KRAMPL

Mitteleuropäische Biomassekonferenz

Central European Biomass Conference

Tagungsband Proceedings

18. bis 20. Jänner 2017, Graz, Österreich

18th to 20th January 2017 Graz, Austria

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PLENARSITZUNG
Bioenergie nach Paris
Saal 1, 9:00 - 12:30

Chairman: Ingmar Höbarth, *Klima- & Energiefonds, Österreich*

„Durch den Weltklimavertrag ist der Ausstieg aus fossilen Energieträgern besiegelt. Die energetische Biomassenutzung wird dadurch weltweit an Bedeutung gewinnen - mit ungeahnten Möglichkeiten für die heimische Wirtschaft."

Josef Plank, *Präsident ÖBMV*

Donnerstag **19** Jänner

09:00 Wissenschaftliche Eröffnung

- **Siegfried Nagl**, *Bürgermeister von Graz, Österreich*
- **Franz Titschenbacher**, *Präsident LK Steiermark, Österreich*
- **Vertreter** der *Außenwirtschaft Österreich*

Bioenergie für künftige Energiemärkte - weltweite Highlights
Hermann Hofbauer, *Technische Universität Wien, Österreich*

Biowärme für Gebäude und Industrie - Perspektiven bis 2030
Lukas Kranzl, *Energy Economics Group, Österreich*

Die Rolle der nachhaltigen Waldbewirtschaftung für Wald- und Klimaschutz
Tomas Lundmark, *Swedish University of Agricultural Sciences, Schweden*

10:30 **Kaffeepause**

11:00 Politische Eröffnung

- **Josef Plank**, *Präsident Österreichischer Biomasseverband, Österreich*
- **Remigijus Lapinskas**, *Präsident Weltbiomasseverband, Schweden*

Österreich auf dem Weg zu 100% erneuerbarer Energie
Andrä Rupprechter, *Bundesminister für Land- und Forstwirtschaft, Umwelth und Wasserwirtschaft, Österreich*

EU Bioenergie 2030: Herausforderungen und Möglichkeiten
Didzis Palejs, *Präsident Europäischer Biomasse Verband (AEBIOM), Belgien*

Mythen und Fakten zur Energiewende
Georg Günsberg, *Politik- und Strategieberater, Wien, Österreich*

12:30 - 14:00 **Mittagspause und Postersession**

Simultanübersetzung

PLENARY SESSION
Bioenergy after Paris
Room 1, 09:00 am - 12:30 pm

Chairman: Ingmar Höbarth, *Klima- und Energiefonds, Austria*

„Due to the world climate treaty the withdrawal from nuclear energy is sealed. The energetic biomass use will gain in importance worldwide - with unimagined possibilites for our domestic economy."

Josef Plank, *President Austrian Biomass Association*

Thursday **19** January

09:00 am Scientific Opening

- **Siegfried Nagl**, *Mayor of Graz, Austria*
- **Franz Titschenbacher**, *President Styrian Chamber of Agric., Austria*
- **Representative** *of the foreign trade office Austria**

Bioenergy technology for future markets - worldwide highlights
Hermann Hofbauer, *Technical University Vienna, Austria*

Biomass for heat in buildings and industry - perspectives up to 2030
Lukas Kranzl, *Energy Economics Group, Austria*

Active forest management and its role for climate change mitigation
Tomas Lundmark, *Swedish University of Agricultural Sciences, Sweden*

10:30 am **Coffee break**

11:00 am Political Opening

- **Josef Plank**, *President Austrian Biomass Association*
- **Remigijus Lapinskas**, *President World Bioenergy Association, Sweden*

Austria on the way to 100% renewable energy
Andrä Rupprechter, *Federal Minister for Agriculture, Forestry, Environment and Water Management, Austria*

EU Bioenergy 2030: Challenges and possibilites
Didzis Palejs, *President European Biomass Assoc. (AEBIOM), Belgium*

Myths vs. facts in the public debate on energy transition
Georg Günsberg, *Political consultant, Vienna, Austria*

12:30 - 02:00 pm **Lunch and Poster presentation**

Simultaneous translation

Biomass for heat in buildings and industry in EU28: policy questions and perspectives up to 2030

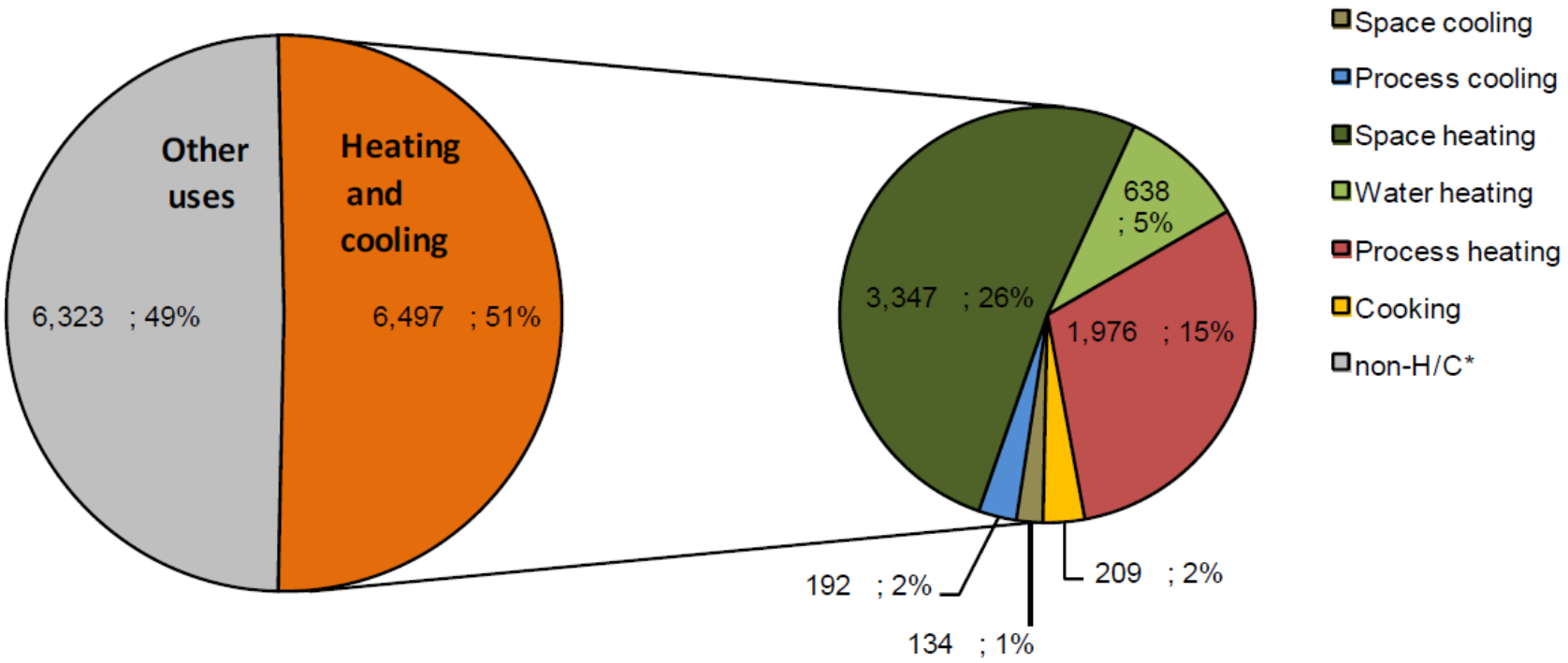
Lukas Kranzl, Michael Hartner, Albert Hiesl, Andreas Müller, Gustav Resch, TU-Wien

Tobias Fleiter, Matthias Rehfeldt, Jan Steinbach, Fraunhofer ISI

Ulrich Reiter, TEP Energy GmbH

Central European Biomass Conference, Graz 2017

More than 50% of the European final energy demand is used for heating and cooling



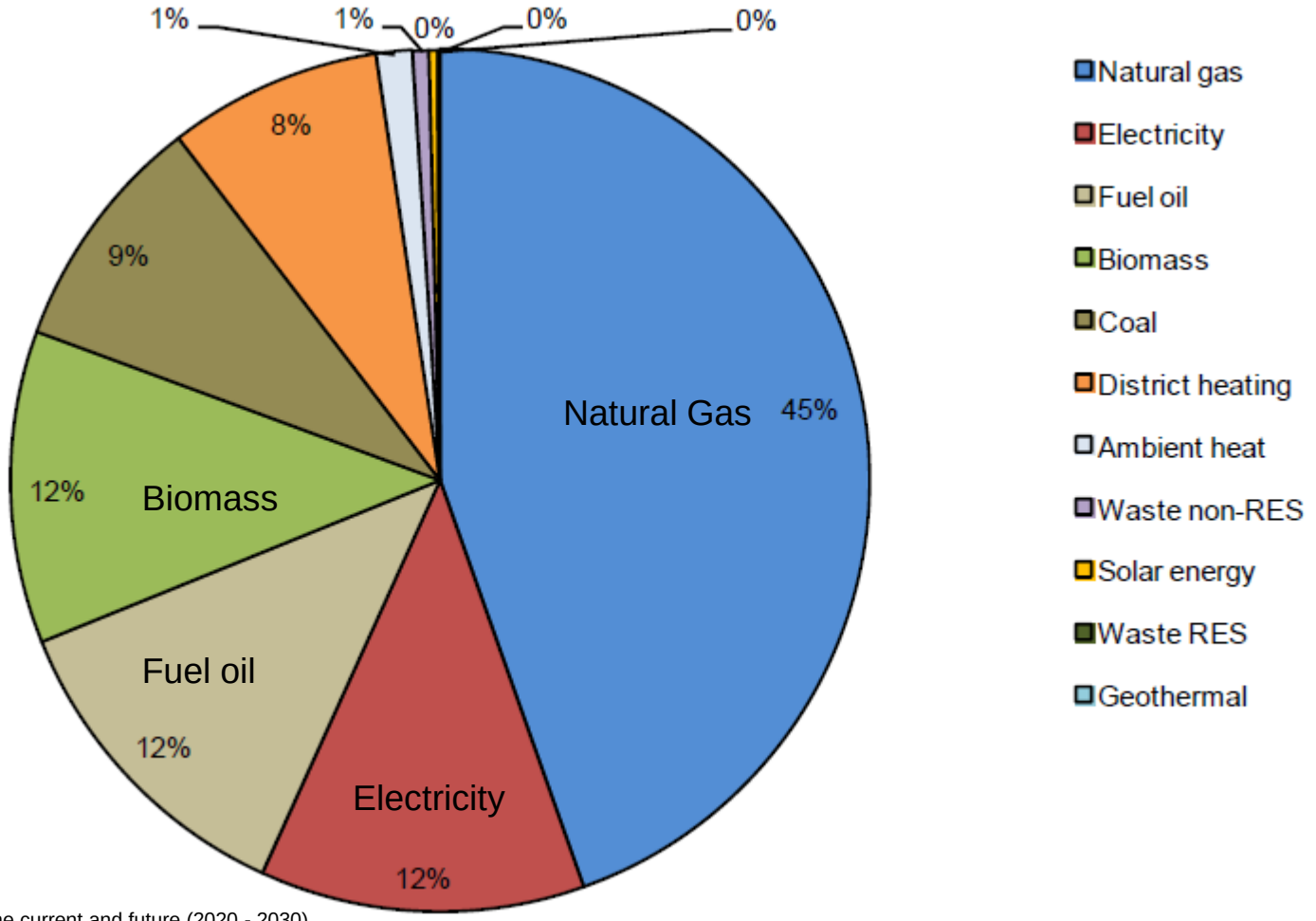
Source: Mapping and analyses of the current and future (2020 - 2030) heating/cooling fuel deployment (fossil/renewables), 2016

Mapping and analyses of the current and future (2020 - 2030) heating/cooling fuel deployment (fossil/renewables)

- Project for the European Commission, DG Ener & DG RTD

- Coordinator: Fraunhofer ISI
- Selected outputs:
  - Detailed, consistent and complete energy balance for the H/C sector by country for the year 2012
  - Model based scenarios for the diffusion of renewable energy sources in H/C until 2020 and 2030
  - Main barriers and bottlenecks that slow down a faster diffusion of renewable energy sources and provide policy recommendations

Role of biomass for H/C: final energy demand by energy carriers, EU-28, 2012



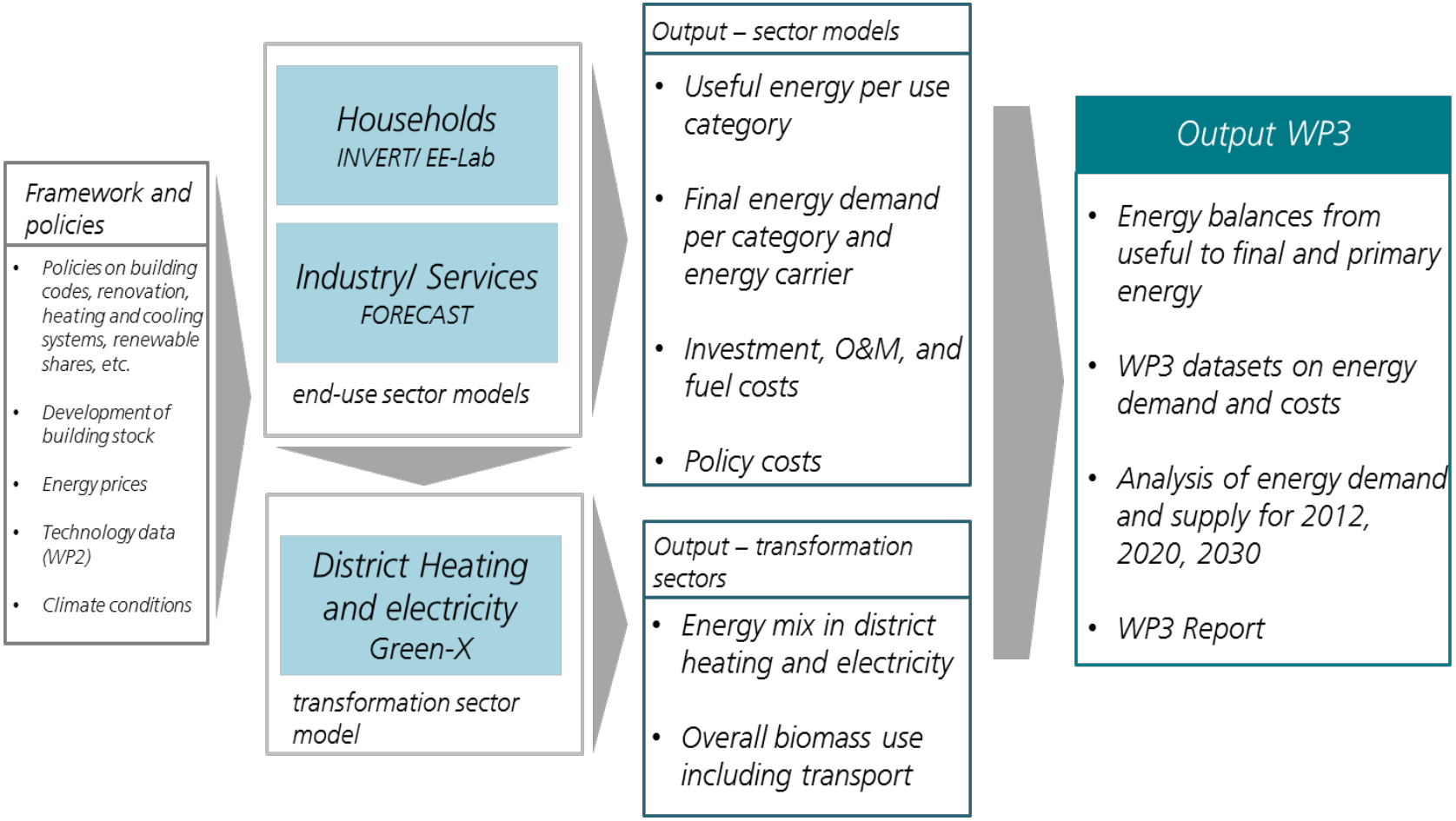
Source: Mapping and analyses of the current and future (2020 - 2030) heating/cooling fuel deployment (fossil/renewables), 2016

Questions and objectives for this presentation

- What is the role of biomass for heat in buildings and industry in EU-28 in a current policy scenario up to 2030?

- Are current policies and framework conditions sufficient for achieving EU 2030 targets and Paris targets?

Modelling: Methodology and modelling framework



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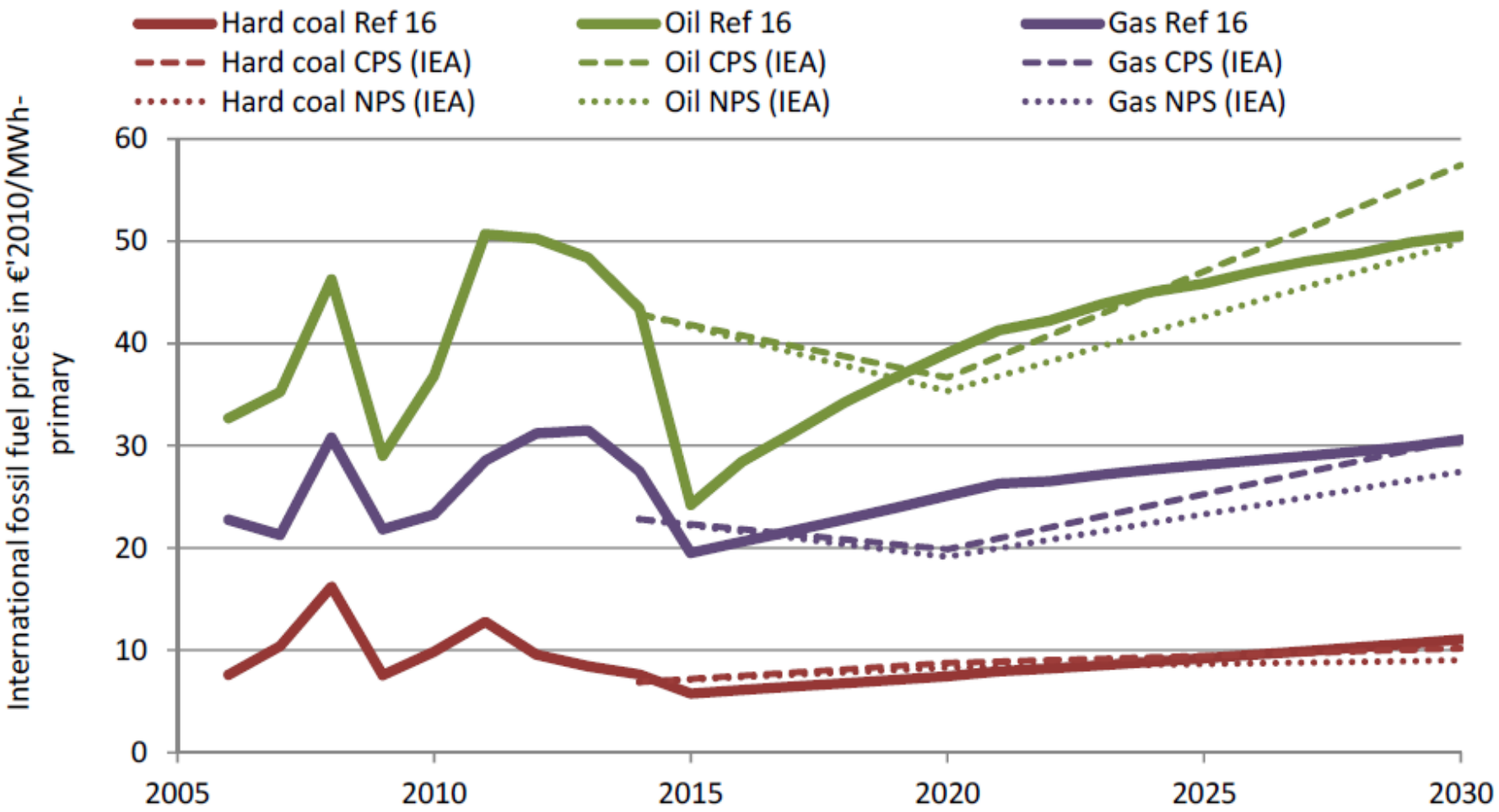
Modelling of scenarios: No predictions!

- Modelling of future scenarios is always connected with uncertainties.
- No predictions are possible.
- What we intend to show is a likely development path under the current policy framework and under the assumptions taken regarding energy prices, technological development …

Modelling: Applied energy price scenarios



Modelling: Relevant policies on EU-level and in Member States were considered

- Energy Performance of Buildings Directive: e.g. nearly-zero-energy building standards
- Energy Efficiency Directive
- Renewable energy directive
- Ecodesign Directive: technology standards e.g. for boilers and water heaters
- Energy Labelling Directive
- Emission Trading Directive
- National and regional subsidies for building renovation
- National and regional subsidies for RES-H/C
- …

Key messages

- Slightly increasing role of biomass in the H/C sector until 2030 expected under current policy framework
- The relevance of biomass heat is expected to shift more and more to industrial end-uses.
- Current RES-H/C policies not sufficient to support EU 2030 RES targets adequately.
- Paris targets are far out of reach with current policies. Much more stringent policies are required.

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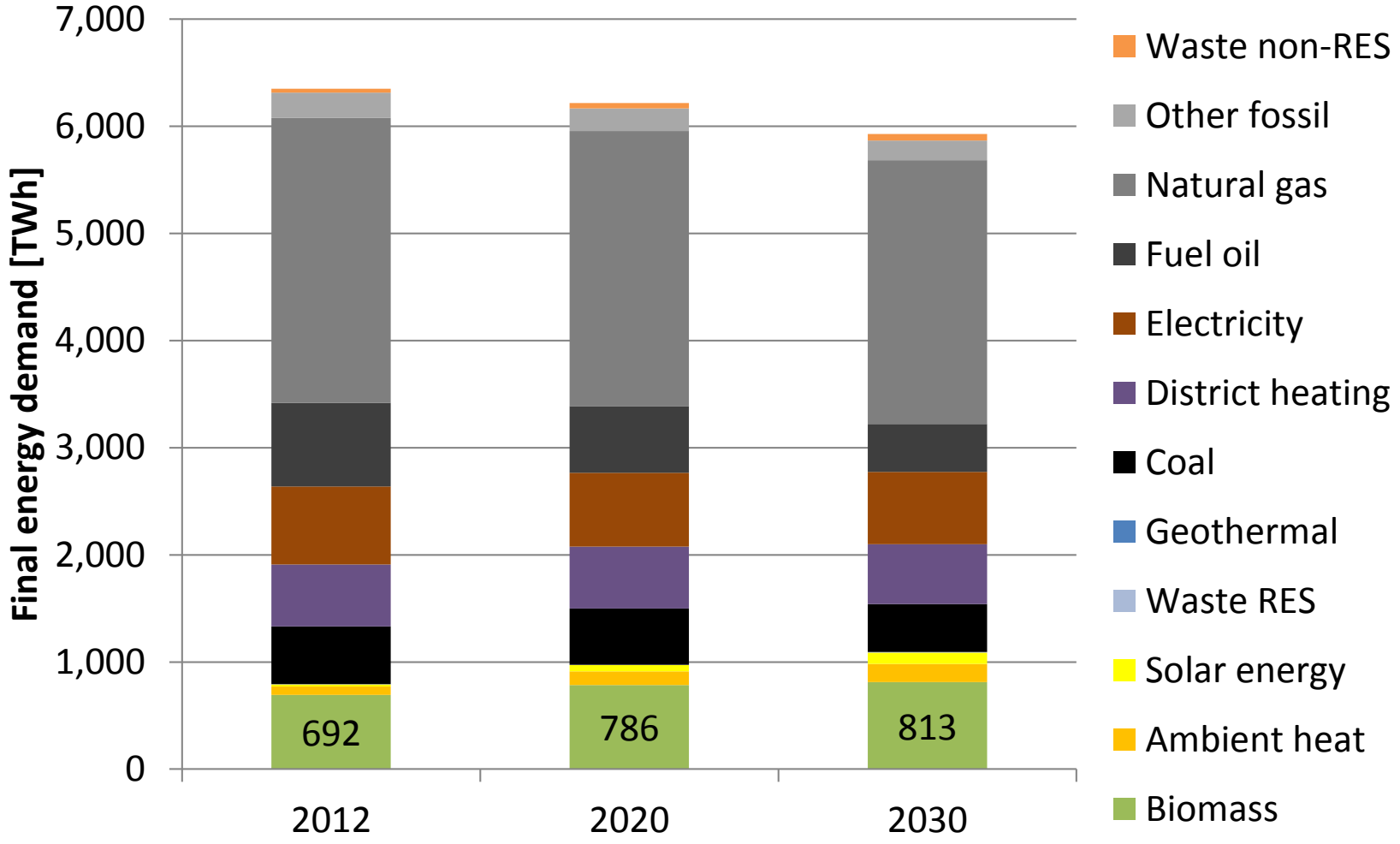
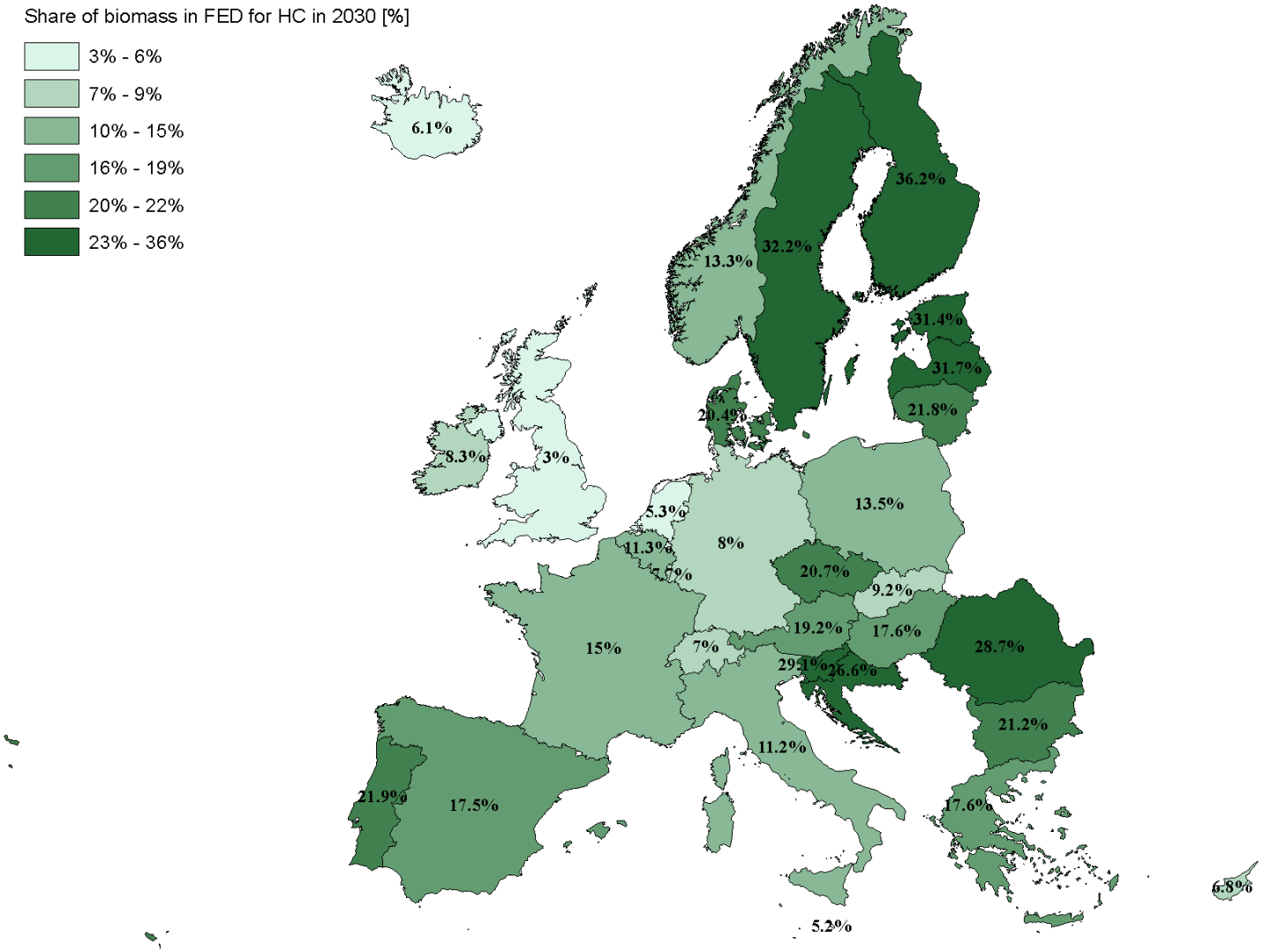
Final energy demand for H/C in EU28, current policy scenario



Source: Mapping and analyses of the current and future (2020 - 2030) heating/cooling fuel deployment (fossil/renewables), 2016

Share of biomass in final energy demand for Heating and Cooling in 2030 (industry and buildings)



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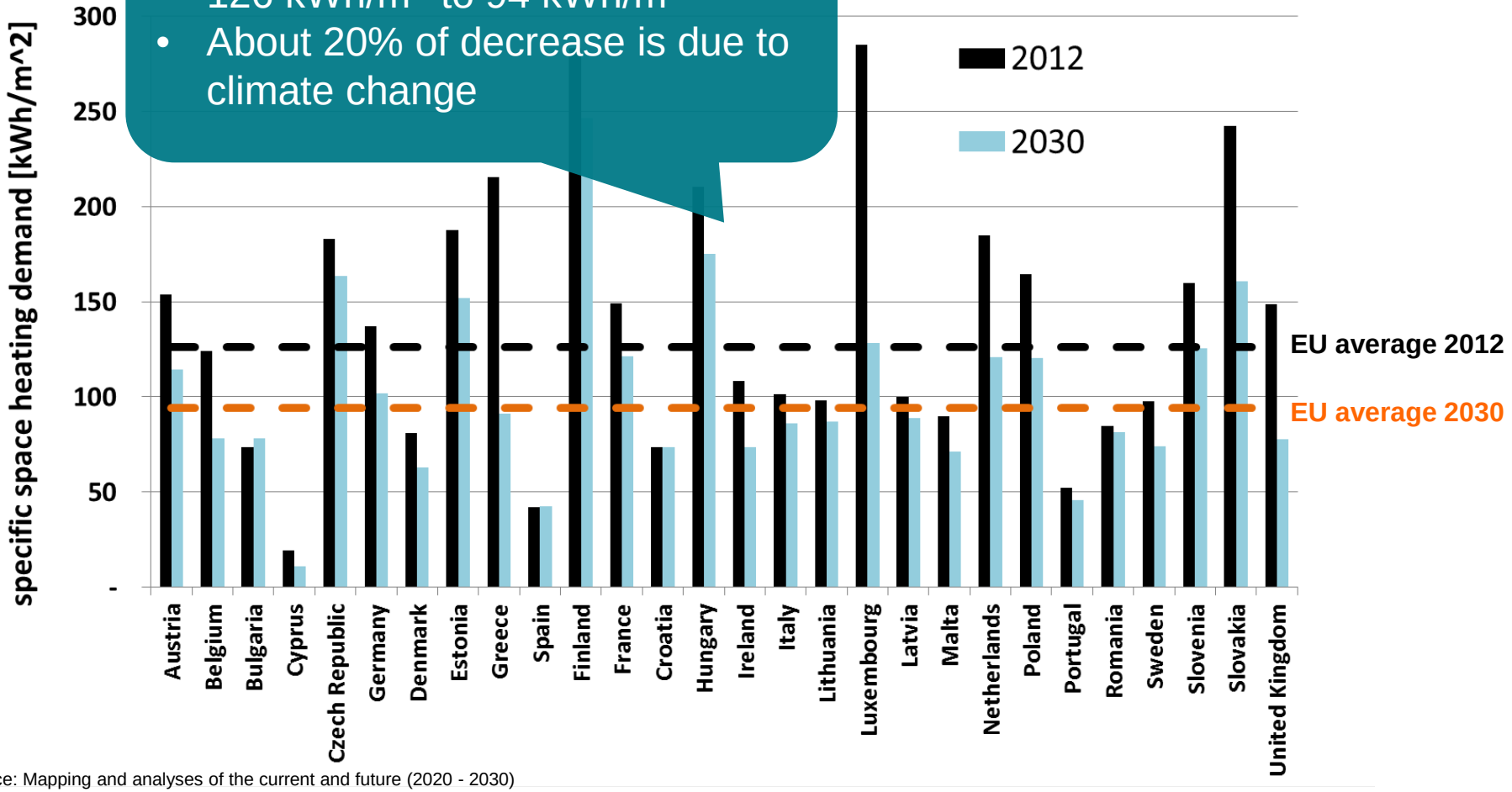
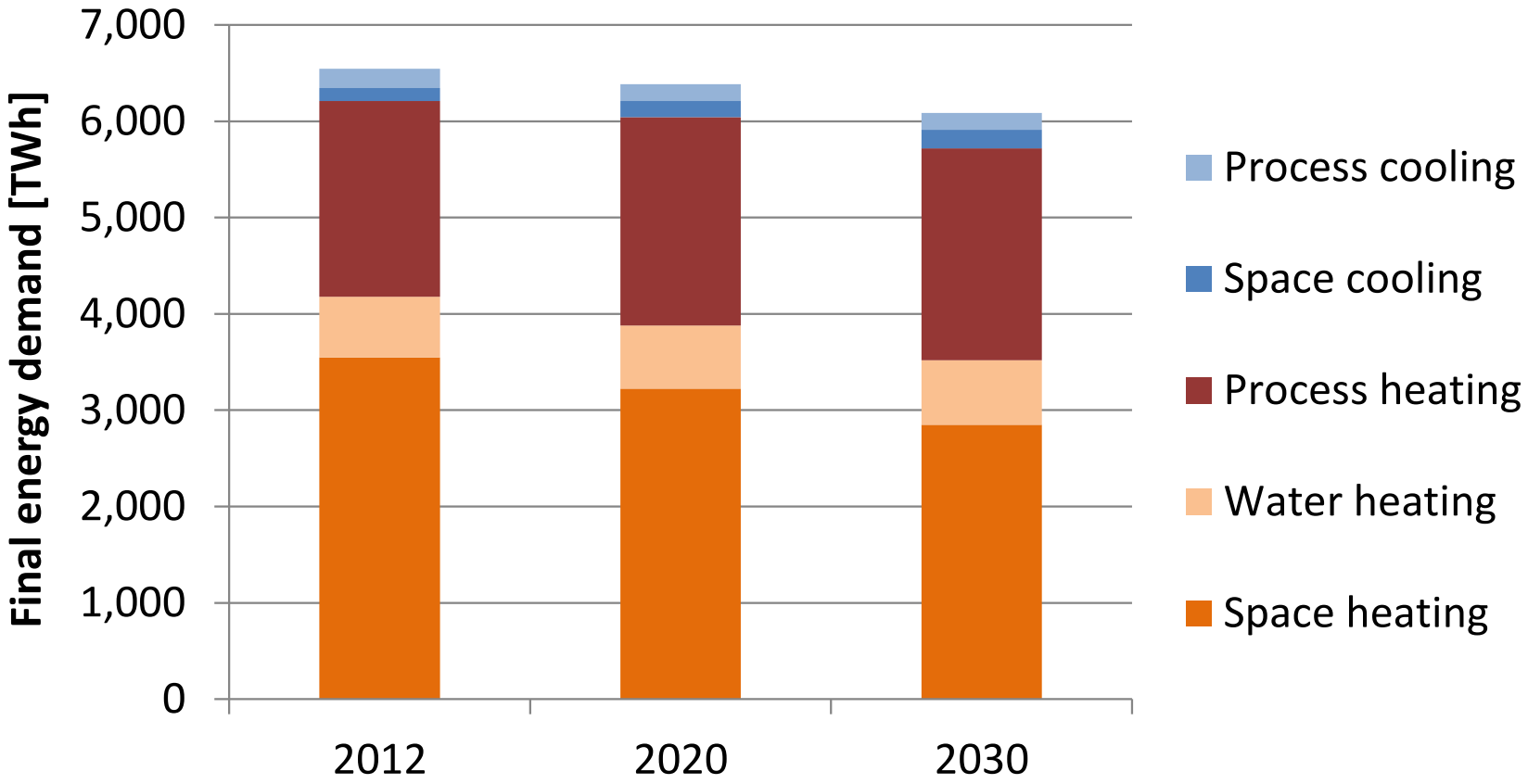
Development of specific space heating demand

- EU28 average decreases from 126 kWh/m^2 to 94 kWh/m^2
- About 20% of decrease is due to climate change



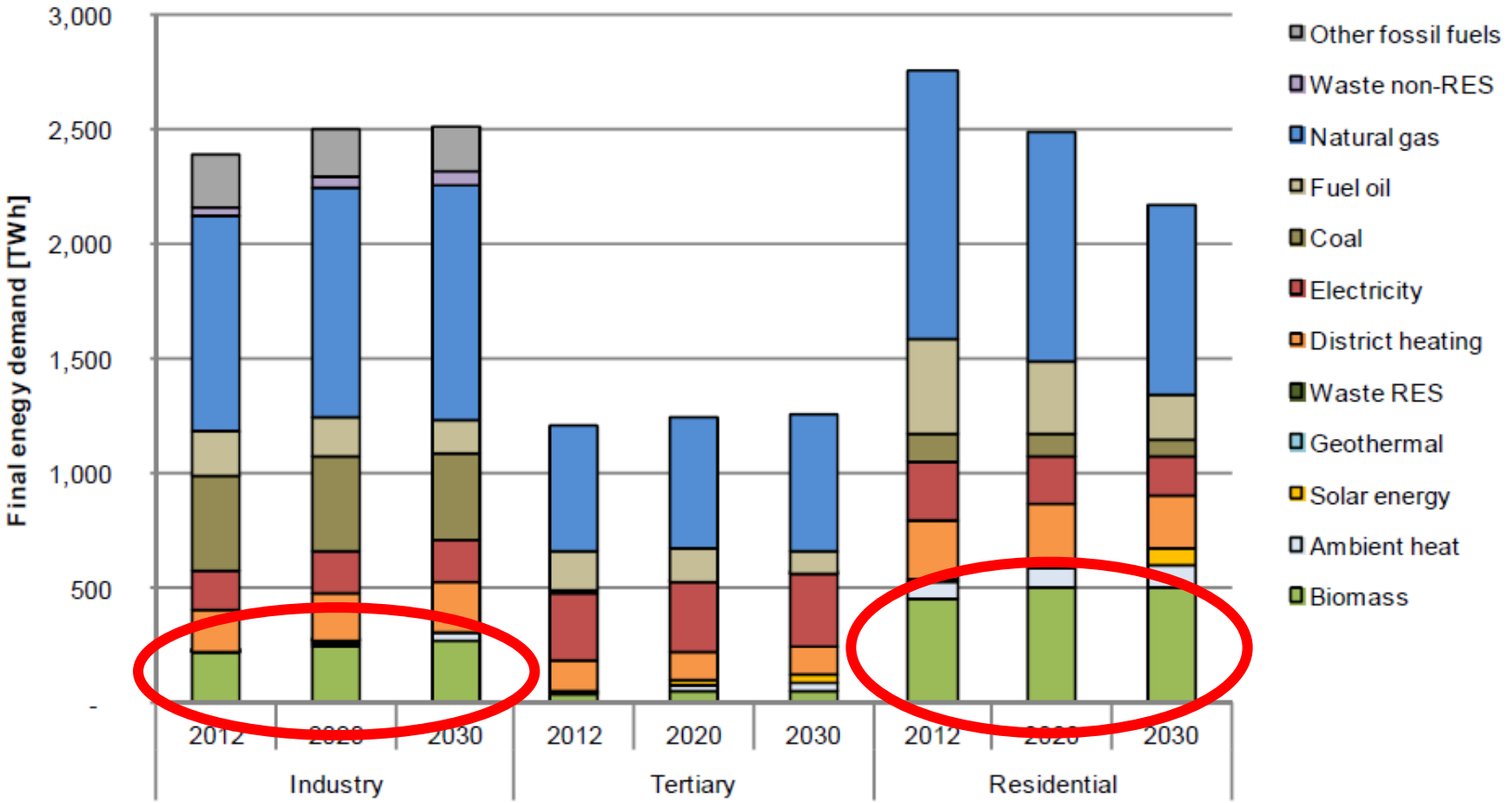
Source: Mapping and analyses of the current and future (2020 - 2030) heating/cooling fuel deployment (fossil/renewables), 2016

Increasing relevance of process heat
Decreasing space heating demand due to building renovation and efficient new buildings



Source: Mapping and analyses of the current and future (2020 - 2030) heating/cooling fuel deployment (fossil/renewables), 2016

Stable relevance of biomass in residential buildings
Increase in industry
Stronger barriers in the tertiary sector



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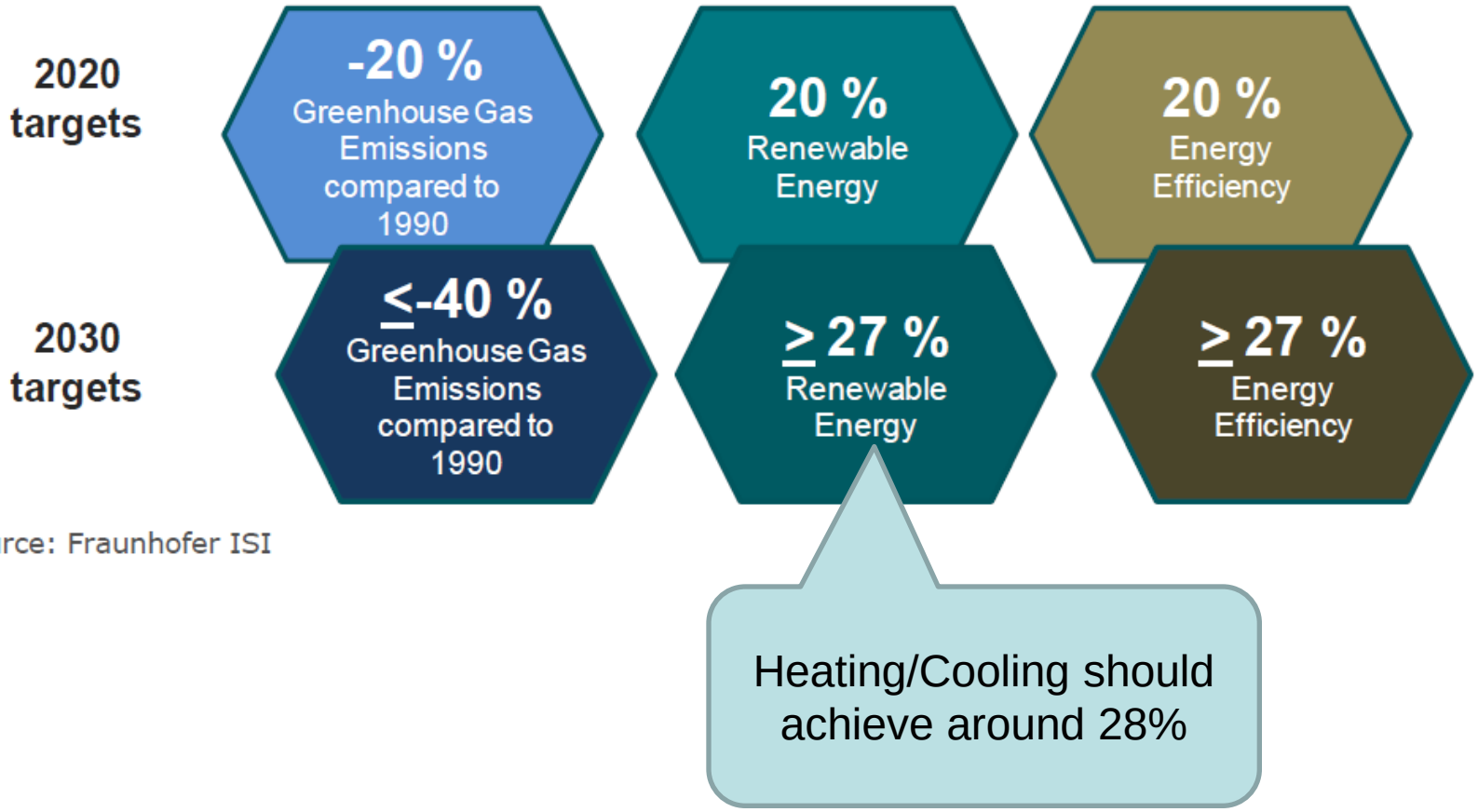
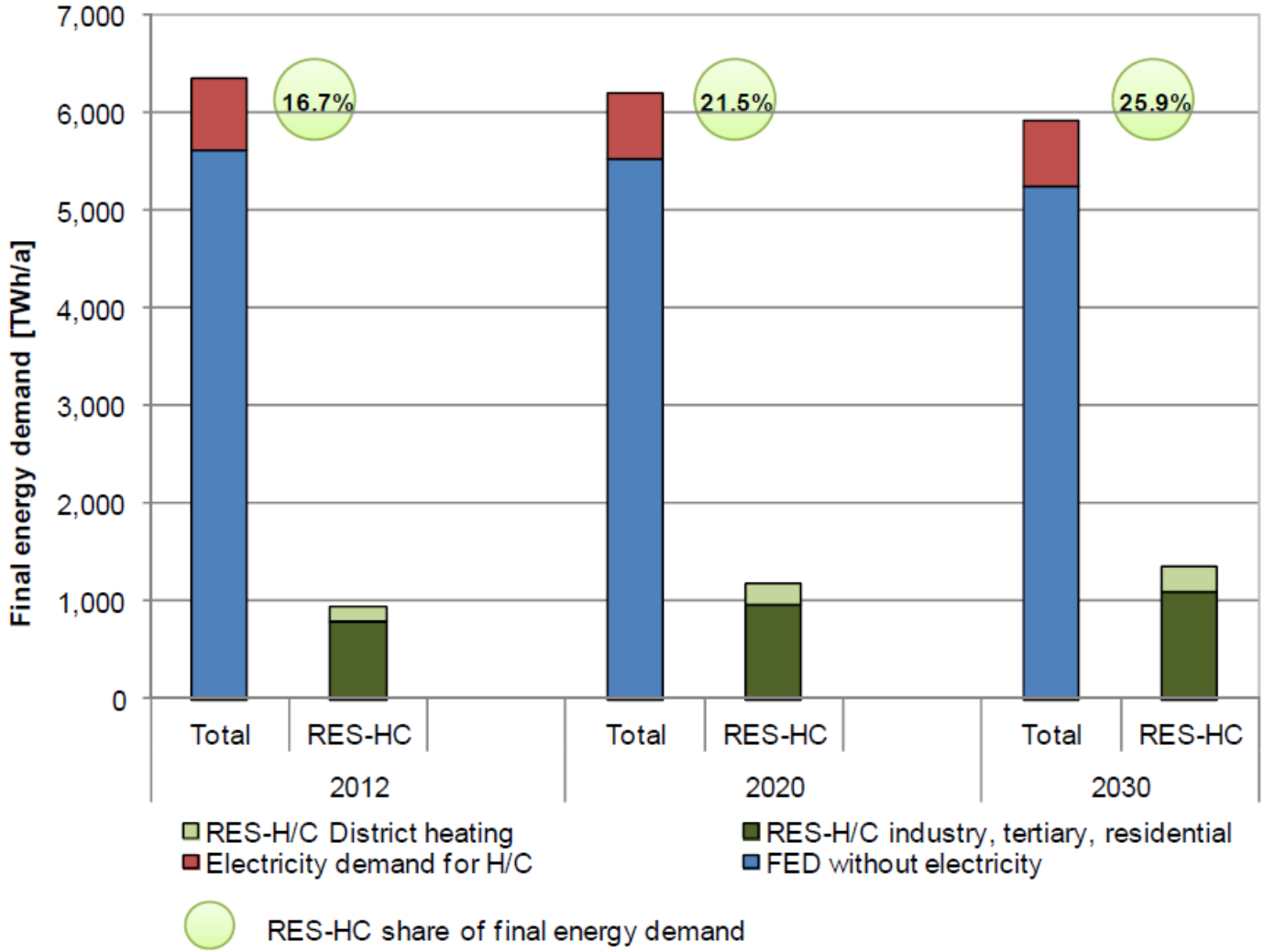
Current policies and the EU-2030 RES target



Current policies are not sufficient to contribute to EU-2030 RES target:



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How to fill the gap for the RES 2030 target?

- Winter package of the European Commission:
  Proposed recast of the renewable energy directive, requesting increase of RES-H/C share by 1% per year (amongst other things …)

- Additional modelling analyses showed: biomass is the cheapest option to fill the gap to the 2030 target.
- However, mind long-term considerations of optimal biomass allocation (see Paris target …)!

Key messages

- Slightly increasing role of biomass in the H/C sector until 2030 expected under current policy framework
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Paris targets

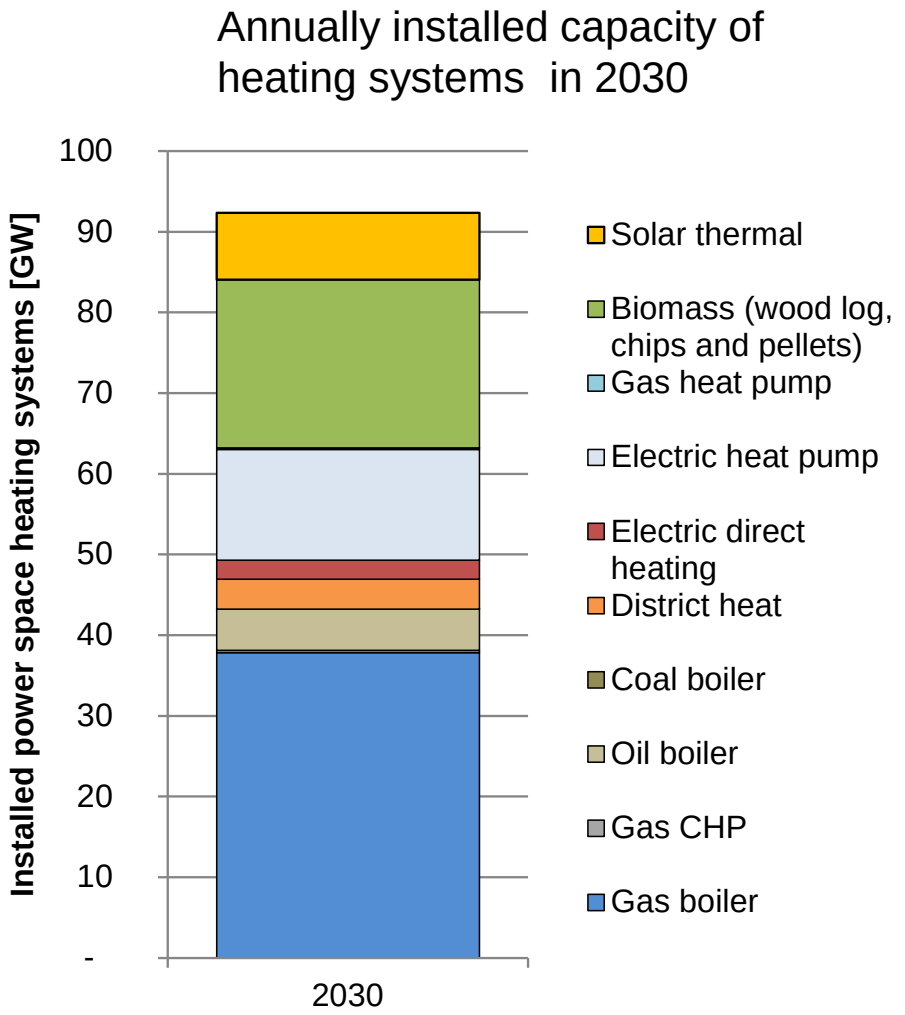
- COP21 led to the agreed target of:
  "holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels"

- What is clear: for the EU 80% reduction of GHG-emissions1990-2050 will not be sufficient.

- Since the Heating /Cooling sector in most scenarios is expected to show higher reductions, almost complete decarbonisation until 2050 required (at least for space heating and hot water preparation)

Paris targets require phase out of fossil boilers:

- Only slow changes in technology stock (lifetime of heating systems)
- Fossil: Oil boilers decrease, Gas boilers show high market shares until 2030
- Strong growth of solar thermal and heat pumps (relative) and biomass (absolute)
- **Our current policy scenario still leads to a strong market share of gas boilers in 2030. This would most probably counteract the achievement of Paris targets.**



Source: Mapping and analyses of the current and future (2020 - 2030) heating/cooling fuel deployment (fossil/renewables), 2016

Implications of the Paris target for heating and cooling?

- Still, we need to know much more about feasible pathways towards an (almost) complete decarbonisation.

However, what we already know is:

- Complete phase out of new fossil boilers latest until 2025/2030.
- Even stronger decrease of space heating demand will be required due to deep building renovation.
- Stronger role of solar thermal and heat pumps to cover low temperature heat (decentral and for district heating) will be required.
- Stronger role of biomass for industrial high temperature applications and other end-use sectors (e.g. freight transport)

Implications of the Paris target?

- Revolution in the whole energy system, including the H/C sector is required.
- No technology alone is able to tackle this huge challenge.
- Strong increase of efficiency measures and close integration of all renewable energy sources is required.
- This will also have an impact on the role of biomass in the H/C sector.

Further Information:

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