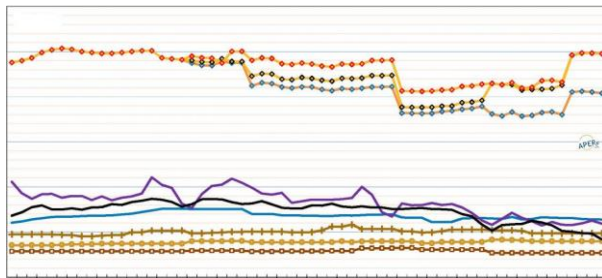
Building efficiency  
Nearly Zero Energy  
Buildings

## Energy Performance of Building directive

Decarbonising  
building stock by  
2050



Renovation plan



Smart readiness  
indicators



Periodic inspection



## EU heating sector

*Hydraulic heating is dominating in Europe*

Preferable solution;  
under floor heating

COMFORT

Also used for cooling  
during summer



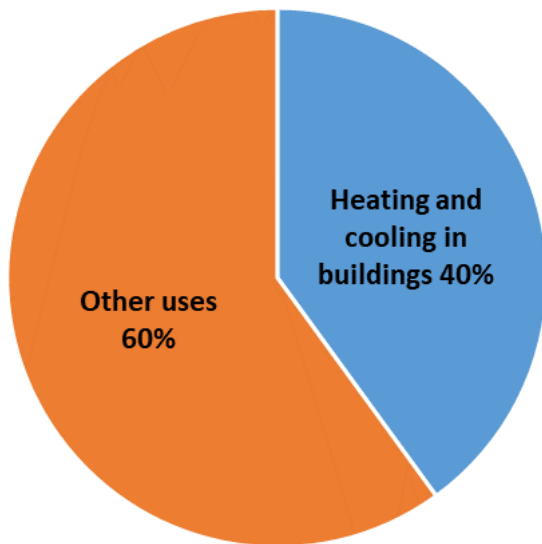
EFFICIENCY

Low temperature operation:  
 $35^{\circ}\text{C}$   
 $\Rightarrow$  Ideal for heat pump: high  
performances

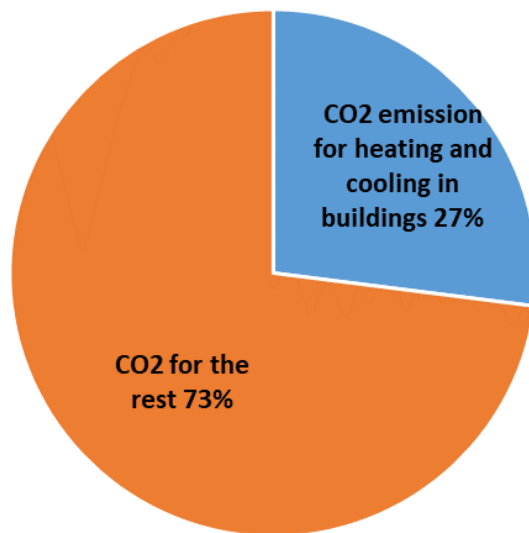
# EU heating sector

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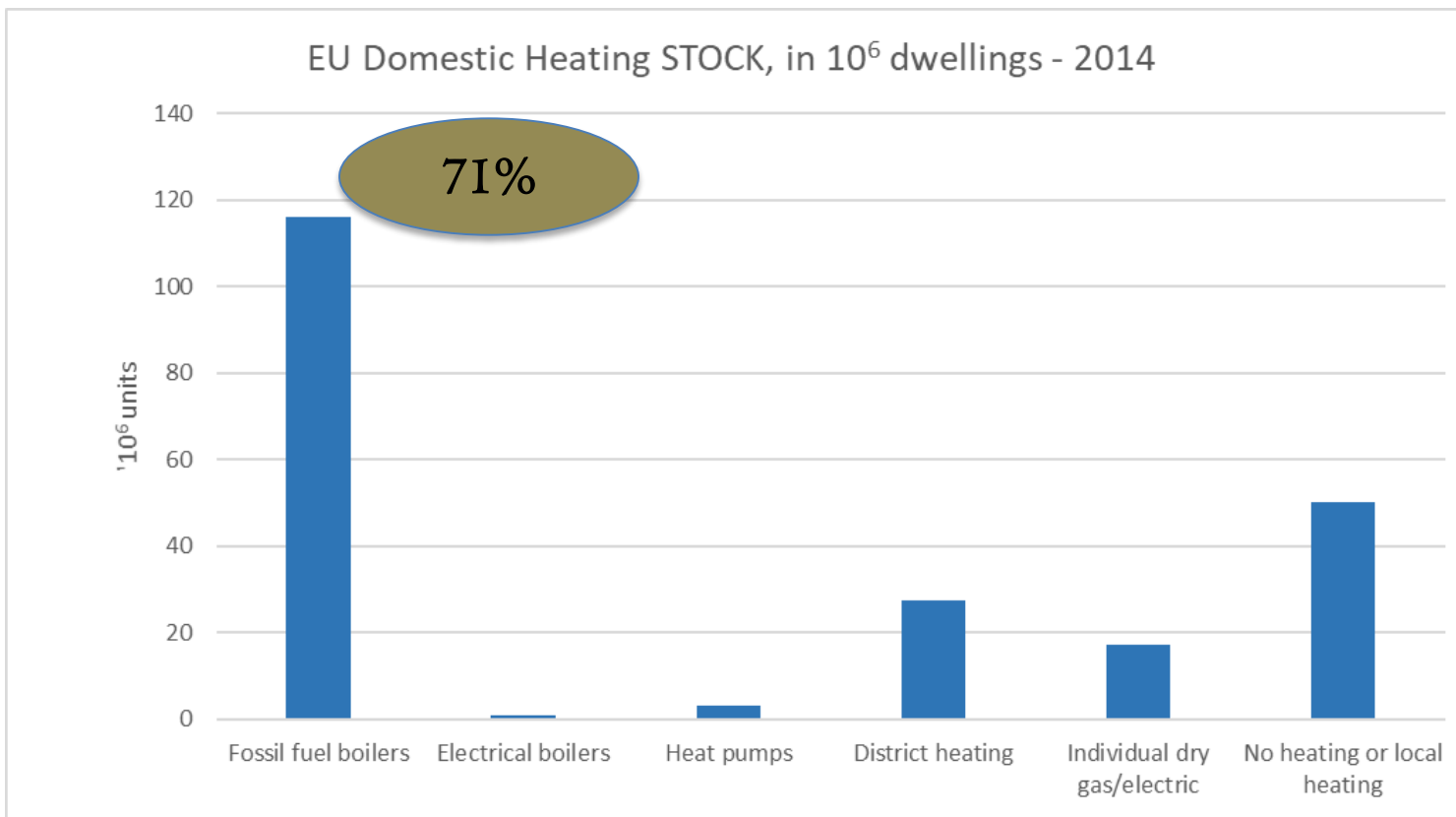
## Final energy use in EU



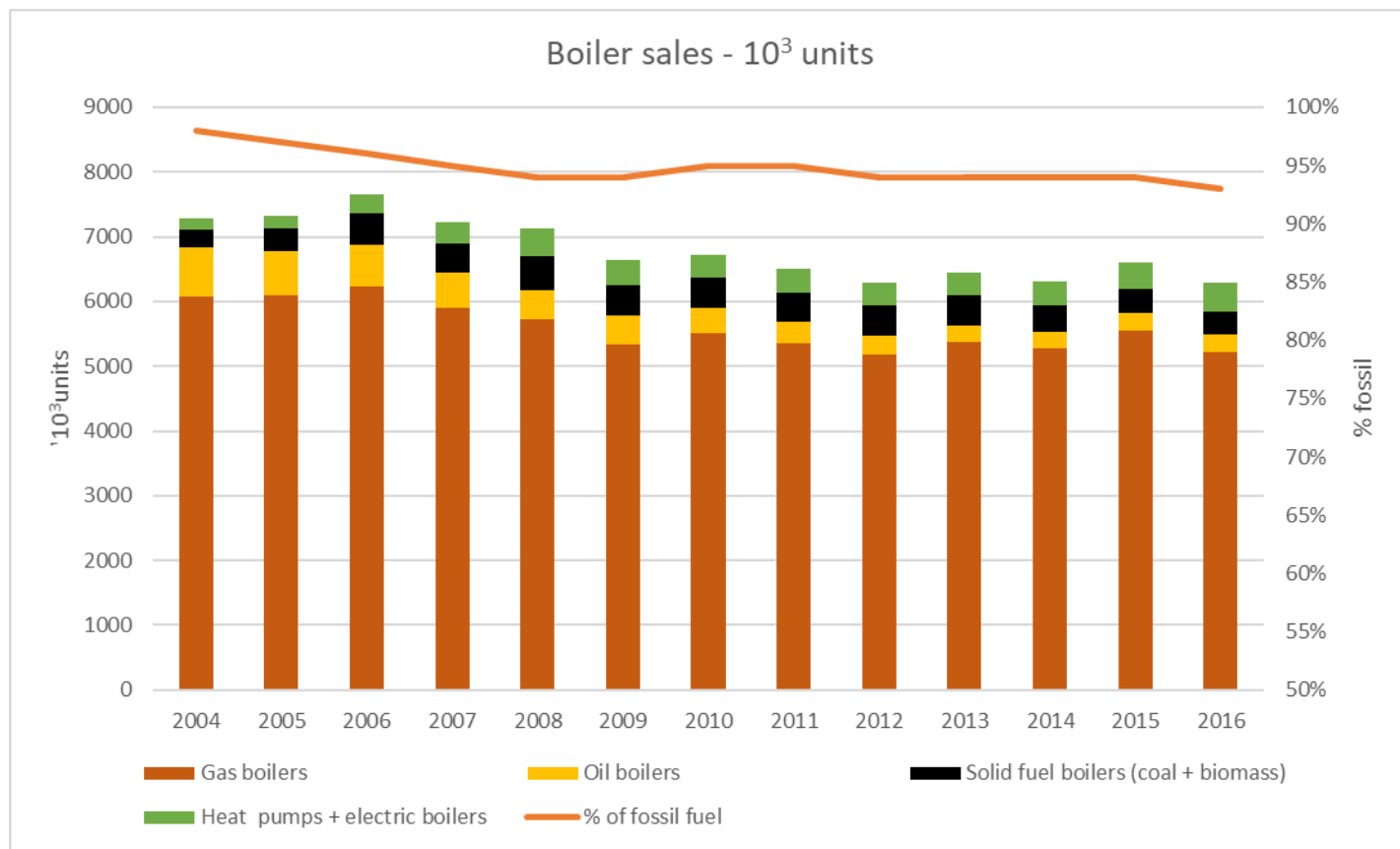
## CO<sub>2</sub> emissions in the EU



## Heating building stock

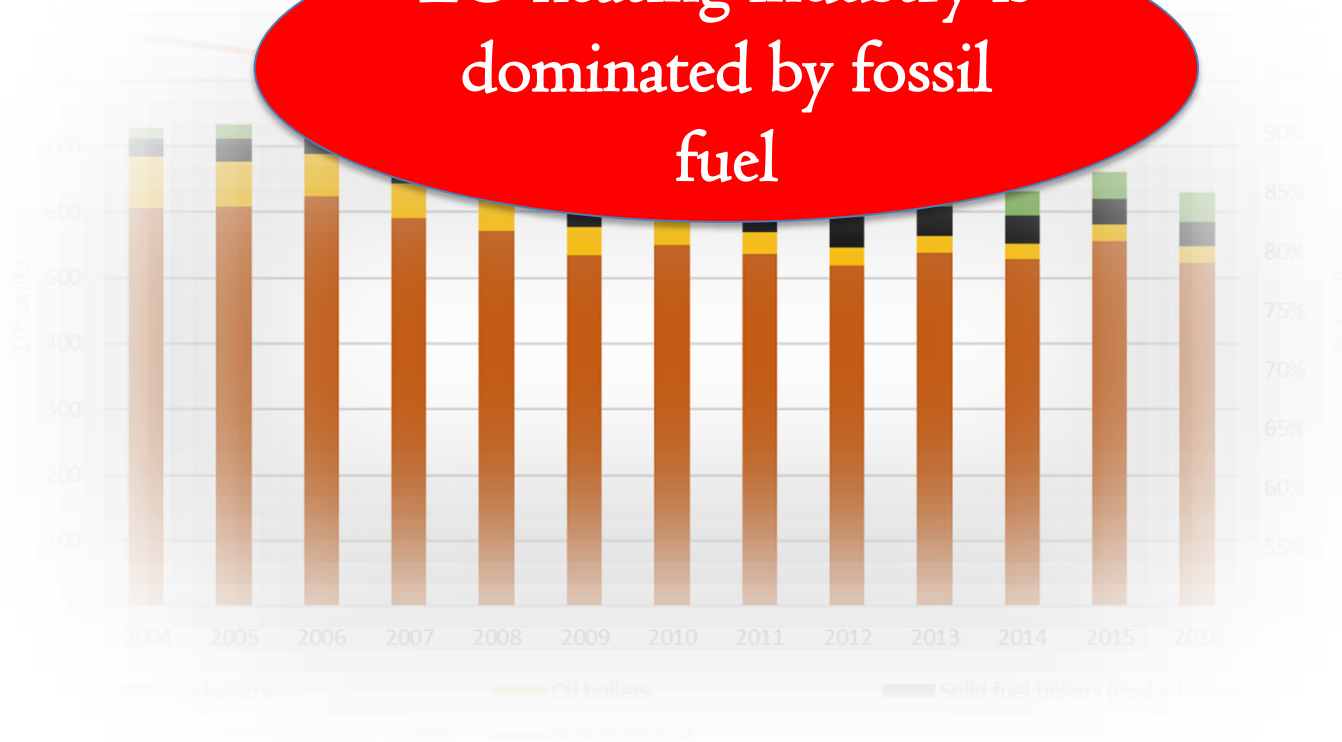


# EU heating sector



# EU heating sector

EU heating industry is  
dominated by fossil  
fuel





# DecarbHeat initiative

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## Starting point of DecarbHeat initiative



- ❑ Decarbonising society without decarbonising heating and cooling is not possible
- ❑ Decarbonising heating and cooling can be done based on proven, available technologies

## The goal

- ❑ Bringing the focus of EU on decarbonisation of the building stock
- ❑ Spreading the message that heating and cooling industry is ready



# DECARB HEAT

Acting together to decarbonise Europe

The heating and cooling industry together with their representative associations fully support the EU in order to turn the vision of a 100% decarbonised heating and cooling system in Europe by 2050 into reality

**The Decarb**



**Heat Initiative**

**DecarbHeat vision:**  
**100% decarbonised heating and cooling system in Europe by 2050**

## **industry pledge**

- ☐ Aligning business development plans with this goal
- ☐ Increasing research and development activities to improve the environmental benefit and cost efficiency

**The Decarb**



**Heat Initiative**

**DecarbHeat vision:**  
**100% decarbonised heating and cooling system in Europe by 2050**

**industry pledge**

**policy  
requests**

- ☐ Align current and planned energy policies with this vision
- ☐ Establish conditions for an energy market that would spontaneously drive decision makers to opt for 2050-ready solutions

## The Decarb



## Heat Initiative

**DecarbHeat vision:**  
**100% decarbonised heating and cooling system in Europe by 2050**

**industry pledge**

**policy  
requests**

**support  
document**

**Support from the associations**

- ☐ To support the vision
- ☐ To take actions in their remit to support this vision



**The Decarb**



**Heat Initiative**

**DecarbHeat vision:**  
**100% decarbonised heating and cooling system in Europe by 2050**

**industry pledge**

**policy  
requests**

**support  
document**

**Industry platform**

To facilitate the materialization, review and further development of the decarbonisation strategy

# DecarbHeat initiative

Start of the campaign with the joint decarbHeat conference May 2017

A promotional poster for the DecarbHeat conference. The background is a scenic view of Brussels at sunset, with several hot air balloons floating in the sky. The DecarbHeat logo, a colorful geometric design, is positioned above the text 'DECARB HEAT'. Below this, the tagline 'Acting together to decarbonise Europe' is written. The conference dates '11-12.05.17' and location 'at the BEL, Brussels' are listed, along with the website 'www.decarbheat.eu'. The hashtag '#DecarbHeat 2017' is prominently displayed. At the bottom, a white box contains the text 'An initiative of EHPA' and the EHPA logo, which includes the text 'ehpa' and 'European heat pump association'.

  
**DECARB HEAT**  
Acting together to decarbonise Europe

**11-12.05.17 at the BEL, Brussels**  
**[www.decarbheat.eu](http://www.decarbheat.eu)**

**#DecarbHeat 2017**

An initiative of EHPA



# DecarbHeat initiative

DecarbHeat pledge & support:

71 signatures from the industry, associations and policy makers.





## DecarbHeat: actions

Communication campaign towards: policy makers and the whole industry

- Press releases / Policy debates

- Annual forum with high level participants

- Presentation at fairs and conference / Distribution of goodies

Permanent communication together with European commission

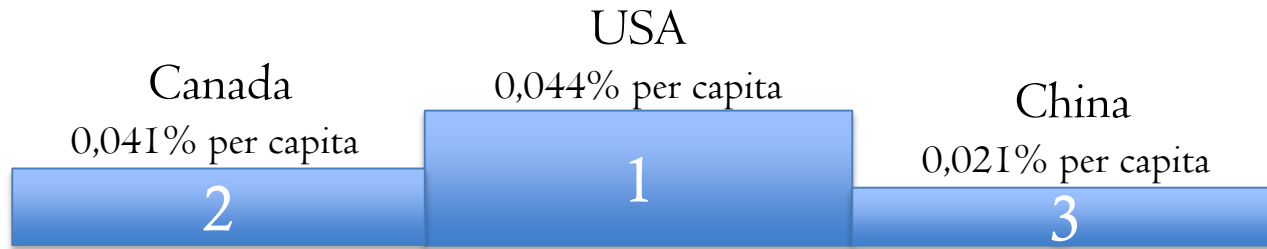
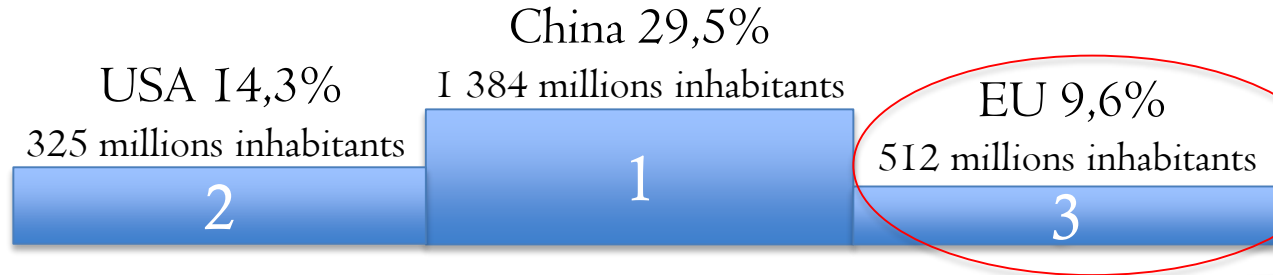
- Bringing support

- Influence the decisions

**Huge communication plan to bring the focus on  
decarbonisation of the heating and cooling sector**

# Focus on national situations

## Greenhouse gas emissions awards (2015)



Canada 1,5%  
36,5 millions

EU  
0,018% per capita



## Focus on national situations

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Sweden has already turned round the  
supertanker...

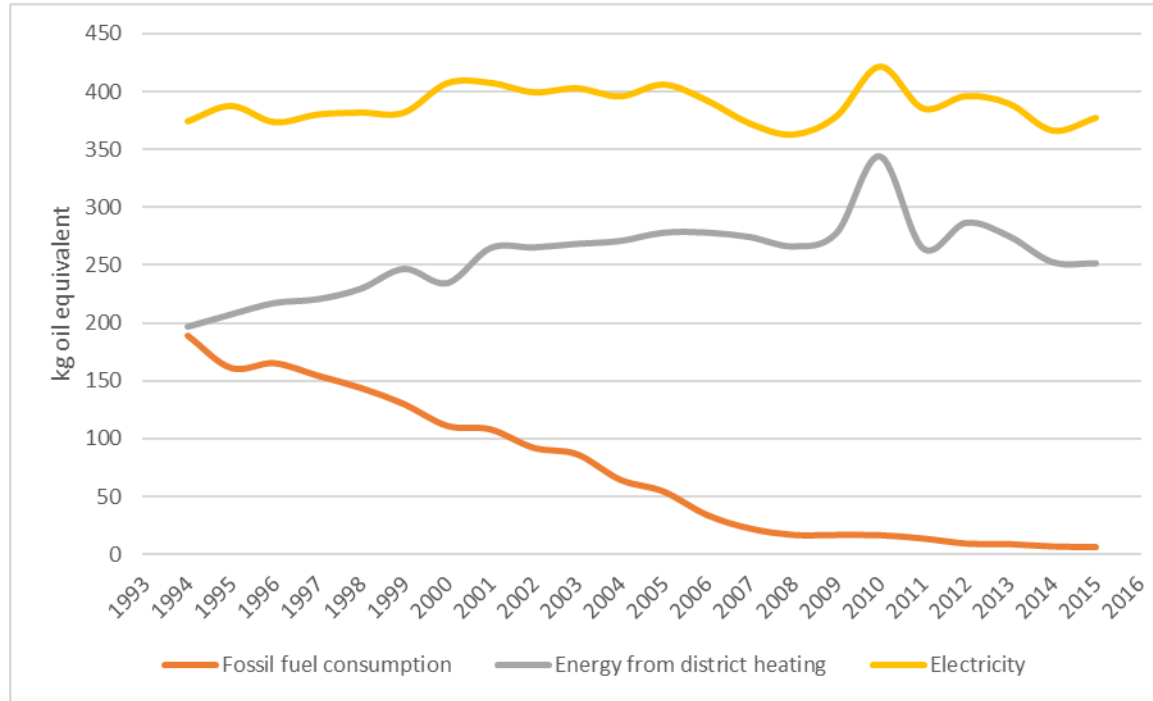
The example of Sweden



# Focus on national situations

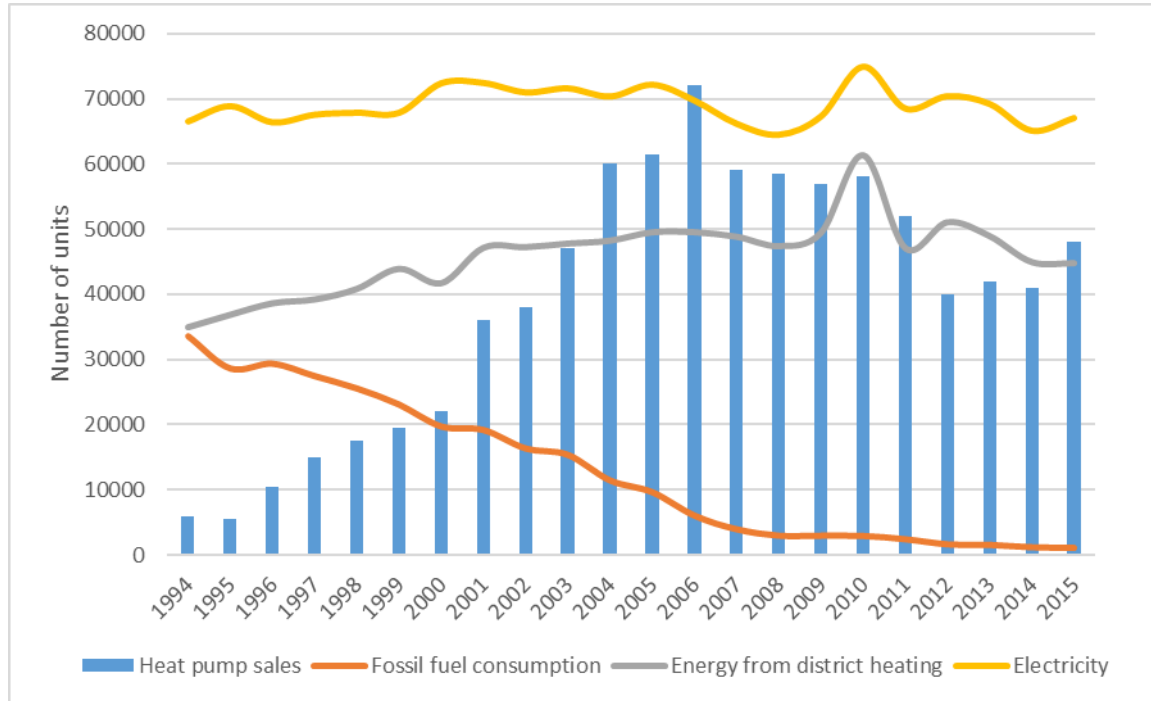
Fossil fuel energy  
dropped down to  
0 in Sweden

Energy consumption in Swedish households



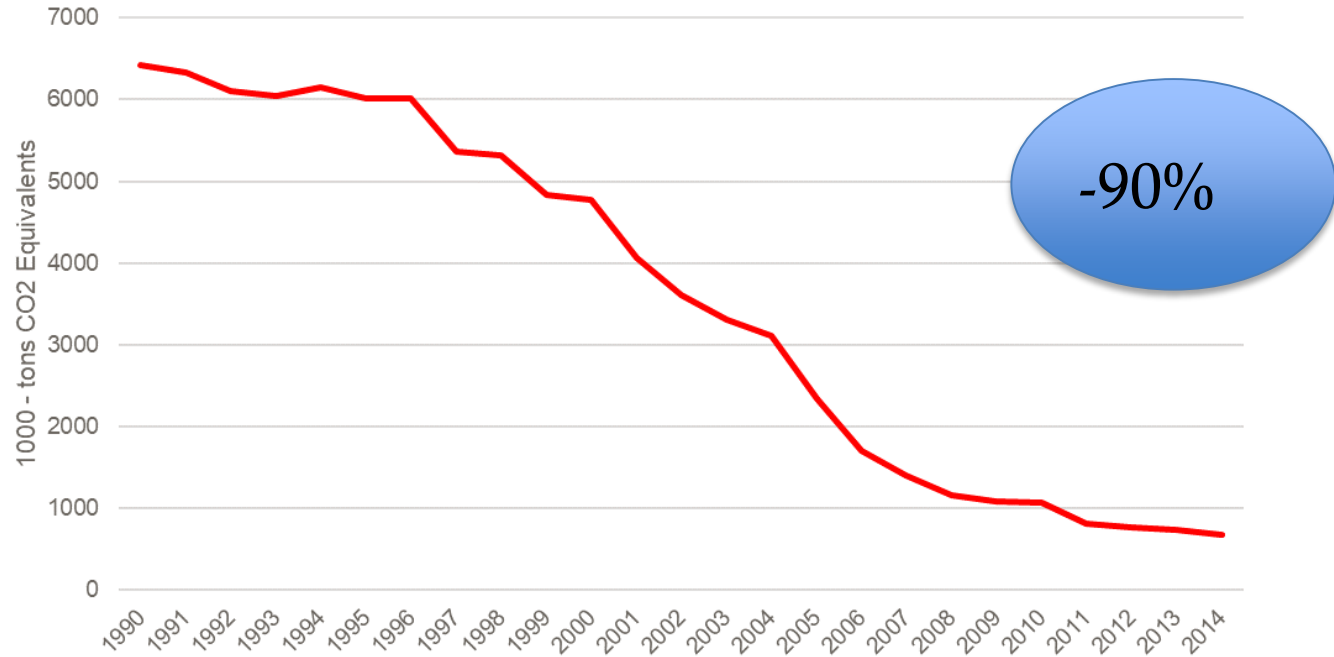
# Focus on national situations

Heat pumps  
replaced fossil fuel  
boilers





## Greenhouse gas-Emissions related to heating in buildings



# Focus on national situations



## NORWAY



Vidar Helgensenlaid, the countries Climate and Environment Minister, stated that,

“Those using fossil oil for heating must find other options by 2020”.

Almost no gas grid in Norway  
0 oil = 0 fossil fuel



# Conclusion

A 100% renewable society is possible – by 2050



Renewable energy from heat pumps in Europe | Thomas Nowak | AHPNW meeting | Tokyo 30.10.2017