**Project Team Interview Questions and Guidance for Carbon Neutral Schools**

The interview is an important time to meet design teams, ask and answer clarifying questions from the request for proposals or qualifications (RFP or RFQ), and discuss initial project goals, such as the carbon neutral building target. When interviewing, allow ample time to discuss the opportunities and challenges of the building project and the programmatic needs of the building. Schedule two to four hours for an in-depth interview to allow time for teams to get to know each other, experience communication styles, hear their in-depth knowledge of energy and carbon outcomes, and most of all, ensure that the team has good working chemistry. The agenda could include a problem-solving activity to assess team knowledge and study their communication in action.

During the interview, allow the design team to present their vision for the project based on the RFP. Following the presentation, provide time for an in-depth question and answer period. Allow the owner to clarify the project goals and the design team to highlight their experience, knowledge, and process that will lead to delivering a project that is on time and on budget. Depending on the procurement process, share the interview questions or the topic areas with the teams in advance of the interview to allow for preparation time. Ask teams for references that can attest to their track record of success.

Different school districts use different procurement processes, and some are more constrained by procurement requirements than others. The nature of the questions owners ask may shift depending on the procurement process used. The questions below are examples that can be used in your district.

**Select the questions you would like to utilize going forward in your procurement process and place them into the empty table on page 9. When prompted by the green text, enter the name of your school district.**

| **Interview Questions and Guidance** | | **Procurement Process** | | |
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| **Interview Question** | **Guidance for School District** | **Design-build (DB)** | **Design-bid-build (DBB)** | **Construction Manager at Risk (CMAR)** |
| **Meeting District Energy and Carbon Goals** | | | | |
| 1. Explain how the energy and carbon goals in the RFP will be met. | The bidder should be able to reiterate the energy goals, know how to measure them, and understand that meeting energy and carbon goals is a key determinant of project success. Designers should agree to your EUI target and provide feedback about if they will aim for this EUI target or even lower.  Can the bidder show examples of previous work that is consistent with or better than these energy numbers? At a minimum, bidders should have measured EUIs from previous projects. They will ideally have a verified zero net energy project. | x | x | x |
| 1. Discuss strategies the team will use to achieve the energy and carbon goal. | The design team should be able to describe strategies that they would implement to ensure the energy and carbon outcome. Ideally, these strategies should have been implemented on previous projects and should lean towards off the shelf or easily maintained and understood strategies. | x | x | x |
| 1. What quantity of on-site renewables will it take to achieve the zero net carbon outcome? | They should be able to discuss the strategies and infrastructure required for on-site renewables, including utility connections. They should be familiar with possible alternative financing mechanisms. | x | x | x |
| 1. How should energy and carbon goal success be measured? Can those goals be guaranteed? | Substantiation of energy performance is critical for meeting energy and carbon goals. Energy goals are either articulated as part of the owner RFP or by the design team. Ideal goals are measurable at the site or building meter, such as kBtu/ft2/yr. Teams can offer to substantiate energy goals by developing energy models and keeping those models updated throughout construction. In some cases, teams will offer to guarantee performance for a year (or more). (Guaranteed performance can be harder to enforce contractually than substantiated models.) | x | x | x |
| 1. How will the project be managed to ensure energy goals are met?   Alternative *question:*  How will the team build a zero net energy or carbon building within the budget? | Teams should describe how energy modeling will affect and can guide the architectural design (including the building envelope) as well as the mechanical and electrical systems. Teams should describe how energy feature costs will be balanced with other costs to arrive at a solution that is within the budget. | x | x | x |
| 1. Describe how the team will work with various stakeholders in the school district to meet the performance goals. | The bidder should give examples in which there was a stakeholder issue and a win-win solution resulted. Refer to the Stakeholder (Section 2) of your Roadmap for a suggested list of stakeholders to reference. | x | x | x |
| 1. Describe other school projects the team has designed and built that have met energy performance targets. Describe those targets and the processes used to meet them. | The projects should have measurable goals such as an EUI target, zero net energy or zero net carbon. The bidder could also provide examples of how it would meet a rating system such as LEED or CHPS. Building owners should use caution to ensure that the rating system meets their requirements. Trading off green materials for long-term energy efficiency is not advised.  *Follow-up question:* How are your previous ZNE or ZNC buildings currently performing? What are the design and operations EUIs of those buildings? | x | x | x |
| 1. Describe a project that used a design-build approach with performance-based targets to design and construct a school building with a specified energy goal. | Examples of actual building energy performance (case studies) within a budget should be discussed.  *Follow-up question:* Describe the process the team used to meet an energy or carbon goal within a fixed budget. | x |  |  |
| 1. How will the team ensure that energy and carbon goals remain a central focus throughout the building delivery process? | Energy models should be updated from concept to completion and should demonstrate that energy goals continue to be met. Construction flaws can also be modeled (e.g., poor insulation installation). If a material substitution is needed, then it can also be modeled to determine that it doesn’t adversely impact the energy budget, a process similar to assessing impacts within a fixed cost budget. Models should be iteratively developed and revisited during the entire process. |  | x | x |
| **Process** | | | | |
| 1. What do you see are the differences between the traditional delivery methods and a ZNC delivery method? | This should be specific to your district’s procurement process. They should mention the integrated design process, interaction with stakeholders and when they plan to incorporate energy into the process. They should answer that energy and carbon should be evaluated at every step of the process and models iterated on to get the best possible outcome. | x | x | x |
| 1. Share two or three lessons learned from previous projects that you plan to apply to future projects, including this one. | The bidding team should be honest about any barriers or successes they have had in prior projects. They should be able to clearly articulate the lesson learned and how they plan to apply it to this project. This will also give you a chance to evaluate their honest communication style | x | x | x |
| 1. How does social equity and diversity contribute to your project delivery process? | Equity and diversity play a key role in a successful and productive school environment. This is a crucial question to ensure the design teams takes into account the needs of every student and staff member and that they are tuned into the diverse aspects of the community as a whole.  The bidder should evaluate and align district priorities to maximize cost efficiency, timelines, and neighborhood relationships. | x | x | x |
| **Budgets and Cost** | | | | |
| 1. How will the team ensure that this school building will have low utility bills after commissioning and during the next 30 years? | Durability and operational longevity should be part of the  design. Simplicity of systems is also important. The design team must show that its solutions can be easily maintained, given the district’s maintenance budgets and expertise. For example, solutions such as increased insulation are more robust than complex heating, ventilating, and air-conditioning (HVAC) systems. | x | x | x |
| 1. How will the design team know that the contractor selected to build the design will meet the budget? | The contractor should provide assurance that they can construct the building as designed for its bid price (or less). Owners need to make it clear that they will not change the intent of the plans even when the contractor can show the change(s) will result in cost savings (often with an energy or carbon penalty). |  | x | x |
| 1. How has your firm used lifecycle cost analysis during the design process? What is essential? | To evaluate the true energy impact and cost implications of a school project the team should be familiar with a lifecycle cost analysis. This evaluates the costs beyond the first costs of construction including maintenance and operations. | x | x | x |
| 1. Are you aware of grants and incentives that may be available for the project? | The design team should help facilitate additional funding to support this project. If they are familiar with your district or region they likely have applied for or have utilized other grants or incentives for similar project and may be able to streamline the application process. | x | x | x |
| **Programmatic Needs** | | | | |
| 1. How can the school district be assured that the team is representing the district’s interests to meet programmatic needs and established energy goals? | Bidders will always indicate that they are meeting the interests of the owner. They should provide references and those references should verify that bidders met or exceeded measurable project goals such as energy use in past projects. | x | x | x |
| 1. How can the school district be assured that the construction team will produce a quality building? | The bidder should describe incentives it will use to ensure that the construction team builds the building according to the plans and that the building meets energy, carbon, and other measurable goals. |  | x | x |
| 1. How does the building design enhance the learning environment? | The first priority for any school is optimizing the learning environment for students. Energy efficiency can enhance that learning environment by, for example, integrating energy efficiency and renewable energy strategies into the curriculum to make the building a living laboratory, using the money saved through reduced energy use to enrich educational programs, providing a healthier indoor environment through daylighting and better air quality, and improving students' overall educational experience with a beautiful and functional building design. | x | x | x |
| **Other Questions** | | | | |
| 1. What are the potential risks associated with the design? How will those risks be mitigated? | What will the contractor do if the owner’s goals are not met (energy and others)? How is risk minimized? | x | x | x |
| 1. How will the constructability of the design be ensured during the design process? | Work with manufacturers to ensure success; provide examples of strategies being successfully employed on other projects. |  | x |  |
| 1. Describe any potential safety hazards and how the team will address those hazards | Examples might include installing equipment in hard-to access locations, PV panels near roof edges, etc.  Design solutions should minimize risk broadly, including routine maintenance. (Can all the filters be easily changed? Can HVAC equipment be replaced without intruding into classrooms and other occupied parts of the building?) | x | x | x |
| 1. How can reducing safety hazards be tied to the energy performance of the building? | Integration is key. A better thermal envelope might mean less rooftop equipment. Dedicated mechanical rooms mean no rooftop HVAC maintenance as well as better energy performance and clear roofs for PV systems. | x | x | x |
| 1. What are some examples of nonenergy benefits of energy efficiency strategies? | The bidder should be able to articulate the nonenergy costs and benefits of energy efficiency strategies. For example, a window system can provide ventilation, access to views, and daylighting. The bidder could describe the benefits of good air quality, full-spectrum lighting, and thermal comfort that can result from tight, well-insulated envelopes and reduced ductwork. | x | x | x |

Interview Questions for School District Construction Projects

Utilizing the questions above and others found on the [Getting to Zero Resources HUB](https://gettingtozeroforum.org/gtz_resources/design-team-interview-questions/), **create your own table of interview questions for your Zero Net Energy and Carbon project hiring process**. You can also choose to not use the table and simply list them out with your own notes. This will be your interview guide for projects going forward so make this as useful to you as possible. You can also add rows, add more columns for notes, etc. You do not have to use all the questions above – just the questions most relevant to your projects and district.

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| **Your Interview Questions** | **Guidance** | **Notes for our District Process** |
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