

DOE BBA Refrigeration Project Team Meeting

January 29, 2013 – Dallas, TX

Attendance:

SUPERVALU – Richard Heath
Walmart- Richard Royal
Target Corporation – Neil Monson
DC Engineering – Dusting Lilya, Tom Wolgamot
NREL – Paul Torcellini
Kroger – David Menninger
Whole Foods Market – Kathy Loftus, Mike Ellinger
ASHRAE – Lilas Pratt
US DOE – Kristen Taddonio
ICF – Meg Giuliano
Navigant Consulting - William Goetzler, Rebecca Legett, Robert Zogg, Dustin Bailey, Collin Weber

Topic 1: Commissioning Guide

The team provided an update on the current status. Lilas Pratt stated that ASHRAE is working with DOE, focusing on supermarket refrigeration. A request for comment and peer review is out on a 50% draft, which was mentioned at TC meetings during the Dallas ASHRAE conference. Responses and comments are due back on February 8, using a form included with the materials emailed for this meeting. The committee will review at the end of February, and a second peer review will occur after revisions are performed to get the draft to a 90% level of completeness. Paul reiterated that ASHRAE highly values comments from industry and needs this input to make the guide a success.

Richard Heath provided comment on the document, stating a concern that it was turning into more of a best practices or design guide rather than a commissioning guide. Lilas said that it was the intent of ASHRAE to walk that line, but Richard pointed out that most of the opportunity to save energy will be in commissioning existing systems. Dustin Bailey stated that a section on how to identify and quantify such existing opportunities would be very useful. Richard Heath reiterated that the goal should be to commission a system to its original design intent. Lilas responded that the guide is intended to include commissioning during the design phase itself. Much discussion ensued of design versus retrocommissioning. Kathy stated that the industry doesn't talk much about commissioning to original design intent; instead, they're usually upgrading systems. Richard H. added that incentives were very important, and reiterated his concern that the current document is a best practices guide. Lilas stated that this was not the intent.

Topic 2: Racks Challenge

Bill laid out an overview of the existing work to date on the racks challenge, and discussed progress so far. Major issues include the complexity of the system, the lack of an existing, universally-accepted

metric to measure rack performance, and the gaps that often exist between suppliers and end user. Bill showed a matrix of items which could form part of the requirements for a challenge. Dave M. asked about what the end result would be. The team clarified that the goal would be to have a universal document to which any OEM could build and qualify.

Neil M. stated that what was shown is on the right track, and that there are other things that could be pursued as well. More discussion of controls and case EEVs, for example, could be included. Tom added that the 50°F floating head set point mentioned in the slides could be an issue, and that instead setting a differential between suction and head pressures might be more universally applicable. Dave added that all options have an upside and downside. One participant pointed out that companies have been building racks for decades, and that perhaps particular value could be gained by focusing on new system types – cascade, transcritical, etc. A participant added that much of the value in such a spec would be in helping smaller end-users with limited resources.

Dustin L. discussed the AHRI 1200 rating table used for display cases, and suggested that perhaps something along those lines – EER requirements at certain operating points – could be useful. This would allow end-users to better estimate whole-system performance. Dustin B. pointed out that universal appeal is something on which we have to focus.

One idea is that we could consider a points system for the spec. So, perhaps there could be 10 items, each with some point value, and the OEMs would pick any combination that yields a certain point total to have qualifying equipment.

Bill suggested that the next step was to draft a first document and have it ready for review and comment in a few months. We will need input from members and will be reaching out.

Topic 3: Collaboration with GreenChill

Refrigerant emissions and electricity consumption data currently exist for low-GWP systems. The goal of this project would be to turn that data into a set of case studies highlighting the performance of specific systems. EPA has begun contacting stores. The objective is to develop rigorous case studies.

Topic 4: Open Case Retrofit Guide

Current work for this project focuses on deployment activities. A webinar on the topic is scheduled for 2/14, with Target and REMIS presenting. The information is available on the RPT website. Neil asked about promotion outside of the RPT. Bill mentioned that we're working with utilities, both electric and gas. Richard H. added that incentives have already been paid on the gas side for some of their projects. Steve Hagen had previously stated that all their projects were custom measures, but Richard H. said that there were some prescriptive measures for gas out there. He is currently using 50 Therms/linear foot for gas savings incentives. The goal is to make this a common, universal incentive. Richard H. stated that National Grid and other eastern utilities may start offering gas incentives for door retrofits soon. He also suggested that perhaps DOE could develop some sort of universal custom incentive form to be used by members. He added that the possibilities for incentives when adding doors aren't limited just to the

retrofit – the resulting impact on the rest of the system provides opportunities too. For example, the vast reduction in medium-temperature load opens up capacity for shedding of low-temperature load to the medium-temperature system. This could be the basis for an incentive as well. Richard H. offered to share data on savings and incentives from door retrofits.

Neil mentioned FMI as a means to share the doors retrofit guide. How should we work with FMI? He suggested we use Laurie Gethin as the point of contact. We should ask her what forums are out there for promotion within FMI. We should also ask contractors as well, and get in contact with ACHR news.

Action items include contacting FMI and ACHR news directly to see how they can be used as promotional channels.

Topic 5: New/Additional Issues

Do we have a full plate?

Target has a few issues. Refrigerant issues, what to do with R-22 stocks, etc. But these seem outside the scope of the RPT.

Topic 6: Webinars

What do members want to hear about? Neil suggested that as we move along with the racks spec, suppliers and others could be brought in to talk about these technologies. Bring in expertise from industry to familiarize end users with the technologies.

Who should we bring into the discussion? Perhaps we should use FMI and ACH&R News to bring in participants, such as for webinars, as well as broadening the audience for our initiatives.

This year's FMI technical conference is in September in Baltimore.

IGA is another entity we could reach out to. Next steps need to be improvement on the deployment side. Dustin B. suggested that we reach out to contractors. RSES is the contractor trade group we should speak to. Contractors would be particularly incentivized to push new technologies out to their customers.

Specific webinars could include system interaction (refrigeration and HVAC). Engineering firms could speak to this, and DC Engineering volunteered. HVAC providers may also have data.

Dustin L. added that a webinar on how to do building load calculations with case credits and impacts upon HVAC loads after retrofits would be useful.

Topic 7: Other Tech Specs

Bill mentioned additional BBA tech specs and the opportunity to participate in demo programs. Target mentioned that they had some stores that might use heat pump water heaters.

Topic 8: Efficiency Forum

Bill announced the 2013 Forum, May 29-30 at NREL. There will be OEMs, suppliers, etc. Other parties will also be in attendance. Who would members like to see? Some responses included larger contracting organizations, suppliers of services, and people on the construction side such as Hussmann and Hill-Phoenix's in-house service/installation groups.

The Forum would also be a great venue to discuss the racks spec.