Understanding Geometry for MultiFamily Buildings in CBECC

1. Can I run Title 24 2022 code compliance using IESVE?

   Yes, as of the 12th, of April 2023, IESVE is approved for Nonresidential compliance for new construction projects.

   The latest information will be posted on our website: https://www.iesve.com/software/title-24

2. Can I model MultiFamily Building in the IESVE?

   Currently, IESVE is not certified for MultiFamily Buildings, however, we have a temporary stopgap using which the user can export the geometry from IESVE to CBECC. We have a short video of this process here: https://www.youtube.com/watch?v=UXZfaO5dhZY

   Note that this export tool can be used only for MultiFamily Buildings.

3. Which version of CBECC should I be using with the exporter tool?

   If you are using IESVE 2023.1 or an older version of VE to generate the ".cidb22x," we recommend using CBECC 2022.2.0. or older version of CBECC. CBECC 2022.2.0 is valid till 09/30/2023.

   If you are using IESVE 2023.2.0 (Scheduled to release in October 2023) or a later version of VE to generate the ".cidb22x," you can use any version of CBECC.

4. How do I export multi-story buildings?

   Both the "Storeys" and the "HVAC Zones and Zone Groups" must be set such that each floor has its own "Room Group" (for Story) or "Zone Group" (for HVAC Zones and Zone Groups). The screenshot below shows an example of 2 story building.

   Note that all the spaces placed under "Unzoned" will be treated as roof (attic) space.

5. What happens if I leave a space under "Unzoned" Zone group?

The exporter will treat the space as a roof (attic). So only the attic spaces should be placed under the "Unzoned" zone group.

6. Does IESVE export the internal wall?

VE-2023.2.0 (Feature Pack 2) and the later version of VE will be capable of exporting internal walls to CBECC through the ".cibd22x" file.

If the user is using an older version of VE (VE-202 Feature pack 1 or older), the internal wall will not be exported and the user will need to manually add the walls to the CBECC model.

7. Why is the "Space Function" for the "ResidentialOtherZone" set as "- specify -"?

Only the thermal templates listed in the "Space Function" of the CBECC can be exported. If any of the spaces in VE has "Space Function" other than the one listed in the CBECC's "Space function," (for example Computer room) the space will be exported but will have the "- Specify -" under "Space Function."
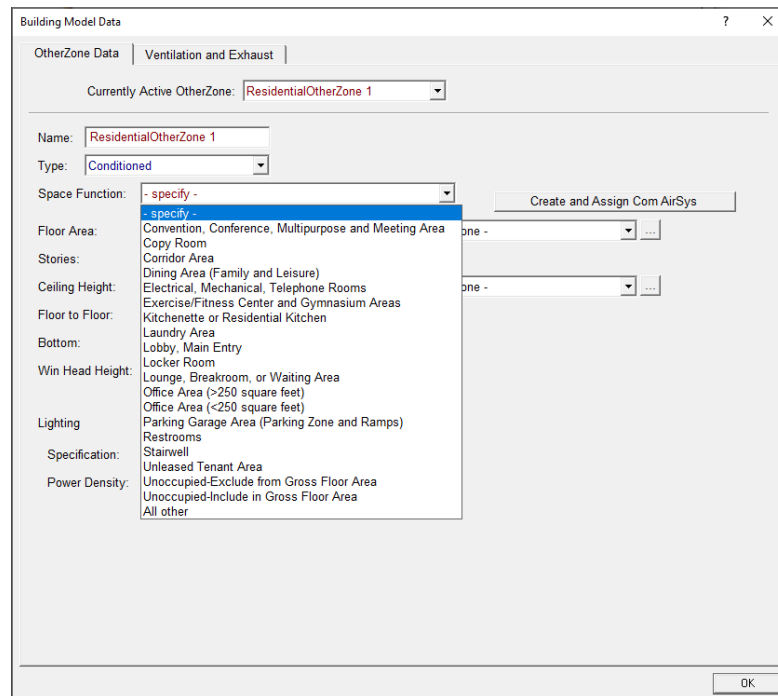
8. I am getting "*Error: The largest child ResIntFlr 'IntFloor : L3 1BR 1' of residential zone (ResZn) 'L3 1 BR 1' is too large in relation to the sum of all child/adjacent surface areas (174 > 171.2 (40% of 428))*" error message, when I use CBECC 2022.2.1 or later version of CBECC.

This is an update made to CBECC in CBECC 2022.2.1 and later versions. This checks that area of none of the surfaces in a zone is more than 40% of the total surface area of the zone. In other words, it uses the following equation.

$$\frac{\text{surface area of one surface } (roof/wall/\,floor\,etc.)}{\text{surface area of of roof} + \text{surface area of wall(s)} + \text{surface area of floor} + \cdots} \leq 40\%$$

Steps to resolve this issue:
- Ensure that all the surface areas in the space are correctly assigned correctly.
- If the internal wall didn't get imported, add the internal wall in CBECC. Adding an internal wall will increase the total surface area of the zone (the denominator of the equation above).

9. I am getting "*Error: ResOtherZn 'ResidentialOtherZone 1' has no connection to the outside (via exterior surfaces of this or adjacent zones), which is required*" error message, when I use CBECC 2022.2.1 or later version of CBECC.

This is an update made to CBECC in CBECC 2022.2.1 and later versions. This is a check to make sure that each zone is connected to the external surface via direct or indirect (through adjacent

zones) surface. An indirect surface means that the zone is connected to a zone (through the internal wall) with an external wall.

Steps to resolve this issue:

- Ensure that all the external wall/roof (if present) is correctly assigned.
- If the zone is an internal zone, then ensure that the zone (with an error message) is connected to a zone (through an internal wall/roof, etc) to a space with an external surface (external wall or external roof).

10. I am getting "*Error: Residential OtherZone (ResOtherZn) 'ResidentialOtherZone 1' has too few child and/or adjacent surfaces (2, minimum is 3) to be simulated*" error message, when I use CBECC 2022.2.1 or later version of CBECC.

This is an update made to CBECC in CBECC 2022.2.1 and later versions. This is a check to make sure that each zone has three or more adjacent surfaces. This may occur if there is an internal space without internal walls.

Steps to resolve this issue:

- Ensure that all the surfaces are correctly assigned.
- If the zone is an internal zone, then ensure that the zone has internal walls added in them.