2026 Design Competition
Frequently Asked Questions

1. Q: Are teams allowed to register in more than one category of the competition?
   A: Yes

2. Q: How many students can participate in a team?
   A: There is no max for Setty Family Foundation Net Zero Energy Design teams but there is a max of six students per team for the other categories. Project groups should consist of at least two members from an undergraduate engineering or architecture curriculum for the HVAC Design Calculations or HVAC System Selection and at least three members (architecture or construction, mechanical & electrical) for the Setty Family Foundation Net Zero Energy Design competition. Team members can be from multiple colleges. All team members must be enrolled during the semester/term in which they contribute to the design. The Applied Engineering Challenge is for a team of 1 to 6 engineering students.

3. Q: Are graduate students allowed to participate in the competition?
   A: Projects can be submitted by graduate students in the Setty Family Foundation Net Zero Energy Design category only. For the other categories, entries should originate from an undergraduate engineering or architecture curriculum and all team members must be enrolled in an undergraduate program during the semester/term they contribute to the design.

4. Q: Is a university permitted to register more than one team into the competition as a whole? For example, if I were to be a member of a registered team for one of the three team categories, but I'm also interested in the Applied Engineering Challenge while my other teams members aren't, can I partake in both?
   A: Yes

5. Q: Do the page limits include appendices?
   A: No.

6. Q: Can we change the orientation of the building to see how it would affect our load calculations?
   A: For the Design Calculation the building is set in its orientation and will not be judged if the building is rotated. However for your own benefit the team can rotate the building to see how Solar effects the building.

7. Q: Is it possible to get the actual location of the building? We would like to explore the use of nearby waste heat opportunities to supplement our HVAC system.
   A: The building location is Denver, Colorado and the ground information can be obtained through research.

8. Q: Are we allowed to add features to the building?
   A: For the Design Calculation the building is set in its features and will not be judged if the building has additional features. However for your own benefit the team can add those feature to the building to see how they effects the building loads.

9. Q: Where can we get the dimensions of the building?
   A: Teams can get the full dimensions of the building from the provided CAD drawings.

10. Q: In the drawings included with the competition information there is no site plan or information about the terrain. Would it be possible to know any information regarding the building site?
    A: No site plans will be provided for this competition. For the design calculation part of the competition, the only information they need about the site is the direction the building is facing.

11. Q: Can we change the layout, i mean the interior layout of design at Setty Family Foundation Net Zero Energy Design?
    A: Yes

12. Q: Do we get the weather data of Denver, Colorado?
    A: Yes ASHRAE provides weather data files for Denver, Colorado on the Design Competition website. You can also utilize the ASHRAE Climate Data Center and ASHRAE Fundamentals.

13. Q: Do we get the baseline model to compare our design?
    A: The base line is the building you see in the drawings plus ASHRAE 90.1

14. Q: I would like to use revit for the design calculations competition, however only AutoCAD drawings are posted. Are there revit drawings I can use?
    A: No, only the drawing files on the website are provided

15. Q: Do we need to follow Denver-specific building codes (such as building, electrical, etc.) for any part of the design?
    A: Follow ASHRAE Standards and guidelines referenced, local codes reference will be removed from OPR.

16. Q: Are we able to assume utility availability (e.g., natural gas, space, and allowance for systems like geothermal)?
    A: Yes, document assumptions.

17. Q: Can we fully assume local availability for theoretical equipment? Or do we need to account for factors like shipping, equipment source location, and compatibility with UK electricity standards?
    A: Yes, document assumptions.

18. Q: Could we get more details on the biohazardous and procedural rooms? Specifically, do we only need to ventilate the biohazardous cupboards, or do these rooms require special filtration and pressurization?
    A: Document assumptions and design accordingly, no isolation rooms and spaces

19. Q: When ASHRAE evaluates the design calculations, what load data is used for comparison? Is it the load from the real-life design by the mechanical firm, or should we follow ASHRAE standards? This is important for us to determine the assumptions and safety factors to use.
    A: Follow ASHRAE standards.

20. Q: How far can we deviate from a standard VAV system? For instance, can we create a hybrid system using VAV and radiant heating, or does that deviate from the guidelines?
    A: Design teams choice, document assumptions and decisions. OPR document does not limit or recommend a system for basis of design. VAV reference will be removed from website.

21. Q: Can we get information on internal loads for specific rooms, especially those with large medical equipment?
    A: Review functional use of spaces and document assumptions from ASHRAE fundamentals

22. Q: Are we able to assume the use of acoustic ceiling tiles in drop locations to help manage sound levels for patients?
    A: Document Assumptions

23. Q: Does the budget cover ducting, piping, general mechanical systems like fire dampers, or is it limited to larger equipment only?
    A: Budget covers all Mechanical systems and equipment including distribution and components.

24. Q: For the Applied Engineering Challenge my group is wondering if integration with existing HVAC&R systems means we are dealing with emissions from conventional residential/commercial heating or large scale production coal or oil based generators?
    A: Integration to HVAC&R systems, no further constraint implied in competition. Document assumptions.

25. Q: What are the R values of the walls? What are SHGC and U values of the windows and doors? Is it necessary to complete full ductwork on the building design? Is it necessary to consider fire evacuation systems? Are we able to manipulate the architecture of the open stairwell to promote better ventilation? The R, SHGC, and U values are asked to be provided to properly perform load calculations to gain better understanding of the heating and cooling loads that will be necessary in this medical building.
    A: Refer to the OPR, document assumptions. Recommend reviewing 90.1.