

# Transforming Cities in Hot and Humid Climates Towards More Efficient and Sustainable Energy Use

**IEA Future Buildings Forum Think Tank Workshop  
24 - 25 October 2017, Singapore**



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## Future Buildings Forum 2017

The theme of the 2017 Future Buildings Workshop is

**“Transforming Cities in Hot and Humid Climates Towards More Efficient and Sustainable Energy Use”.**

Particular focus areas are:

- **meeting increasing needs for cooling, dehumidification and ventilation, and**
- **deploying low carbon solutions for buildings and communities.**

## About

The IEA Future Buildings Forum (FBF) Think Tank Workshops are convened every five years to agree on strategic R&D priorities for the IEA buildings-related Technology Collaboration Programmes (TCPs). The collective long term goal of the programmes is that appropriate, and if necessary, disruptive changes should be made to the design, construction and operation of building and community scale energy systems to meet the challenging goals for clean energy supply and demand reduction. Internationally renowned experts and creative thinkers are invited to these Workshops to share their knowledge and to anticipate which new technologies and business models will be needed to achieve this goal.

## OBJECTIVES

The objectives of the FBF Workshop are to:

- identify long term energy, environmental, economic and other technical and non-technical issues, and
  - propose the future R&D necessary to understand their potential effects on future energy supply, storage and demand for buildings.
- The FBF Workshop will help to identify the following expectations:
- future R&D needs over next 5 years,
  - future R&D needed to optimize interactions of individual building and building clusters with smart energy grids,
  - future R&D required to develop promising technologies (pre-commercialisation), and
  - opportunities emerging from outcome of future R&D (large scale deployment).

#### **INTERNATIONAL ENERGY AGENCY**

The International Energy Agency (IEA) was established as an autonomous body within the Organisation for Economic Co-operation and Development (OECD) in 1974, with the purpose of strengthening cooperation in the vital area of energy policy. The multilateral Technology Collaboration Programmes are a flexible and effective framework for IEA member and non-member countries, businesses, industries, international organisations and nongovernment organisations to research breakthrough technologies, to fill existing research gaps, to build pilot plants, to carry out deployment or demonstration programmes – in short to encourage technology-related activities that support energy security, economic growth and environmental protection.

#### **IEA BUILDINGS-RELATED TECHNOLOGY COLLABORATION PROGRAMMES**

The following IEA Technology Collaboration Programmes (TCPs) are related to buildings:

- Energy in Buildings and Communities (EBC)
- Energy Efficiency through Energy Storage (ECES)
- Energy Efficient Electrical Equipment (4E)
- District Heating and Cooling (DHC)
- Demand Side Management (DSM)
- Heat Pumping Technologies (HPT)
- International Smart Grid Action Network (ISGAN)
- Photovoltaic Power Systems (PVPS)
- Solar Heating and Cooling (SHC)

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#### **Deliverables**

Findings of the Think Tank Workshop will be formulated into a concise and validated research roadmap synthesizing the status of current research and setting out future R&D priorities. The key elements of this publicly available document will include: an industry environmental scan; a technology scan; market drivers; R&D priorities and strategies; outcome-based business models for collaboration and market access. The roadmap and business models will be used to underpin the new strategic and operational plans for the IEA buildings-related research programmes. It will also be freely available and disseminated for use by national and international research programmes and other organisations.

#### **Meeting Arrangements**

The 2017 FBF Think Tank Workshop will be held from 24 - 25 October 2017 in Singapore at the BCA Academy, and will be hosted by the Building and Construction Authority (BCA), Singapore in collaboration with the IEA EBC TCP. Attendance at the Workshop will be by invitation only, with about 60 international participants. It is planned these will represent different segments of the built environment value chain, including government and the private sector, and covering industry, innovators, decision-makers, community energy planners, regulators, and academia. The FBF coincides with the Singapore International Energy Week ([www.siew.sg](http://www.siew.sg)) and arrangements can be made to register for those who are interested to attend.

#### **Date and venue**

24 - 25 October 2017, BCA Academy, Singapore

#### **Organizer**

Noel Chin, BCA.

Queries concerning the meeting arrangements for the FBF Think Tank Workshop 2017 may be addressed to:

[noel\\_chin@bca.gov.sg](mailto:noel_chin@bca.gov.sg)

#### **Co-Organizer**

Malcolm Orme, IEA EBC Executive Committee Support Services Unit.

Queries concerning IEA Buildings-Related TCP co-ordination may be addressed to:  
[essu@iea-ebc.org](mailto:essu@iea-ebc.org)

#### **Further information**

[www.iea-ebc.org/strategy/future-buildings-forum](http://www.iea-ebc.org/strategy/future-buildings-forum)