

[Equest-users] Fwd: LEED Review Comment - Exhaust Fans

Pasha Korber-Gonzalez [pasha.pkconsulting at gmail.com](mailto:pasha.pkconsulting@gmail.com)

Fri Jun 17 13:46:07 PDT 2011

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Hi All--- I have been corrected thanks to Magda...

Thank you Magda for setting me straight on this. Do you offer LEED compliance simulation training that I can get from you---looks like there are some details that I don't clearly understand sometimes with the compliance rules.

...please remember I am only human, and I do believe this. I don't intend to tout any amount of "perfect expertise" as I am still learning and growing everyday too along with the rest of you. That's why I love this forum and the discussion we can freely have. Thanks Jason Glazer for making this possible for all of us.

Also--you might be interested to know that another simulation off-line wanted to "warn" me that the USGBC and GBCI EAc1 reviewers "monitor" this list. I disagree that they "monitor" this list, but hopefully they watch the list to see how we are all interacting or not interacting with each other through the forums and the simulation industry.

The bottom line is this: We simulators (GBCI or not) are all in this goal together to change the building design industry to work for a better future for our Planet and way of life. These are my goals to, so if my frustration is being heard by the rest of my colleagues maybe GBCI will consider that some of their approaches need to be reviewed and revised so that the industry can be in sync together.

It's apprent to me that I have "stirred the pot" with many other out there: "Maybe the pot needed to be stirred to get some attention brought to these issues." I don't think I am completely alone on this thought. If I am then I guess I will stand alone.

Thanks for all the great commentary and discussions--it is stimulating.

Pasha

----- Forwarded message -----

From: Magda Lelek <magda_at_andelmanlelek.com>

Date: 2011/6/17

Subject: RE: [Equest-users] LEED Review Comment - Exhaust Fans

To: Pasha Korber-Gonzalez <[pasha.pkconsulting at gmail.com](mailto:pasha.pkconsulting@gmail.com)>, Ömer Moltay <omoltay_at_mimtarch.com>

Cc: Michael Andelman <mike_at_andelmanlelek.com>

Dear Pasha,****

** **

Regarding you criticism of the reviewer's comments about the electric heat use in case of your project - please note that he/she *was correct*. Please note that according to G3.1.3.2 boilers shall be natural draft. Your boiler type (forced draft) was incorrect. Contrary to your assertion the reviewer was just merely trying to enforce consistent standard and I actually applaud him/her.****

** **

Sincerely,****

** **

M. Magda Lelek, P.E., CEM****

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From: [equest-users-bounces at lists.onebuilding.org](mailto:equest-users-bounces@lists.onebuilding.org) [mailto:
[equest-users-bounces at lists.onebuilding.org](mailto:equest-users-bounces@lists.onebuilding.org)] *On Behalf Of *Pasha
Korber-Gonzalez
Sent: Friday, June 17, 2011 3:12 PM
To: Ömer Moltay
Cc: [equest-users at lists.onebuilding.org](mailto:equest-users@lists.onebuilding.org)
Subject: Re: [Equest-users] LEED Review Comment - Exhaust Fans****

** **

Omer---I have your reviewer also on one of my projects...I literally just finished the 33 comments back to the reviewer only 6 hours ago. I'm exhausted and frustrated (hopefully I'm not alone in these feelings after fighting with LEED & GBCI...)*****

I had the exact same comment, but I already had the exhaust fans in both the baseline and proposed. I was also told to break-out the fan energy which was annoying to have to back-track on these tedious things, add an extra meter, etc.... I also ran into the same issue of mis-match output results and I could not track what was the cause of it. I ended up explaining how the discrepancy in energy is literally negligible in the whole building picture of annual energy use. Exhaust fans and motors are small--in the sense of the ones they are referring to and to spend a whole hour fixing, revising, and rewriting explanations in the hopes that I appease this reviewer is EXHAUSTING and FRUSTRATING....also this change made virtually no change or difference in my overall results comparison as my reviewer pointed out that these fans are considered process loads and therefore are held equal in both cases...UGH. ****

Further more, it ultimately feels that GBCI and the LEED Reviewers are always "out to get us"....What's going on with the LEED Comment discussion on Assembly U-values being unacceptable????!! I have never had a LEED reviewer comment about this modeling approach and I've completed LEED sims from LEED version 1.0. This is really starting to get to be too much of a double standard for inconsistencies within the GBCI EAcl/EAp2 reviewers. The amount of work that is required for the reporting is ridiculous. Why do the new forms make us simulators take time to transpose the Appendix D climate characteristic data from 90.1 into the LEED template....****

There doesn't seem to be much support or comfort when "working for" a LEED reviewer and to TAKE THE CAKE....several comments in my LEED review were unprofessional on their part AND they are incorrect! For example my LEED reviewer takes the liberty to state: "...* Table G3.1.1B indicates that the heating type for system type 7 is hot water fossil fuel boiler only, so there must not be any energy consumption for electric space heating.**

The following was my response back to them where based on my 10+ yrs of simulation & HVAC design experience warranted their statement ignorant and unprofessional in my opinion. Statements like this from GBCI Reviewers are insulting to experienced simulators (maybe to inexperienced simulators too?) and only make the LEED Reviewers look inexperienced and

unknowledgable---which makes me question thier ability to adequately review my energy models:****

Response: First off it is incorrect to state, "*so there must not be any energy consumption for electric space heating." *The order of magnitude is small enough (equalling 0.4% of the total energy use in the whole building), that the impact of this energy is more than negligible. Thus indicating that this electric energy usage is coming from something very small in comparison to the over all building systems. Second, looking at the output summary document for the simulation tool the screen shot below shows that "*boiler draft fan electric use is included under SPACE HEATING, not PUMPS & AUXILLARY EQUIPMENT*." Therefore the small amount of electric space heating that is being reported is being accounted from the hot water boiler draft fans. ****

* *****

I tested the model where this energy was coming from and found that in the boiler input window the efficiency is represented as an HIR value, and there was a small default input for the EIR input associated with the equipment. To appease the confusion of this small amount of electric energy that was being reported I have zeroed-out the EIR input value that was causing the results to be unacceptable to the LEED Reviwer.****

---end of response comment-----****

I don't really want to use the term "enemy" but with these types of stupid comments from LEED EAcl reviewers they certainly feel like the enemy who's goal is to work against the Simulation crusade to better our design industry with these integrated design tools and skills.****

HOW CAN WE REGARD GBCI & USGBC AS INDUSTRY 'GURUS' AND EXPERTS WHEN IDIOT COMMENTS ARE COMING FROM THE SIMULATION REVIEWERS. I certainly have lost any amount of respect or comfort in the "expertise" of the GBCI & USGBC organizations with regards to energy simulation for real life and for compliance purposes.****

Note to GBCI---you cannot apply a cookie-cutter approach to energy simulation reviews, where there is literally NO cooking-cutter approach to creating energy simulations. The EAcl review process needes to become more dynamic and interactive, so at the very least you can let me educate your reviewers since it is obvious they are not getting the proper training nor does it seem they even have any simulation experience at all to do a minimally adequate review of an energy model. ****

It is my professional opinion that GBCI EAcl Review Team is losing face quickly amongst the greater populus of LEED simulators. At this point in time I'd sooner start consulting to my clients that doing the *formal* LEED process will do nothing for them but waste more money and cause more stress and headaches in the long run. I'll certainly suggest that they apply the "principals" and strategies of LEED but without the 'marketing-monopoly hype' spewing from USGBC/GBCI lackies.****

Furthermore as a LEED simulator and an Engineering Consultant there is ZERO support from USGBC/GBCI in support of what reasonable simulation fees and costs should be to comply with all of the ridiculous requirements that are being mandated to be completed for EAcl. Over the years of new LEED versions, the amount of information detail being "required" by the reviewers has increased at least 3-fold, however I've observed that energy simulation fees have been at a stale-mate for the past 10 years and have had no opportunity for growth--in fact it is more likely that simulation fees have been continuously decreasing over the years while the LEED work requirements

continue to increase.****

The only thing that I get out of this LEED phenomena is more headaches...all of my LEED projects are at a profit loss due to the amount of *extra* work imposed on us by the LEED Comments and requirements of the reviewer (i.e. my comment example above). I spent an extra 45 minutes composing that response and verifying that I WAS CORRECT, to prove to the LEED reviewer that thier comment was completely false in how it applied to my project. At an average hourly simulation rate of \$125/hour, this LEED comment cost me an extra \$94 of time that could have been legitimately spent working on another model that will be useful for the client to use and help impose an industry shift towards sustainable building design standards.****

...Instead, this comment cost me an extra \$94 out of my pocket to "argue" with the LEED reviwier who virtually isn't even there or listening to me....so in a sense I am also throwing more money towards USGBC inclusive of the multi-thousand dollars that my client has already paid them. DEAR USGBC---please stop raping the industry for the money monopoly that you have created. The sense of GREED is oozing from everything that comes out of USGBC/GBCI with a price tag on it or a cost associated with it.****

(my profit loss is due to extra unforeseen time expended to fulfull LEED comment requirements beyond the fee that I had estimated to my client.) ****

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* *****

2011/6/16 Ömer Moltay <omoltay_at_mimtarch.com>****

Dear Crina,

Thanks for the reply. I just added these exhaust fans to my baseline model. The reviewer is also asking for a separate energy consumption calculation for the exhaust fans. While trying to capture this through separate meters, I just realized that the air volume exhausted through some of these independent fans is variable in hourly reports even if I define them to be constant volume. I am afraid that this will result in mismatching values for energy consumption between the baseline and the proposed models.

1. What could be causing the air volume to be variable?
2. Is it a must that both the baseline and the proposed cases should display exactly the same amount of energy consumption for these independant fan systems?

Thank you, ****

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14.06.2011 00:04, Bosch, Crina yazmis:****

Omer,

They are talking about independent fans like toilet exhaust or kitchen exhaust. Those values that you have under EF-1 thru EF-9 need to be equal between baseline and proposed model. So, if you have EF-1 at 300 cfm and 2KW for that fan, you need to input the same values in baseline model. Those fans are separate than the Exhaust from the AHU. I usually input them at space level and the kw/cfm for those fans. Hope this helps.

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-----Original Message-----

From: Omer Moltay [mailto:omoltay@mimtarch.com]
Sent: Monday, June 13, 2011 9:16 AM
To: equest-users@lists.onebuilding.org
Subject: [Equest-users] LEED Review Comment - Exhaust Fans****

Dear All,

We have received the following from GBCI regarding the energy modelling review:

"Table 1.4.2 indicates that exhaust fan systems are reflected in the Proposed model; however, the equipment capacities are inconsistent with the exhaust fan systems (EF-1 through EF-9) as indicated in the mechanical schedules provided for PI Form 4: Schedule and Overview Documents. In addition, the independent fan systems of the HVAC systems in the actual design must be modeled identically between the Proposed and Baseline models at actual equipment capacities (fan volume and fan power) as required by Table G3.1.10 in the Proposed building column, since the fan design air flow rates and fan power per Sections G3.1.2.8 and G3.1.2.9, respectively, only applies to system types 1 through 8 in Table G3.1.1A. Revise the

Proposed and Baseline models so all independent fan systems of the HVAC systems are modeled identically between the Proposed and Baseline models. In addition, separate the energy consumption and peak demand energy for independent fans in Table EAp2-4 and Table EAp2-5 of the prerequisite form. Further, provide revised SV-A reports reflecting the changes"

Our proposed model has supply and exhaust fans (Supply: AHU, FCU - Exhaust: AHU, independent exhaust fans). Our baseline model has supply and relief fans (VAV System).

Please look at Section 6 of the attached Table 1.4.2. Are we expected to additionally model exhaust fans in the baseline case? Do they mean exhaust fans when they say "independent fan systems of the HVAC systems?".

Thanks for all replies,

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