



# 第八届清华大学-国际能源署联合研讨会

## The 8<sup>th</sup> 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**

### **Organisers 主办单位:**

International Energy Agency (IEA) 国际能源署  
Building Energy Research Centre, Tsinghua University (BERC)  
清华大学建筑节能研究中心

### **Supporting Organisations 支持单位:**

Energy Foundation China 能源基金会  
Chinese National Institute of Standardisation (CNIS) 中国标准化研究院

**Time 时间:** 14:00 ~ 18:00 (Beijing 北京) / 08:00 ~ 12:00 (Paris 巴黎)

**Date 日期:** 2022 年 10 月 27 日 / Oct 27th, 2022

**Platform 会议方式:** Zoom 线上会议

**Language 会议语言:**

Chinese and English, simultaneous interpretation 中英文, 同声传译

## **Please register in advance**

**Register in advance for this meeting at the following link:**

[https://meetoecd1.zoom.us/webinar/register/WN\\_8dPJJa\\_0LTAu8QfSPO16O9w](https://meetoecd1.zoom.us/webinar/register/WN_8dPJJa_0LTAu8QfSPO16O9w)

After registering, you will receive a confirmation email containing information about joining the meeting.

If you have any problems during registration, please contact: [zy20@mails.tsinghua.edu.cn](mailto:zy20@mails.tsinghua.edu.cn) or [conor.gask@iea.org](mailto:conor.gask@iea.org)



## Background

Several countries around the globe have committed to target towards achieving carbon neutrality in the next decades. Buildings operations account directly and indirectly for approximately 30% of global energy sector emissions, and will play a critical role in meeting these targets. In 2021 direct emissions from heating buildings grew by 5.5%, reaching a new high of 2 500 Mt CO<sub>2</sub>, 80% of direct CO<sub>2</sub> emissions in the buildings sector. Despite this increase, CO<sub>2</sub> emissions from energy use for heating are only 1.5% above 2010 levels. Aligning with governments' targets, whilst at the same time addressing the ongoing energy crisis, will require a rapid acceleration of the rate of improvement.

The 8<sup>th</sup> IEA-Tsinghua Joint Annual Conference *Making Buildings Zero-Carbon Ready by 2030 – Near-term Solutions for Heating Systems*, will bring together leading global experts from government, academia, think-tanks and the private sector to share experiences on decarbonisation of building heating systems. The workshop, outcome of the longstanding collaboration between IEA and the Building Energy Research Centre (BERC) of Tsinghua University, will focus on the near-term policy, technology and financing options available for governments to ensure that space heating in the buildings sector can remain on track to meet decarbonisation goals in the next decade whilst delivering energy savings needed to protect consumers from high energy costs.

During the workshop speakers will address topics including:

- Near-term outlook for decarbonisation of the buildings sector – global and regional perspectives
- Policy and technology approaches for accelerating building space heating system decarbonisation
- Near-term policy and financing best practices for retrofitting buildings and for accelerating deployment of best available technologies



## Agenda 会议日程

### Opening 开幕

**Moderator: Melanie Slade, Senior Programme Manager of Energy Efficiency in Emerging Economies Programme**

**Melanie Slade, 国际能源署新兴经济体能源效率, 高级项目经理**

<p>CST: 14:00-14:15 (北京时间)</p> <p>CET: 8:00-8:15 (欧洲中部时间)</p>	<p><b>Opening speech 开幕致辞</b></p> <p>Kun Qin, Director of Energy Conservation Division, Department of Resource Conservation and Environmental Protection, China National Development and Reform Commission 勤坤, 国家发展和改革委员会环资司节能处, 处长</p> <p>Brian Motherway, Head of Energy Efficiency Division International Energy Agency Brian Motherway, 国际能源署 (IEA) 能源效率组, 主管</p> <p>Yi Jiang, Director of BEREC of Tsinghua University, Academician of CAE 江亿, 清华大学建筑节能研究中心主任, 中国工程院院士</p>
<p>CST: 14:15-14:20 CET: 8:15-8:20</p>	<p><b>Online group photo 在线合影</b></p>

### Session 1: Near-term outlook for buildings sector decarbonisation – global and regional perspectives 建筑领域脱碳的近期展望——全球和区域展望

**Moderator: Melanie Slade, Senior Programme Manager of Energy Efficiency in Emerging Economies Programme**

**Melanie Slade, 国际能源署新兴经济体能源效率, 高级项目经理**

<p>CST: 14:20-14:35 CET: 8:20-8:35</p>	<p><b>Pathways for delivering zero-carbon ready buildings by 2030 到 2030 年实现零碳建筑的路径</b></p> <p>Chiara Delmastro, Energy Analyst of Technology Innovation Unit, IEA Chiara Delmastro, 国际能源署技术创新组, 能源分析师</p> <p>Rafael Martinez Gordon, Energy Analyst of Technology Innovation Unit, IEA Rafael Martinez Gordon, 国际能源署技术创新组, 能源分析师</p>
<p>CST: 14:35-14:50 CET: 8:35-8:50</p>	<p><b>Decarbonisation pathway for building heating systems in China 中国建筑供热系统的脱碳路径</b></p> <p>Yi Jiang, Director of BEREC of Tsinghua University, Academician of CAE 江亿, 清华大学建筑节能研究中心主任, 中国工程院院士</p>
<p>CST: 14:50-15:05 CET: 8:50-9:05</p>	<p><b>Context of energy efficient buildings and decarbonization of heating systems in Europe 欧洲节能建筑与供暖系统脱碳</b></p> <p>Anne Svendsen, Special Consultant, Danish Energy Agency (DEA) Anne Svendsen, 丹麦能源局, 顾问</p>
<p>CST: 15:05-15:20 CET: 9:05-9:20</p>	<p><b>Context for building heating systems and how their energy efficiencies are evaluated in a Building Energy Code of Japan 日本建筑物供热系统以及如何在建筑能效规范中评估其能源效率</b></p> <p>Takao Sawachi, President of the Building Research Institute 泽地孝男, 日本国立建筑研究所, 理事长</p>



CST: 15:20-15:30  
CET: 9:20-9:30

**Q&A 提问与讨论**

**Session 2: Accelerating decarbonisation of building heating systems – policy and technology solutions**

**加快建筑供暖系统的低碳化转型——政策和技术机遇与挑战**

**Moderator: Araceli Fernandez Pales, Head of Technology Innovation Unit**

**Araceli Fernandez Pales, 国际能源署, 技术创新组组长**

CST: 15:30-15:45  
CET: 9:30-9:45

**Fossil-free distributed heating: technology advancement and large scale applications**  
**基于非化石能源的分布式供热: 技术进展及大规模应用**

Xudong Yang, Professor, Vice Dean of Architecture School, Tsinghua University  
杨旭东, 清华大学建筑学院副院长, 教授

CST: 15:45-16:00  
CET: 9:45-10:00

**Policies in Europe for driving heating systems decarbonisation**  
**欧洲推动建筑供暖系统低碳化的政策**

Richard Lowes, Senior Associate, Regulatory Assistance Project (RAP)  
Richard Lowes, 睿博能源智库, 项目经理

CST: 16:00-16:15  
CET: 10:00-10:15

**The application of Industrial waste heat for district heating**  
**工业余热在集中供热系统中的应用**

Jianjun Xia, Associate professor, Architecture School, Tsinghua University  
夏建军, 清华大学建筑学院, 副教授

CST: 16:15-16:30  
CET: 10:15-10:30

**Importance of standards in supporting the affordable growth of the high-efficiency heat pump market**  
**标准在支持高效热泵市场增长方面的重要性**

Cheng Jianhong, researcher of Chinese National Institute of Standardisation (CNIS)  
成建宏, 中国标准化研究院, 研究员

CST: 16:30-16:45  
CET: 10:30-10:45

**Q&A 提问与讨论**

**Session 3: Moderated panel on “finding near-term solutions that can support decarbonisation of heat in buildings”**

**小组讨论: 加快建筑供热脱碳的短期解决方案**

**Moderator: Jianjun Xia, Associate professor, Architecture School, Tsinghua University**

**主持人: 夏建军, 清华大学建筑学院, 副教授**

CST: 16:45-17:05  
CET: 10:45-11:05

**Topics to discuss and debate:**

**1. Actions being taken by governments in buildings heating sector in preparation for the upcoming Winter.**

**为迎接即将到来的冬季, 政府在建筑供暖领域采取的行动**

Ang Ye, Team Lead, Division of Urban energy transition, German Energy Agency  
叶昂, 德国能源署, 城市能源转型组主管

Mr. Xiaoliang Sun, Executive Deputy Director and Secretary-general of ESCO Committee of China Energy Conservation Association, EMCA

孙小亮, 中国节能协会节能服务产业委员会, 常务副主任兼秘书长

Pauline Lucas, Policy Director, Euroheat & Power



	Pauline Lucas, 欧洲供暖与电力, 政策主任
CST: 17:05-17:25 CET:11:05-11:25	<p><b>2. Financing solutions for retrofitting and for accelerated deployment of best available heating technologies</b> 改造和加速部署供热技术的金融解决方案</p> <p>Zhigao Wang, Senior Program Director, Low Carbon Cities Program, Energy Foundation China 王志高 能源基金会 低碳城市项目 高级项目主任</p> <p>Mr. Xiaoliang Sun, Executive Deputy Director and Secretary-general of ESCO Committee of China Energy Conservation Association, EMCA 孙小亮, 中国节能协会节能服务产业委员会, 常务副主任兼秘书长</p> <p>Miha Bobic, Vice President for Buildings, Danfoss Miha Bobic, 丹佛斯, 建筑副总经理</p> <p>Lijian Zhao, China Country Manager, Carbon Trust 赵立建, 碳信托中国区首席代表</p>
CST: 17:30-17:55 CET:11:30-11:55	<p><b>3. Suitable technology solutions to achieve low-carbon, resilient and inclusive heating system</b> 实现低碳, 韧性和包容性的供热系统的技术解决方案</p> <p>Hengyi Zhao, Executive vice general secretary, China heat pump alliance, CHPA 赵恒谊, 中国节能协会热泵专委会, 常务副秘书长</p> <p>Congfei Wang, senior engineer, Chinese Association of Refrigeration 王从飞, 中国制冷学会副秘书长, 高级工程师</p> <p>Longai Zhang, assistant general manager of commercial AC R&amp;D department, Gree 张龙爱, 格力电器商用空调研发部, 副总经理</p>
<b>Closing 闭幕</b>	
CST: 17:55-18:00 CET: 11:55-12:00	<p>Conor Gask, Energy Efficiency Analyst, IEA 康纳, 国际能源署能源效率组, 分析师</p> <p>Jianjun Xia, Associate professor, Architecture School, Tsinghua University 夏建军, 清华大学建筑学院, 副教授</p>