



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



## IEA Future Buildings Forum 2017 Session Plan – DRAFT

Meeting co-chairs: Tan Tian Chong (BCA) and Andreas Eckmanns (EBC)

Day 1 - 24 October 2017, Tuesday (morning)

| Time | Duration | Activity  | Venue                      |
|------|----------|---|----------------------------|
| 0830 | 30 mins  | Registration and breakfast  | T1-1 Auditorium            |
| 0900 | 30 mins  | <b>Welcome and opening address</b> <ul style="list-style-type: none"><li>– Welcome: Er Lam Siew Wah, Managing Director Built Environment Research and Innovation Institute, BCA</li><li>– Welcome: Dr Fatih Birol, IEA Executive Director</li><li>– Opening: Mr Andreas Eckmanns, Chair IEA EBC</li></ul>   | T1-1 Auditorium            |
| 0930 | 45 mins  | <b>Keynote</b><br>“Future challenges of cities in hot and humid climates”<br>Prof Lam Khee Poh, Dean School of Design and Environment, National University of Singapore   | T1-1 Auditorium            |
| 1015 | 30 mins  | Tea-break   | Tower Block, Level 2 Foyer |
| 1045 | 45 mins  | <b>Challenge Statement</b><br>Plenary presentations on <ul style="list-style-type: none"><li>– Policy: “IEA Energy Technology Perspectives”<br/>Brian Dean, Energy Efficiency Division, IEA</li><li>– Industry and Business’ view:<br/><b>David Waldren, Head of Planning, Design and Development, Grocon</b></li><li>– Future challenges of cities:<br/><b>Deo Prasad, “Sustainable, resilient and low carbon’</b></li><li>– Technology/Implementation:<br/><b>Poul Erik Kristensen, (tbc)</b></li><li>– “Singapore’s Positive/Zero/Super-Low Energy Buildings Challenge for the Tropics”<br/><b>Dr Gao Chun Ping, Director Green Building Research Department, Built Environment Research and Innovation Institute, BCA</b></li></ul> | T1-1 Auditorium            |
| 1130 | 60 mins  | <b>Tour of Skylab</b>   | Tower Block, Level 8       |
| 1230 | 90 mins  | Lunch   | Block F, Cafeteria         |



## Day 1 - 24 October 2017, Tuesday (afternoon)

|      |         |  |                                     |
|------|---------|--|-------------------------------------|
| 1400 | 90 mins | <b>Challenges to be addressed</b><br><i>Barriers and obstacles in policy making and implementation, business and market penetration, technology uptake and in addressing user behaviour</i><br><br>Guided parallel discussions in 3 groups to cover the perspectives of<br>i. Policy Making and Implementation (Gov./Authorities)<br>ii. Technology Meets Market Demand (Industry)<br>iii. Technology Implementation (City/Planners/End-users) | T8-3, T8-4, T8-5                    |
| 1530 | 30 mins | <i>Tea Break</i>   | Tower Block, Level 2 Foyer          |
| 1600 | 30 mins | <b>Conclusions from the Parallel Sessions on Challenges</b><br>Identification of 12-16 topics including cross-cutting issues to be further discussed (eg. rating by participants)<br><i>Workshop facilitators of the 3 groups</i>  | T1-1 Auditorium                     |
| 1630 | 30 mins | <b>Industry Keynote</b><br>"Importance of long term measurement and monitoring for ACMV in the tropics"<br><i>Mr Lee Eng Lock, Deputy Chairman and Senior Technical Director, Measurement and Verification Pte Ltd</i>   | T1-1 Auditorium                     |
| 1700 | 30 mins | <b>Travel to United World College of South East Asia (UWCSEA) for Site Visit</b>   |                                     |
| 1730 | 45 mins | <b>Site Visit</b><br>United World College of South East Asia (UWCSEA) Dover Campus<br>"3for2" technology. Transportation provided from BCA Academy.  | UWCSEA Dover Campus, Admin Building |
| 1815 | 30 mins | <b>Travel to NUSS Guild House@Suntec City for Networking Dinner</b>  |                                     |
| 1900 |         | <b>Networking Dinner (Paid event).</b><br>Transportation provided from UWCSEA Dover Campus   | NUSS Guild House@Suntec City        |

Organised by:





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



Day 2 - 25 October 2017, Wednesday (morning)

| Time | Duration | Activity  | Venue                      |
|------|----------|---|----------------------------|
| 0830 | 30 mins  | <i>Joint Presentation: Annex 62 Ventilative Cooling and Annex 69 Adoptive Thermal Comfort by Dr Toshihiro Nonaka and Dr Cao Bin (tbc)</i>   | Tower Block, Level 2 Foyer |
| 0900 | 60 mins  | <p><b>State of the Art briefings</b><br/> <i>Plenary presentations out of the TCPs network</i></p> <ul style="list-style-type: none"> <li>– Cooling Technology:<br/>           “Cooling Technologies” – <b>Stephan Renz, Chair IEA HPT</b><br/>           “Solar cooling” – <b>Stephen White, IEA SHC</b></li> <li>– Building Efficiency:<br/>           “Multi-Scale Energy Systems” – <b>Dr Jimeno Fonseca, ETH-FCL</b></li> <li>– Grid and Storage Interaction:<br/> <i>Mark Spurr, IEA DHC</i><br/> <i>Teun Bokhoven, Chair IEA ECES</i></li> <li>– Policy Implementation:<br/> <b>Benoit Lebot, IPEEC, Executive Director (tbc)</b></li> </ul> | T1-1 Auditorium            |
| 1000 | 45 mins  | <p><b>Opportunities</b><br/> <i>Identify the means to address the existing challenges in the fields of technology, policy and market implementation</i></p> <p>Guided parallel workshop discussions (4 groups of which each works on 3-5 topics as identified on Day 1)</p> <ol style="list-style-type: none"> <li>i. City and District level – technology needs and solutions</li> <li>ii. City and District level – policy and market implementation</li> <li>iii. Building level – technology needs and solutions</li> <li>iv. Building level – policy and market implementation</li> </ol>  | T8-1, T8-3, T8-4, T8-5     |
| 1045 | 30 mins  | <i>Tea-break</i>  | Tower Block, Level 2 Foyer |
| 1115 | 45 mins  | Opportunities (cont.)   | T8-1, T8-3, T8-4, T8-5     |
| 1200 | 30 mins  | <p><b>Conclusions from the parallel Sessions on Opportunities</b><br/>           Findings of the 4 groups and assignment of these for in-depth discussion in the following discussion blocks (afternoon session).<br/> <i>Workshop facilitators of the 4 groups</i></p>   | T1-1 Auditorium            |
| 1230 | 90 mins  | <i>Lunch</i>  | Block F, Cafeteria         |

**Day 2 - 25 October 2017, Wednesday (afternoon)**

|      |         |   |                            |
|------|---------|---|----------------------------|
| 1400 | 90 mins | <p><b>R+D Priorities of the next 5 years</b><br/> <i>In-depth discussion on where and how IEA-TCPs contribute to provide solutions, as well as prioritisation of each R+D theme.</i></p> <p>Guided parallel workshop discussions (4 groups of which each works on 3-5 topics including cross-cutting issues)</p> <ul style="list-style-type: none"> <li>i. Building HVAC and systems (HPT, 4E, EBC, SHC)</li> <li>ii. Building envelope and user behavior (EBC, SHC, DSM, PVPS)</li> <li>iii. City and District scale (DHC, EBC, DSM, ECES, SHC)</li> <li>iv. Grid and storage interaction, renewable integration (ISGAN, ECES, PVPS, SHC)</li> </ul> | T8-1, T8-3, T8-4, T8-5     |
| 1530 | 30 mins | <p><b>Conclusions from the parallel Sessions on R+D Priorities</b><br/> Identification of R+D priorities of the next 5 years<br/> <i>Workshop facilitators of the 4 groups</i></p>  | T1-1 Auditorium            |
| 1600 | 30 mins | <i>Tea break</i>  | Tower Block, Level 2 Foyer |
| 1630 | 30 mins | <p><b>Wrap-up</b><br/> Conclusions and recommendations resulting from the FBF 2017<br/> <i>Co-chairs</i></p>  | T1-1 Auditorium            |
| 1700 | 15 mins | <p><b>Closing remarks and follow up actions</b><br/> <i>Co-chairs</i></p>   | T1-1 Auditorium            |
| 1715 |         | End of the meeting  |                            |

26 September 2017