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| http://ashrae.org/Image%20Library/Static/logo_ashrae.png?code=72c4166c-fe1f-490d-abad-d16d2147f7f2**Minutes**  **TC 7.6 Building Energy Performance - Research Subcommittee**  Sunday, June 26, 2016, 1:00 p.m. - 2:00 p.m. (CDT)  Marriott Grand, CL: Landmark 3 |

1. **Introductions and Sign-In**

1. **Review of ASHRAE Research Procedures – discussion deferred, all those present were active in research.**
   1. Research Topic Acceptance Request (RTAR)
   2. Workstatement (WS)
   3. Research Project (RP)
2. **Research Chair “Breakfast” in Orlando**

* 1. URP process is under review – temporary halt
  2. Nine RTAR’s considered, five accepted with comments and four rejected
  3. Need to get the handout – more research is needed, temporary halt to URPs
  4. DSE will provide StL updates when available

1. **Current Research Projects of TC 7.6 and co-sponsoring** 
   1. 1702-RP ***Case Studies to Test Performance Measurement Protocols*** – the initial meeting of the PMS took place immediately prior to the research subcommittee meeting. The award was to the University of Wyoming, PI Liping Wang, with partners from University of Alabama and Iowa Energy Center. All three partners and most of the PMS were able to attend the meeting.
2. Updating the measurement plans currently. The scope is agreed for scales of approach for the matrix of facilities and levels of measurement.

1. The scope is to determine the feasibility, so we need to keep difficult items included to push the boundary of feasibility.
2. Some new research assistants added. Still implementing the occupant surveys.
3. Current timeline…is on schedule.
   1. 1771-RP - Co-sponsorship of bEQ’s WS “***Modeling of Typical Commercial Buildings in Support of the ASHRAE Building Energy Quotient Energy Rating Program***” – TC member Michael Deru is on the PMS. Waiting for approval from RAC on award of contractor. There was a lot of interest and many qualified contractors bidding on this one. University of Miami was awarded the contract in the last month. A preliminary meeting took place to setup a kick-off in the next month.
      1. Question: what’s typical? That assessment is in the scope. This will be a difficult project to complete in budget and on time.
      2. 2-year timeframe
   2. 1608-RP, ***Development of a Load-Based Method of Test for Light Commercial Unitary HVAC*** Sponsored by: TC 8.11, Unitary and Room Air Conditioners and Heat Pumps, Co-sponsored by: TC 7.6, Building Energy Performance. Michael Deru from TC 7.6 is on PMSC. Oklahoma State is the contractor. Recommendations were made for the final report which were incorporated. TC 6.8 will vote on the final report this meeting.
   3. Projects in development:

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| Number | Topic | Action / Champion |
| TBD | Development and Testing of Stacked EUIs for Use in Standard 100 for Setting Targets by Building Types coming from Dennis Landsberg  **--- draft RTAR provided** | Dennis Landsberg |
| 1650 | Training Requirements For Sustainable, High-Performing Building Operation | TC 7.6 is co-sponsor, 7.03 is the lead.  Need a TC 7.6 member for PMS.  PES meets Monday 4 p.m.  TC 7.3 meets Tuesday  Hyojin and Patrick Carpenter volunteered |
| TBD | Testing Uncertainty Equations in Guideline 14 coming from Jeff Haberl and Joshua New. This RTAR would serve as preparation for revision of the guideline in the next couple of years. | Joshua New |
| 1697 | Simultaneous heating and cooling with TC 7.5 | Might be dropped, didn’t show up on my latest report as active |

* 1. Recently completed research

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| Number | Topic | Status |
| 1633 | **Data and Interfaces for Advanced Building Maintenance and Operation** | Presentations available from prior meeting, final report |
| 1651 | ***Development of Maximum Technically Achievable Energy Targets*** | Report available, presentations forthcoming (at this meeting?)  One overview presentation was in Orlando.  Seminar 2 Sunday morning at StL. |

1. **Research Proposals Presented to TC / New Business**
   1. Request for participation of TC 7.6 on an MTG initiated by TC 6.8 to develop a method to calculate the renewable benefit of geothermal heat pump systems and other heat-pump type systems that recover heat. **Move to recommend one or two members of TC 7.6 join the MTG (one voting and one alternate).**

* + 1. Purpose is to measure and quantify avoided source energy.
    2. Submitted WS to RAC this cycle, expecting comments. Harvey Sachs has provided some comments, need to provide argument to RAC about the deficiencies in current practices.
    3. Needs to account for coincident and non-coincident waste heat recovery.
    4. Seven TC’s are represented.
    5. Goal to make examples to justify the need.
    6. Consider a symposium to demonstrate the need.
    7. Avoided waste energy can contribute to RECs, this is one avenue for these types of systems, and complement sun and wind which are inconsistently available.
    8. Next opportunity is after comments come back from RAC. Then would TC 7.6 contribute to a symposium with a slide or program. This might be for Las Vegas, but could be next annual meeting.
    9. Q: does this feed into Guideline 14? Hasn’t been phrased this way so far. Talking to IBPSA-USA for the Salt Lake City/ASHRAE conference. Dr. Amanda Smith will present.
  1. Is there a “comfort” TC for non-energy benefits? Janice looking for a BPA project to quantify benefit which resulted in an incentive adder for the increased benefit. This one was specifically for residences to say that they received some benefit.

* + 1. Hyojin: Maybe TC 2.1, although their focus is commercial real estate. Benefits of increased productivity. Seminar TC Tuesday 3:30.
    2. Chris Baker: Lisa S. he will forward offline.
    3. Mike B.: Productivity of CO2 from Harvard School of Medicine and Syracuse.
  1. Any interest in future research subcommittee chairs? A few candidates from Orlando. A great way to contribute to the TC! Make friends! See the world!
  2. Standard 209 as a method of how to connect design/modeling and operation together, kind of how commissioning worked for the construction industry but we still need an operational parallel. Mike B. noted 7.3 does this also. How are energy targets developed used now?
  3. Other new business?

1. **Adjourn 2:00 p.m. +**