

# Energy Model review updated 6-24-15

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**Depth:**

Incomplete model review of mechanical systems due to Mechanical schedule being incomplete and inconsistent nomenclature of system names. Cannot take credit for high efficiency systems when efficiencies are not listed in the M-dwgs. Please provide all information to complete review.

9-1-15 not resolved

Please update drawing date on revised drawing set. Date has not been dated to the latest date, it should also be fixed so we can be sure during inspection that we are looking at the most current set of mech drawings

## additional comments:

Please clarify the changes to the model. Provide explanation in AI1 for the following model changes, submit revised drawings to match changes as required to match energy model:

- Lighting W/SF and operating schedules have not changed since the last submission. The PS-E report shows that energy consumption for "AREA LIGHTS" have decreased
- Plug load Equipment W/SF and operating schedules have not changed since the last submission. The PS-E report shows significant decrease in energy consumption for "MISC EQUIPMT".

- 1) M-500: 5 cooling towers indicated, none on standby. However, model indicates 1 on standby. Clarify.
- 2) M-502: Heating and Ventilating Systems – HV-4-1A,B,C,D, HV-68-1 & 2
  - outdoor air CFM does not align with DOAS-SYS in SV-A.
- 3) M-502: Heating and Ventilating Systems – HV-5-1,2,3,4,5,6,7, HV-68-3,4,5
  - unable to verify these systems are in the model. Identify system names from M-502 with SV-A
- 4) M-502: Factory Assembled & Field Erected Central AC System – AHU-4-1, 2A, 2B
  - missing capacity information, efficiencies.
  - CFM/Fan Power does not align with LOBBY-SYS from SV-A. Clarify.
- 5) M-504: Lobby Fan Coil Units – Type A,B,C
  - Clarify how these are modeled. Included in LOBBY-SYS?
- 6) M-505: Condenser Water Packaged AC Units – missing information.
  - Must use code default information for efficiencies if not included in the drawings.
  - Align unit names from M-505 with SV-A. For example, AC-B1-1, AC-B2-1, AC-B3-1, does not align with BOH-SYS from SV-A.
- 7) M-506: Chilled Water Packaged AC Units –
  - Align unit names from M-505 with SV-A. Unable to identify these systems in model.
- 8) SV-A: Align unit names from M-dwgs. For example, 4-IT-SYS thru 68-IT-SYS, which systems are these?

9) M-dwgs: Missing Cogen information. Energy Report Summary includes information about Cogen (i.e. efficiencies) that is not in the M-dwgs.

Provide fuel input for Cogen.

- PS-C/PS-E: Elec-DHW-Heater has varying usage and differing peak demand between baseline and design. Should be identical.
- PS-C/PS-E: DHW-Heater has varying usage and differing peak demand between baseline and design. Should be identical.