

# Passive Cooling and beyond

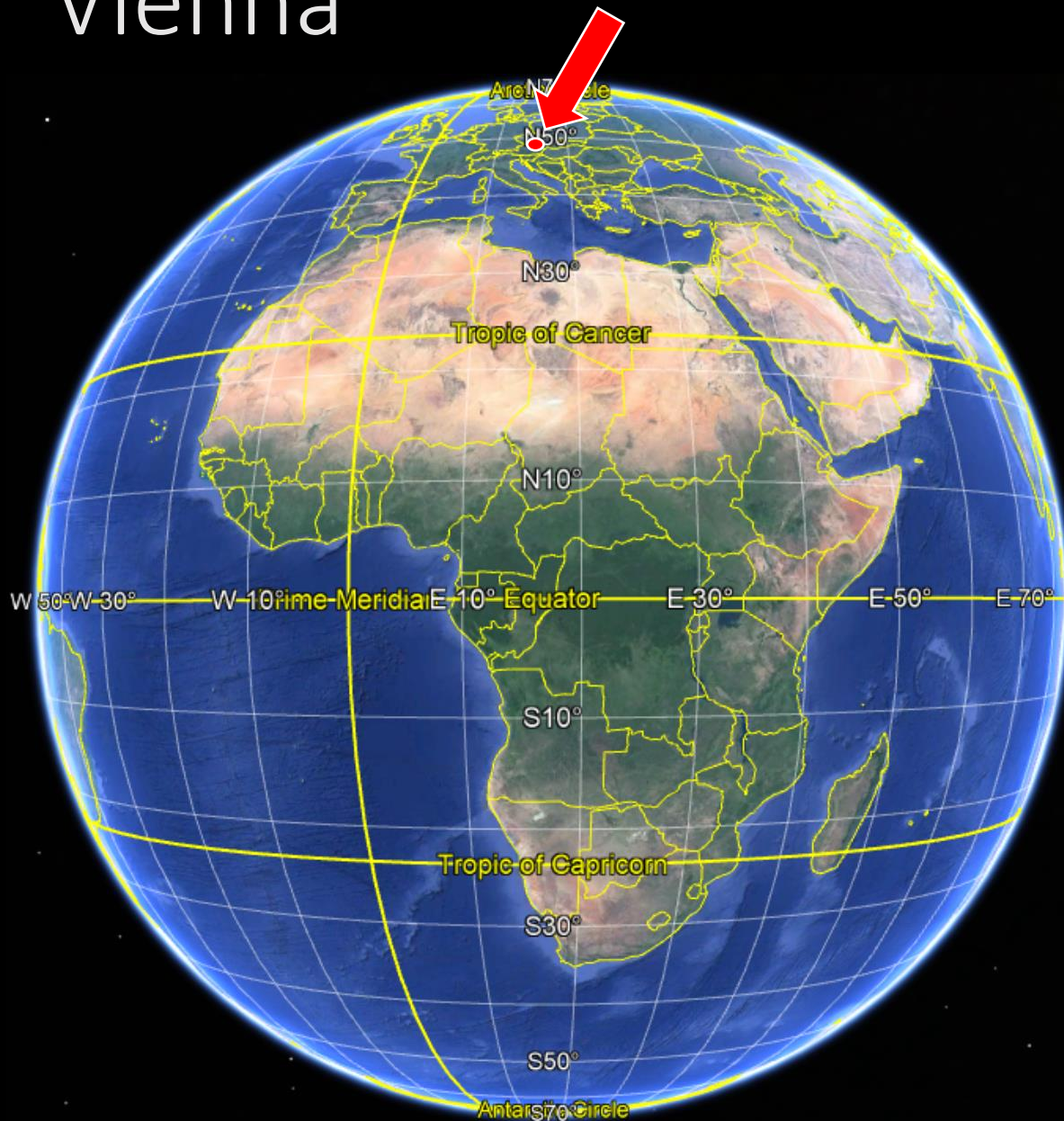
Balanced Cooling and Heating in moderate climates

Introducing the new IEA EBC Annex 80 'Resilient Cooling'

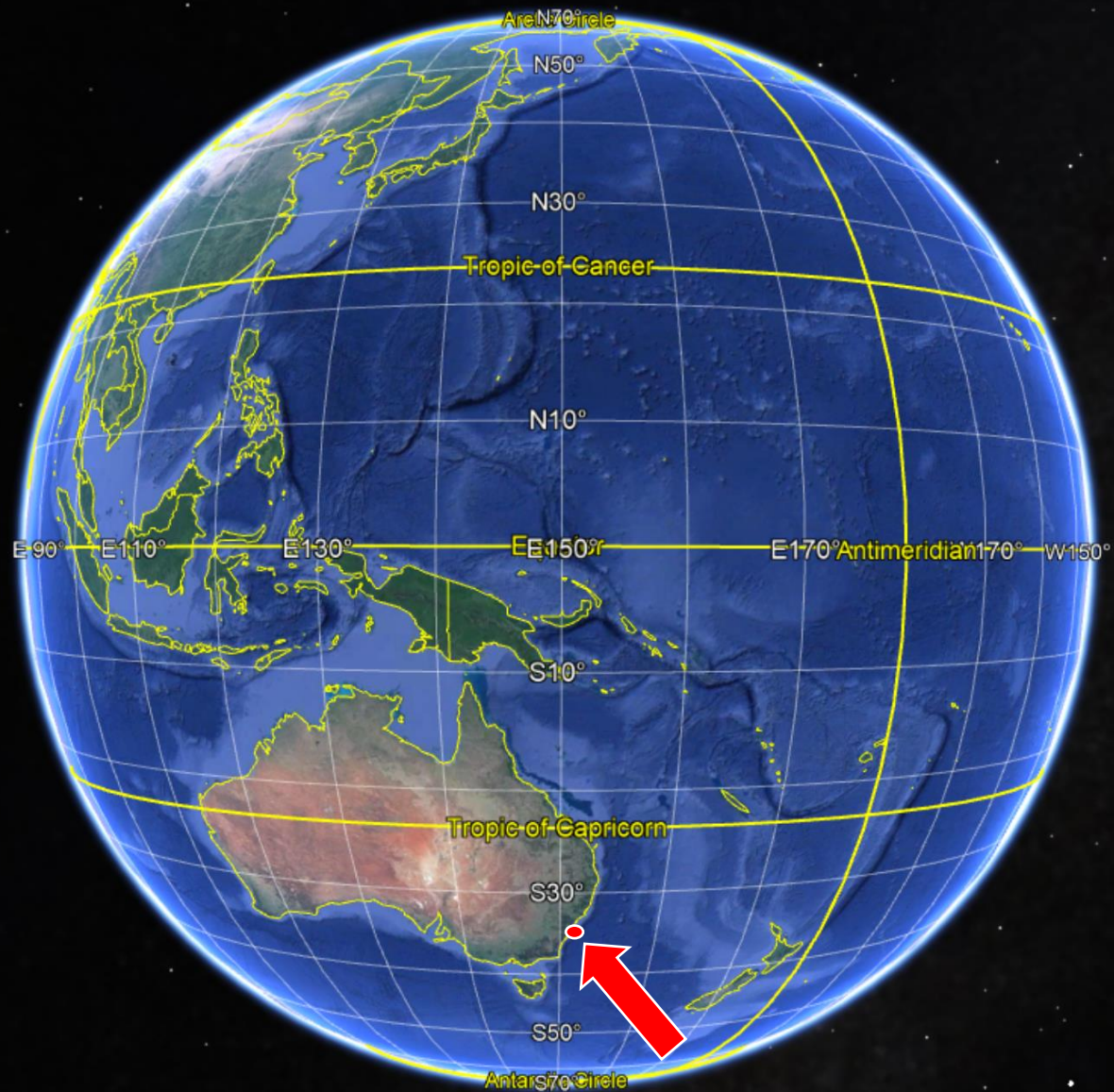


Energy in Buildings and  
Communities Programme

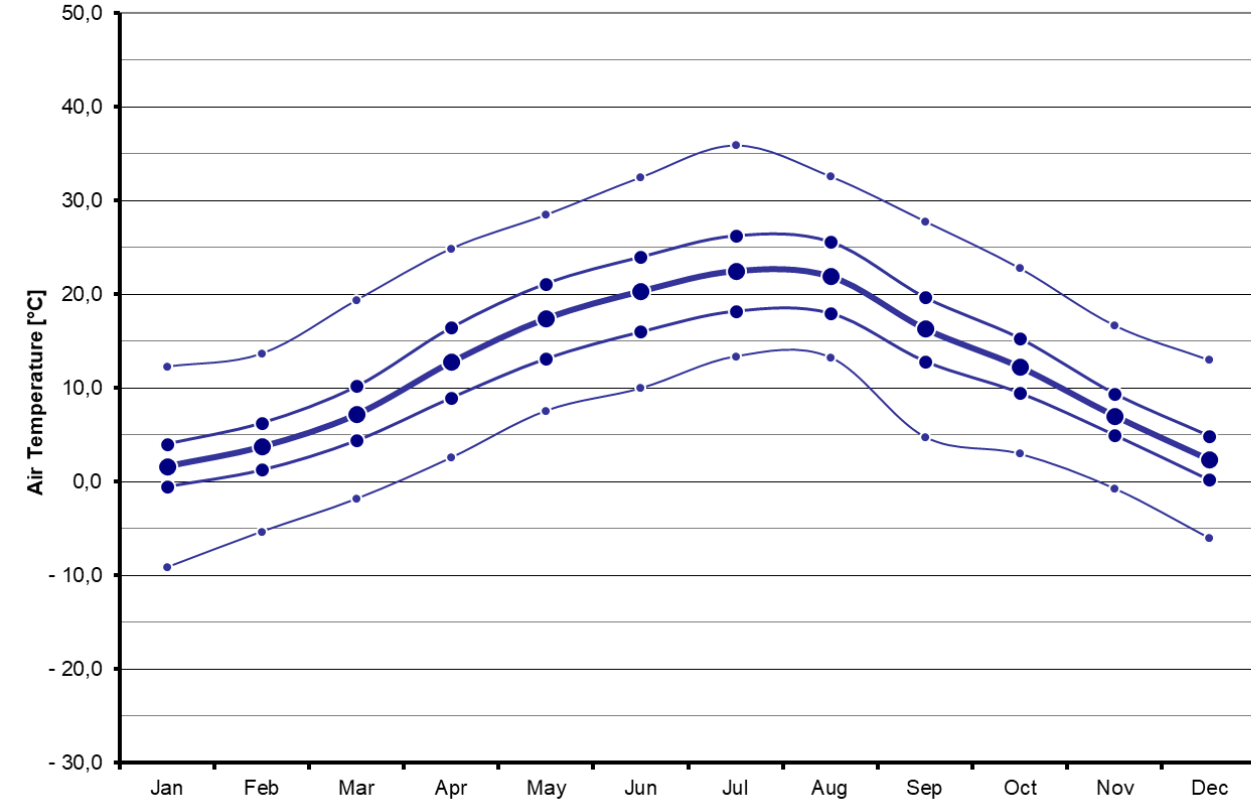
# Vienna



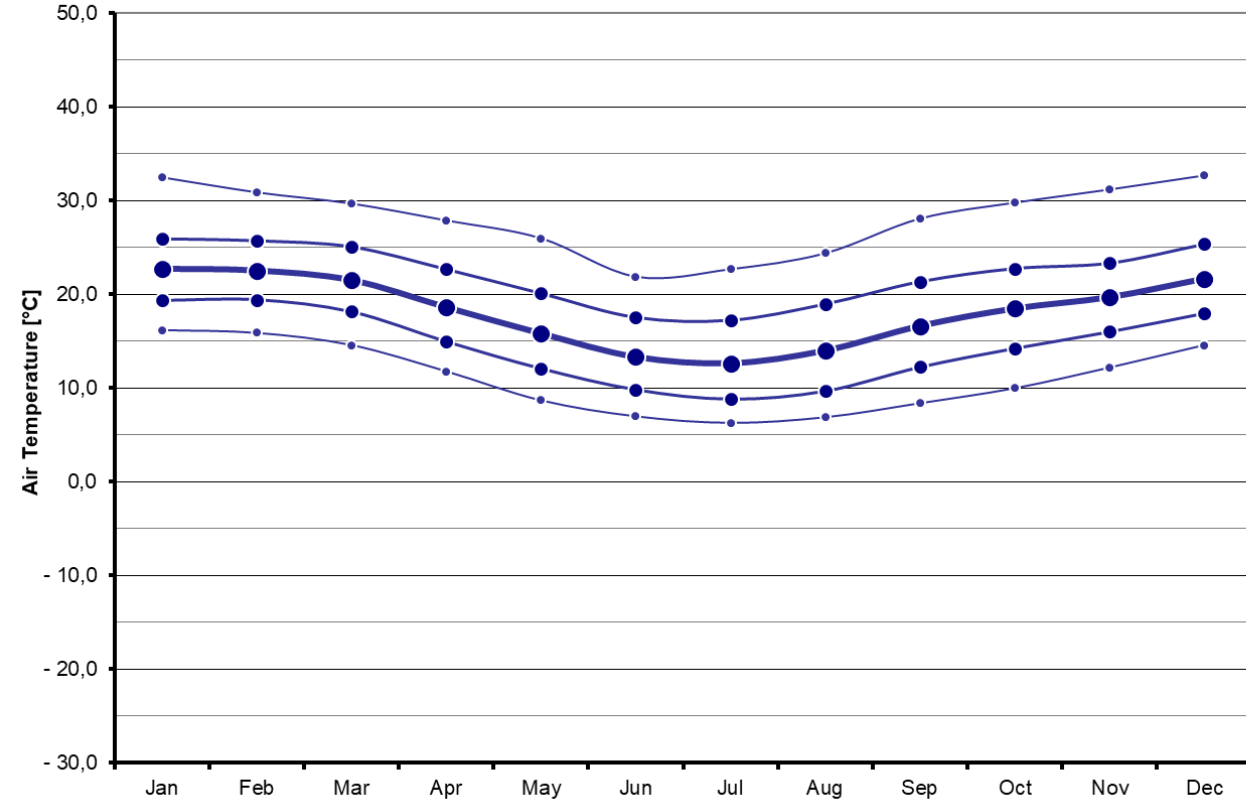
# Sydney



# Vienna

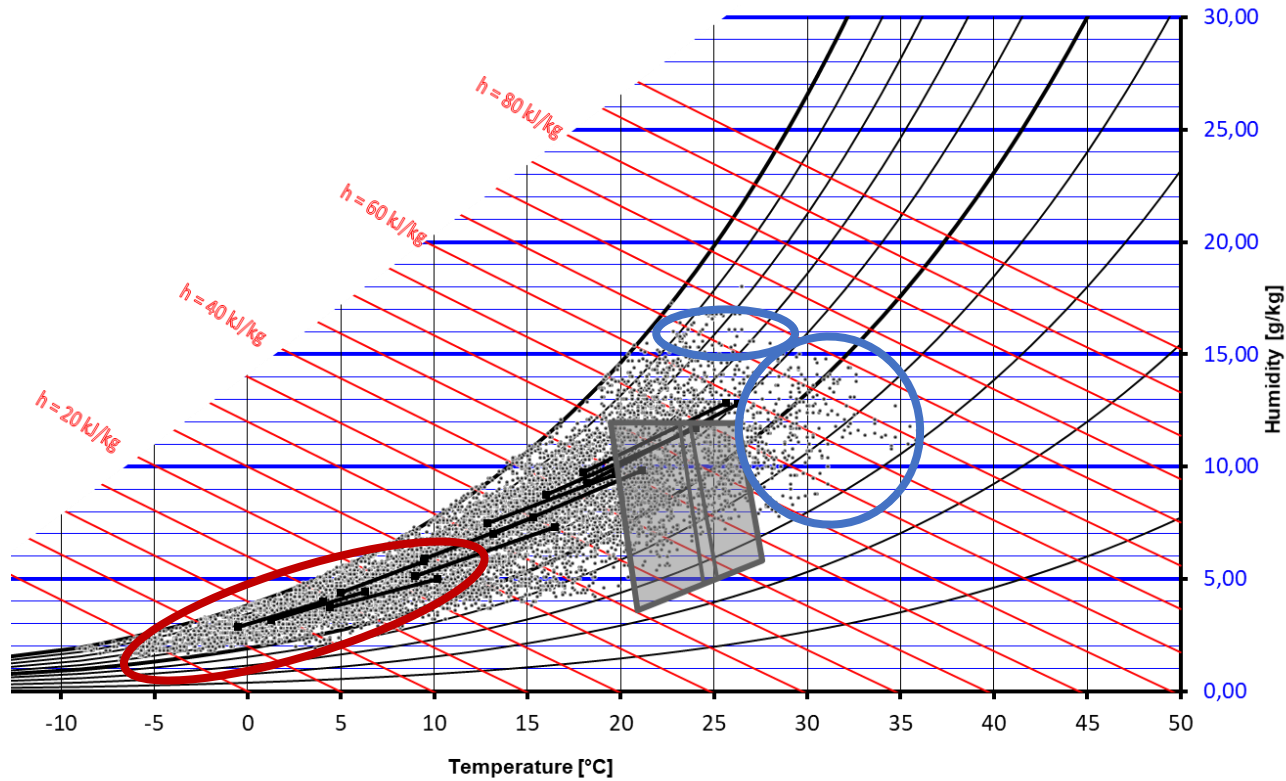


# Sydney

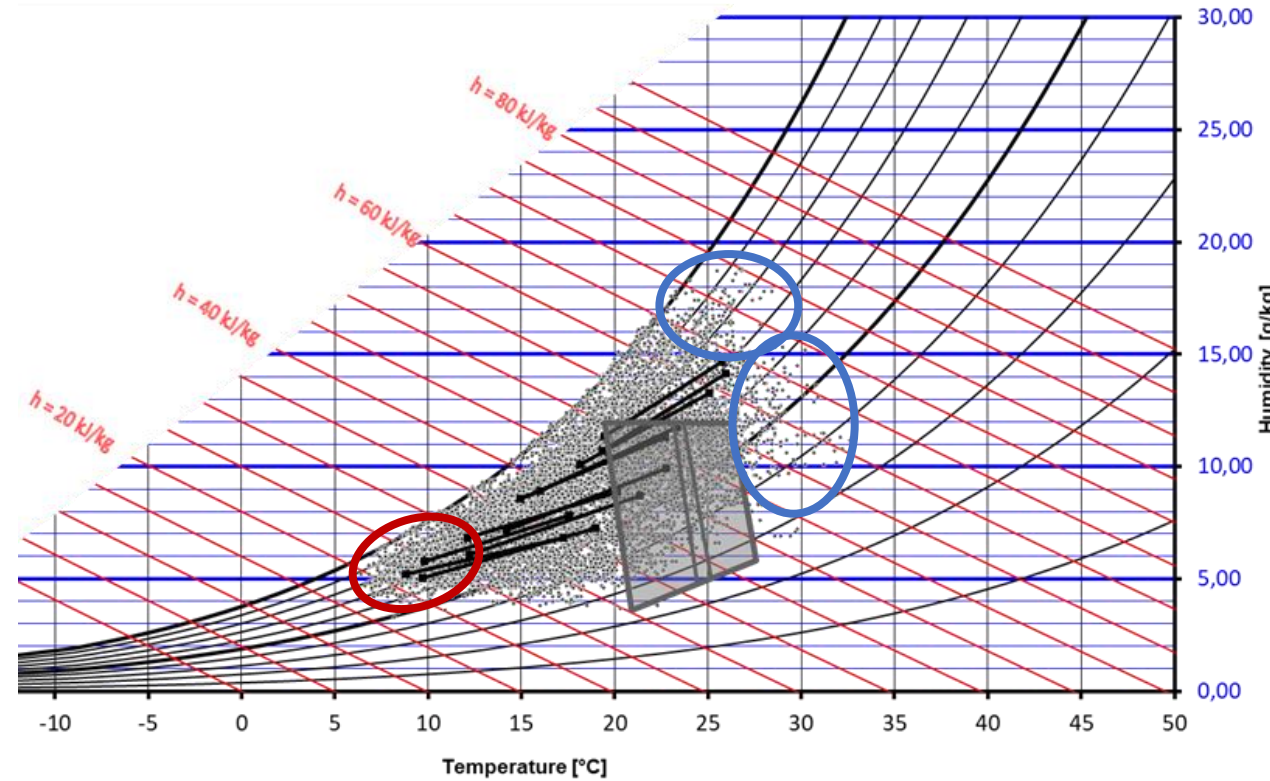




# Vienna



# Sydney



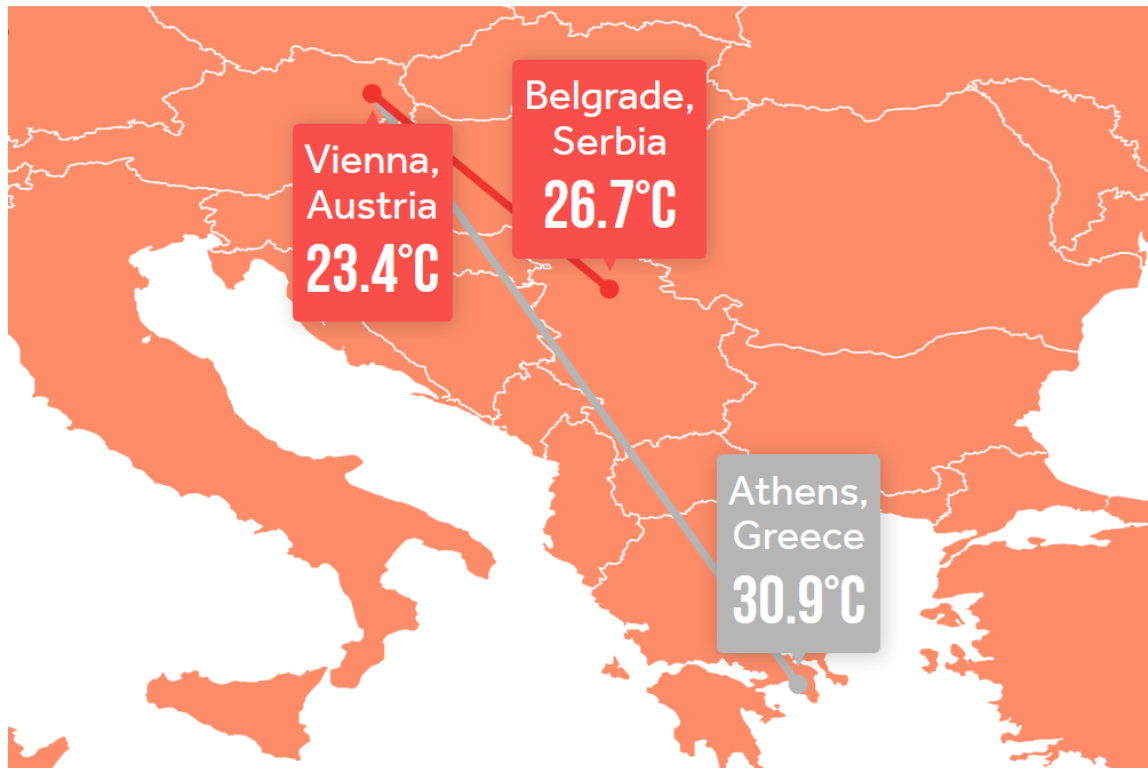
# Vienna

## Shifting Cities

### How Hot Will Summers Be By 2100?

Summer highs in **Vienna, Austria** could be more like **Belgrade, Serbia** by 2100 with moderate emissions cuts.

Vienna, Austria



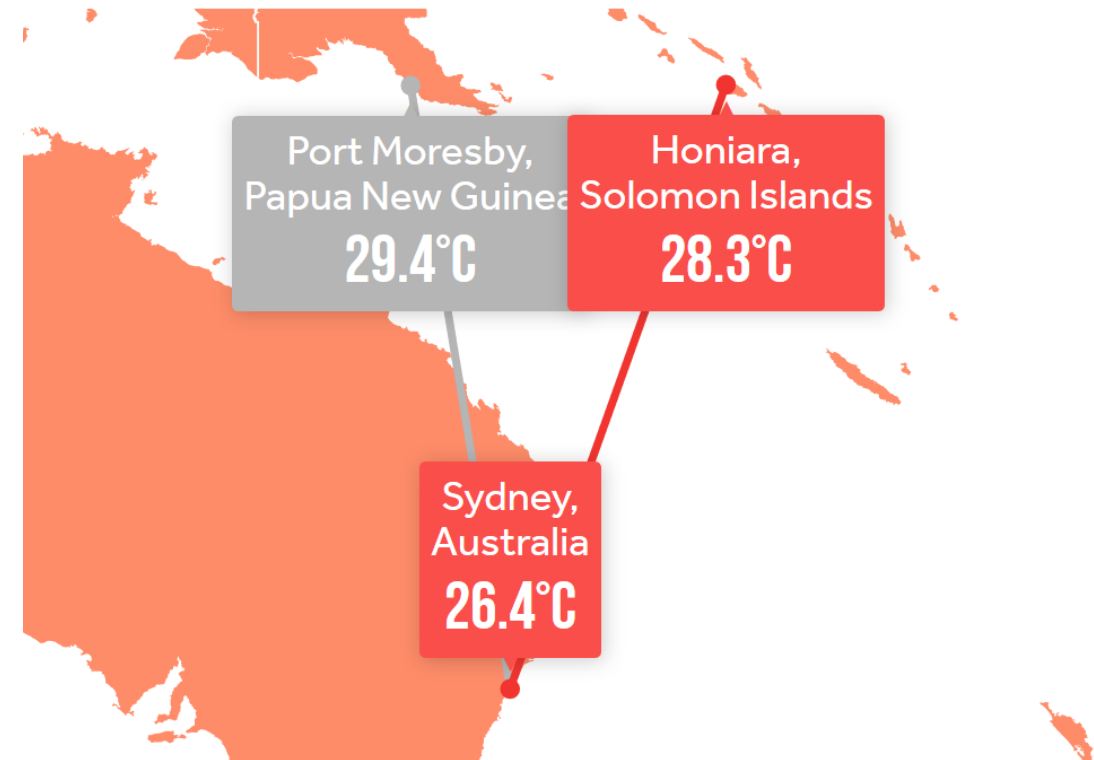
# Sydney

## Shifting Cities

### How Hot Will Summers Be By 2100?

Summer highs in **Sydney, Australia** could be more like **Honiara, Solomon Islands** by 2100 with moderate emissions cuts.

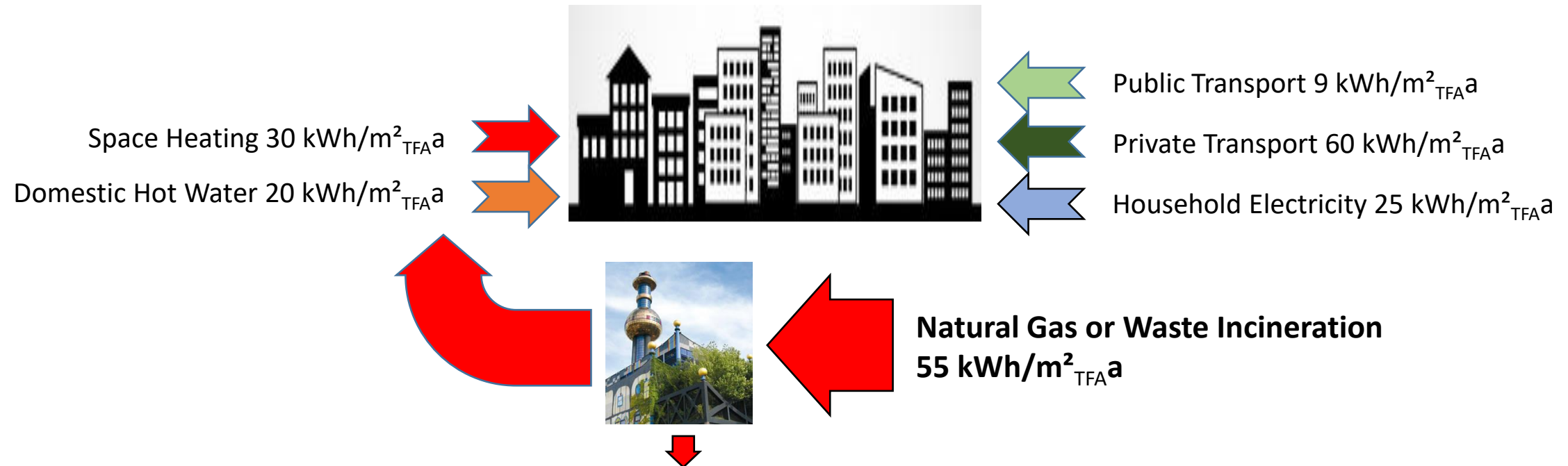
type city here



# Residential buildings, Vienna, newly built in 2000, without cooling

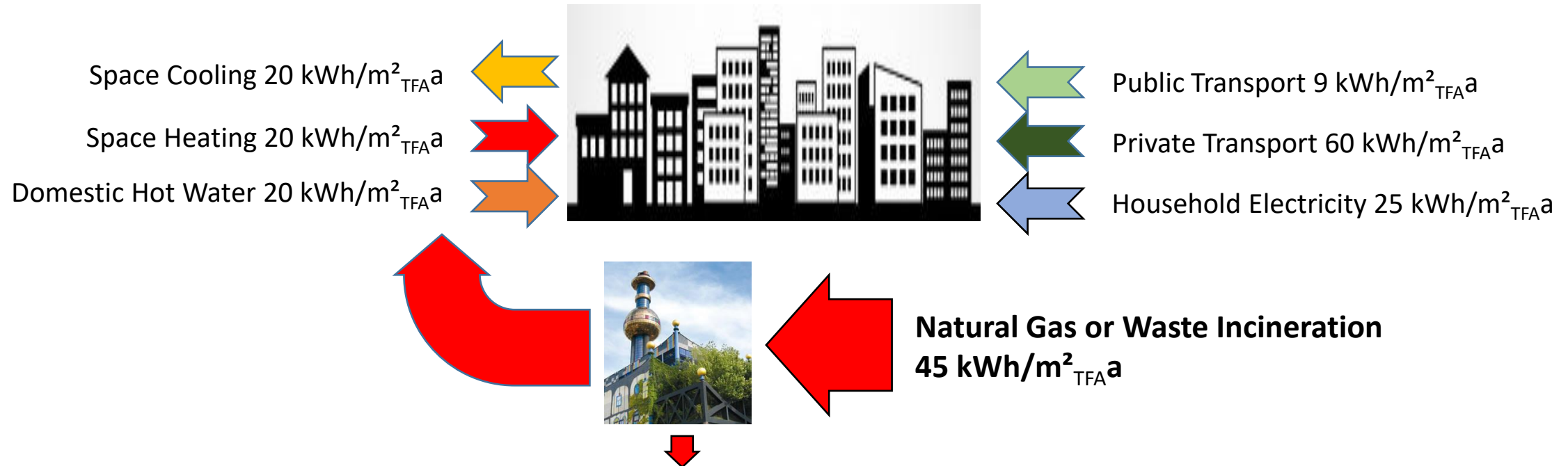


# Residential buildings, Vienna, newly built in 2000, without cooling

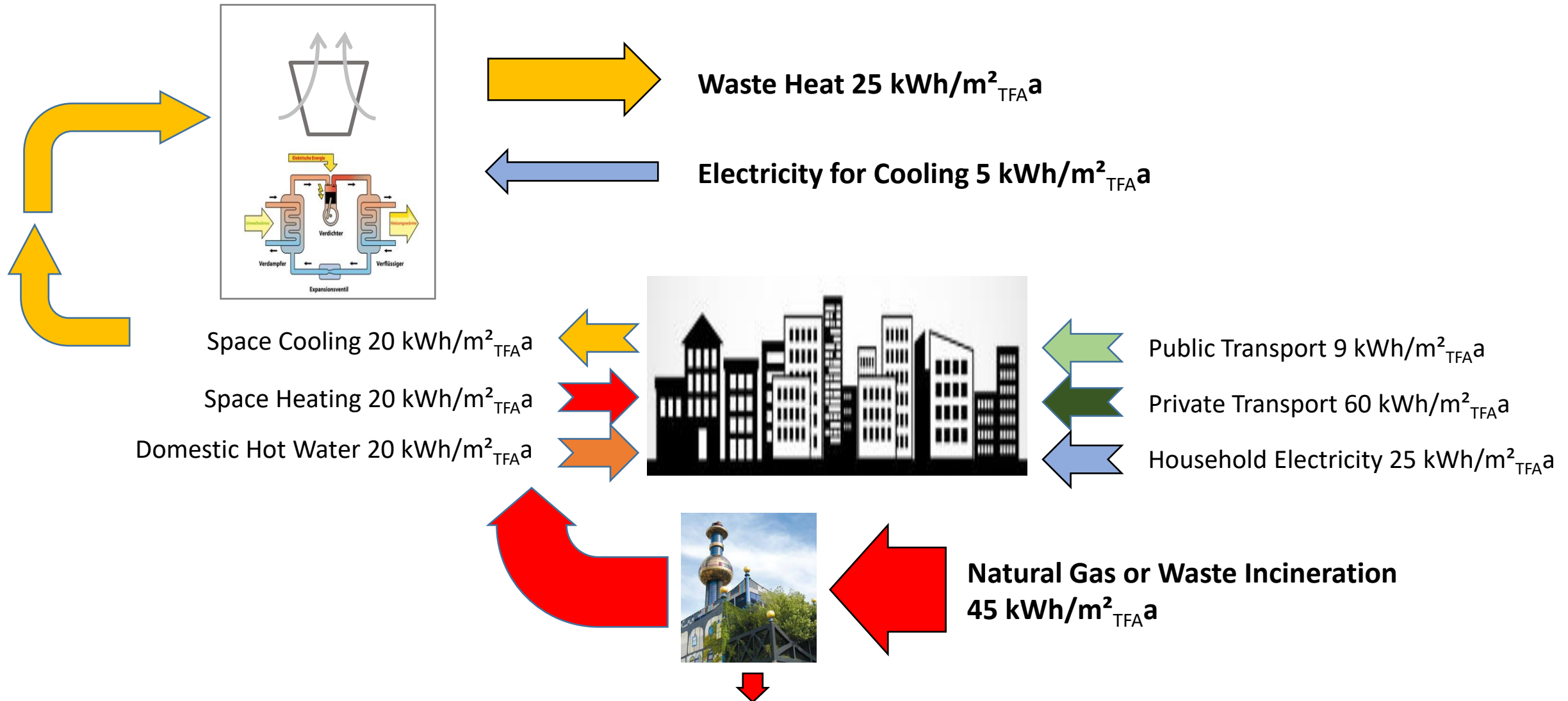




# Residential buildings, Vienna, newly built in 2020, with additive cooling



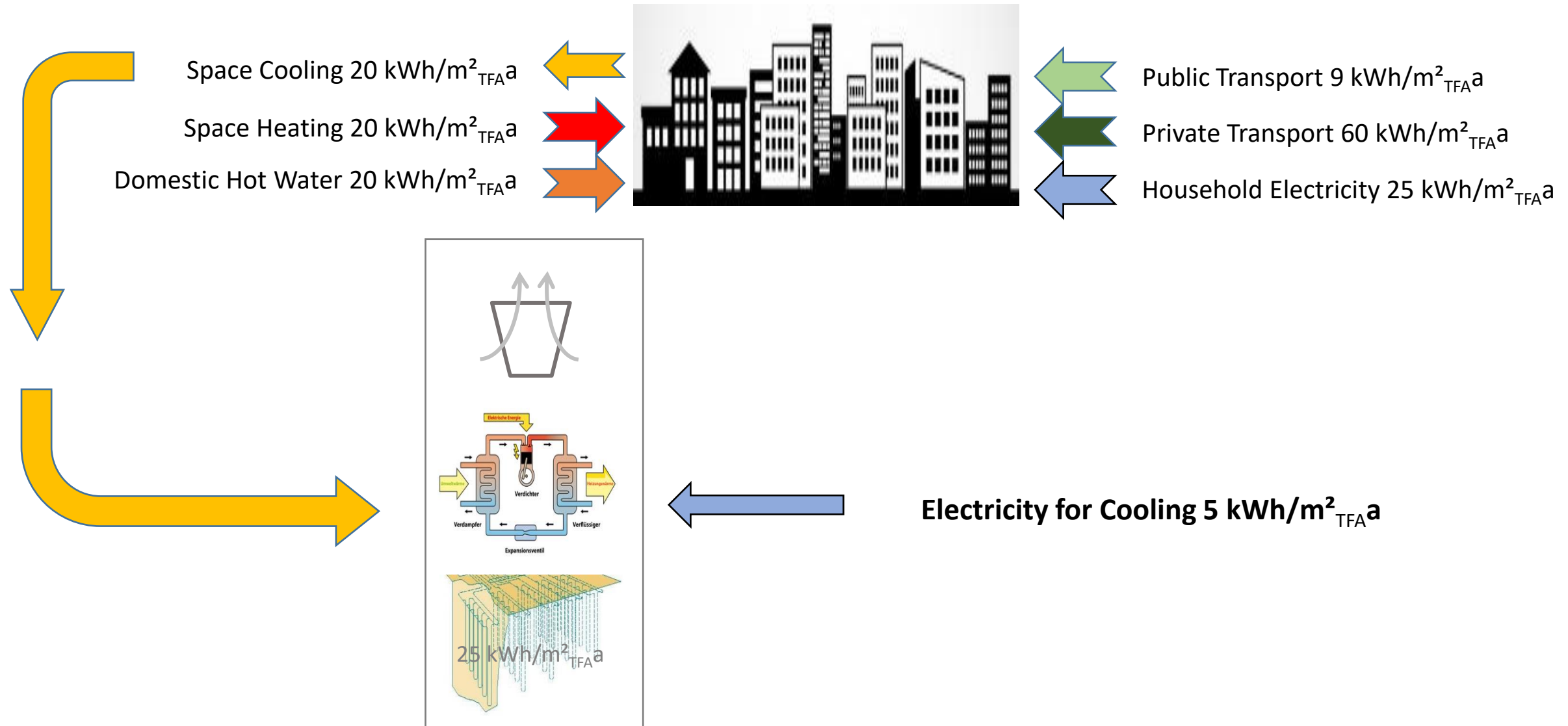
# Residential buildings, Vienna, newly built in 2020, with additive cooling



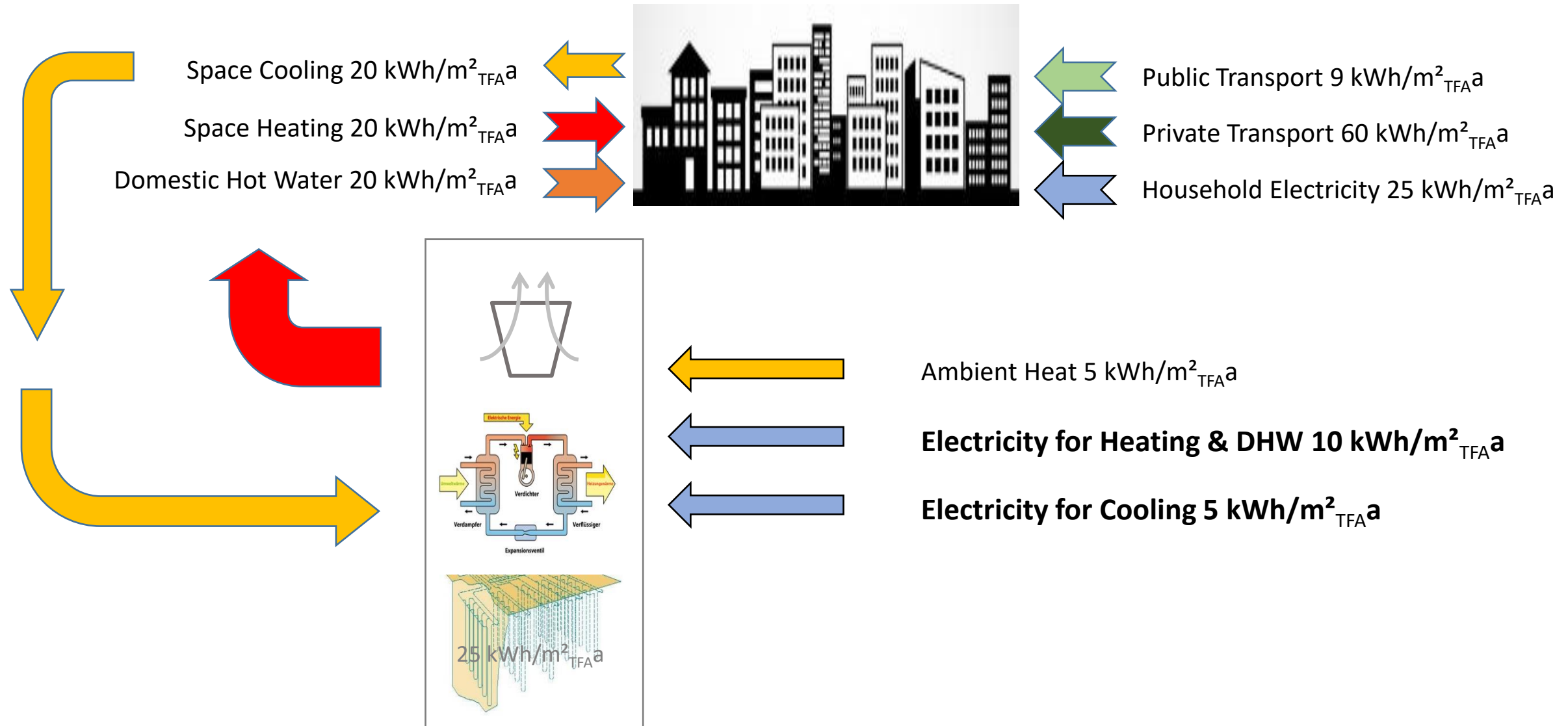
# Residential buildings, Vienna, newly built in 2020, with balanced heating & cooling



# Residential buildings, Vienna, newly built in 2020, with balanced heating & cooling

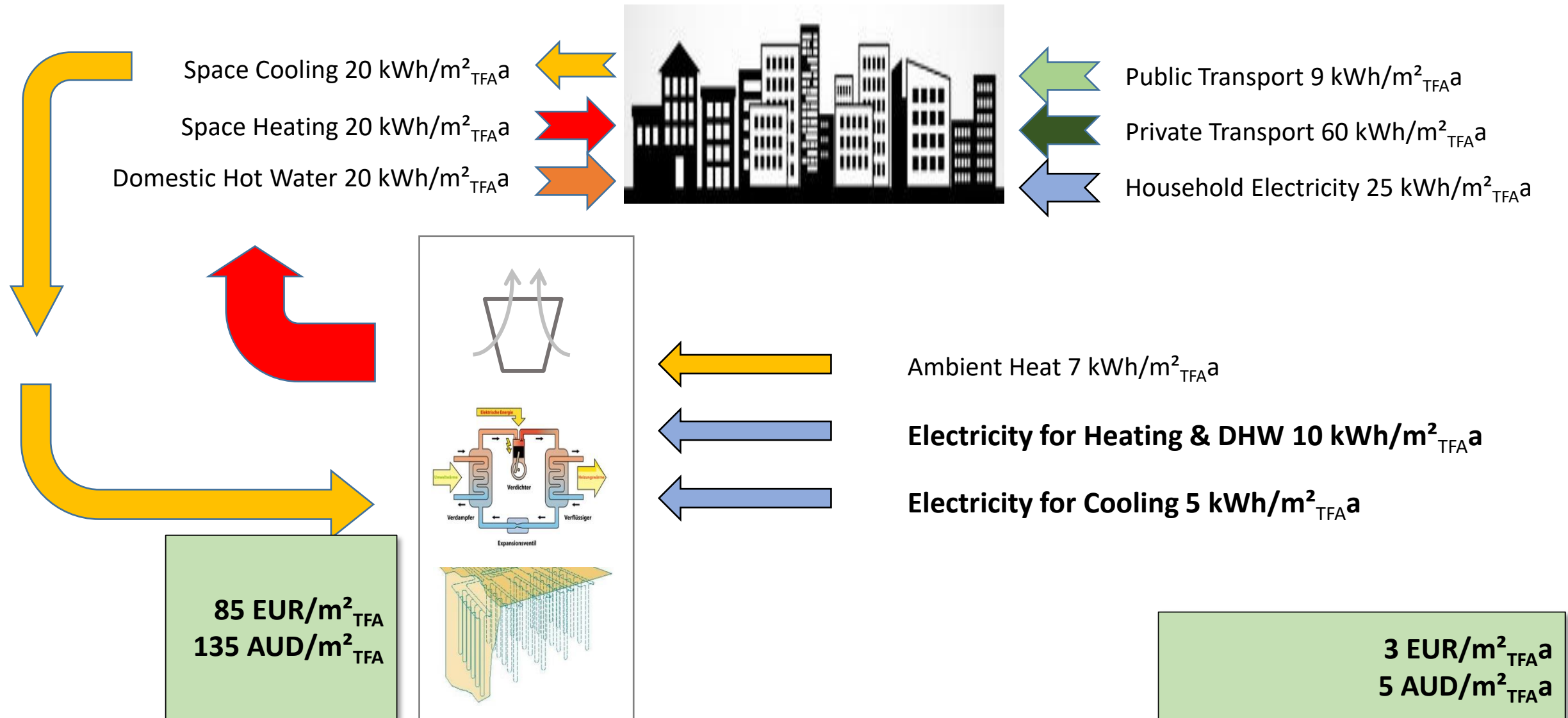


# Residential buildings, Vienna, newly built in 2020, with balanced heating & cooling

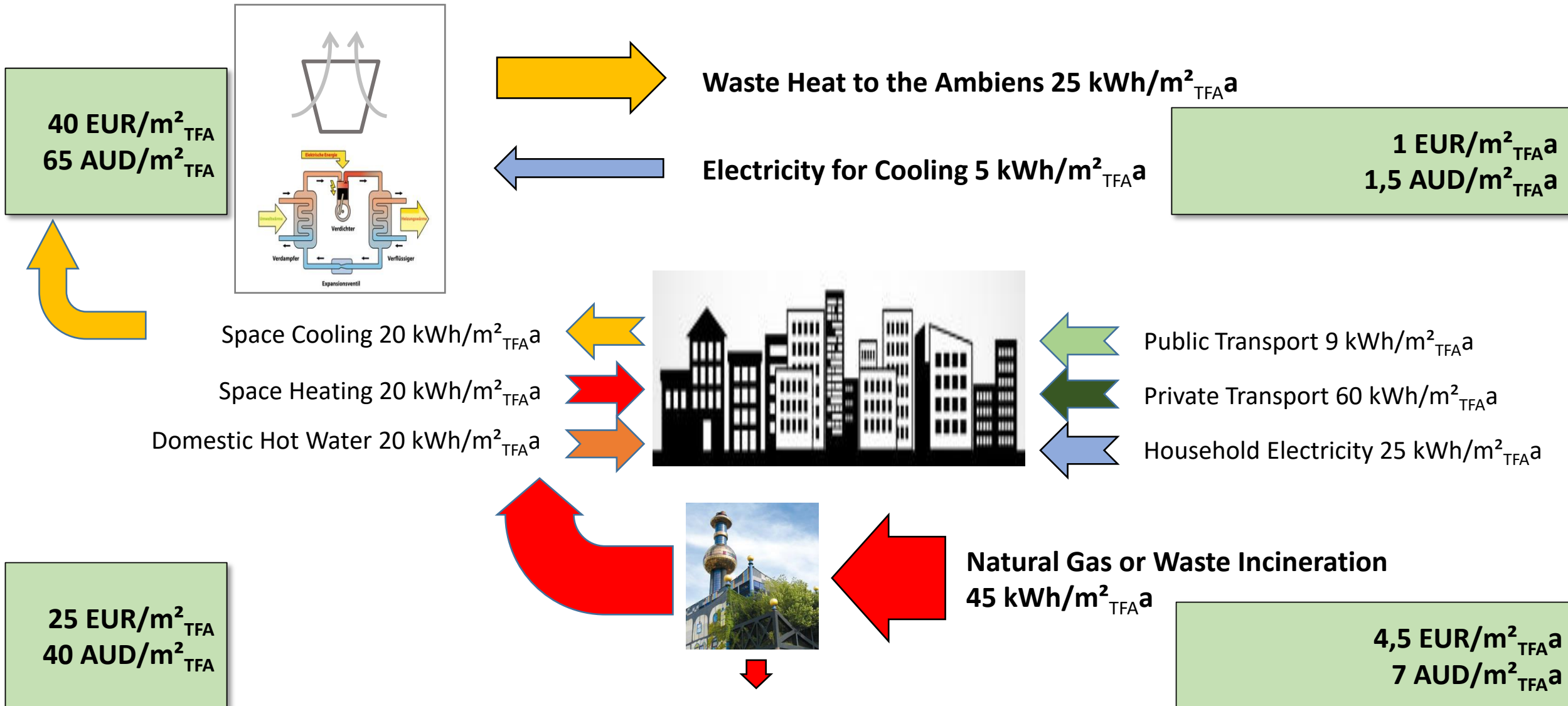




# Residential buildings, Vienna, newly built in 2020, with balanced heating & cooling



# Residential buildings, Vienna, newly built in 2020, with additive cooling



# IEA EBC Annex 80 – Resilient Cooling

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International Research on

Low-energy and low-carbon cooling applications, both passive and active,  
including the aspect of affordability and accessibility,  
including the aspect of robustness in technical as well as in social dimension.

Three year working phase starting in June 2019

2<sup>nd</sup> preparation meeting on April 12<sup>th</sup> and 13<sup>th</sup> at Heriot Watt University, Dubai

Participation warmly welcome

# IEA EBC Annex 80 – Resilient Cooling


Subtasks will focus on


- A Systematic multi-criterial Performance Assessment of cooling solutions
- B Specific R&D towards technical development of systems and components
- C Field Studies of real performance and operational optimization
- D Policy Actions,  
analysis and active cooperation with international activities,  
namely KIGALI Cooling Efficiency Programme (CEP) and  
Mission Innovation Challenge #7 Affordable Heating and Cooling



# <http://annex80.iea-ebc.org/>

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## IEA EBC Annex 80 - Resilient Cooling

An inexorable increase in energy consumption for the cooling of buildings, and the increase in overheating of buildings is caused by urbanisation and densification, climate change, elevated comfort expectations, and inappropriate architectural design practices.

Meeting this challenge requires further development and application of low energy and low carbon cooling solutions on a large scale. In order to expedite the transition of our new-build and existing building stock to nearly zero energy building (nZEB) and nearly zero carbon building (nZCB) status we have to take immediate action.

To address these challenges the EBC Executive Committee launched the Annex 80 one-year preparation phase in June 2018.

**Join**

The annex is open to all interested scientific and industrial researchers as well as governmental stake holders of EBC participating countries. (You can find a list of participating countries [here](#).)

The following documents are available for download

- [Draft Annex Text \(June 2018\)](#) (.pdf)
- [Annex 80 Guidelines for Participation](#) (.docx)
- [Annex 80 Letter of National Participation Template](#) (.docx)

### ANNEX INFO & CONTACT

**Status:** Ongoing (2018 - 2023)

**OPERATING AGENT**

**DI Dr Peter Holzer**  
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[Email](#)

### ANNEX EVENTS

[IEA EBC Annex 80: 2nd Preparative Web Meeting](#)  
April 3, 2019, 9:00am-10:00am CET -

[IEA EBC Annex 80: 2nd Preparation Meeting, Heriot Watt University, Dubai](#)  
April 12-13, 2019, 2:00pm-12:00pm -  
Dubai, United Arab Emirates

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