



2252 S. Figueroa St., Los Angeles, CA 90007

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### Okapi eNewsletter Questions

**1. Your client base includes clients in large institutional settings, including campuses. What are some of the challenges you face in achieving client buy-in regarding energy efficiency goals?**

- *All clients in our large institutional settings do embrace and buy in on the energy efficiency goals. The major challenge faced by us however is in implementing these energy efficiency goals due to limited or lack of budgets to undertake capital upgrades and renovations. Most of the existing buildings inventory has ageing infrastructure and systems, inefficient equipment and require a sizeable budget to undertake replacement of systems/envelope/fenestrations to make them efficient. For all projects that are funded either by the state or through bonds passed by the institutions, we have no challenge in getting a buy in and implementing energy efficiency goals from our clients.*

**2. What are the keys to convincing client leadership and your colleagues to support energy efficiency initiatives?**

*The following are key elements in convincing the client leadership and colleagues to support energy efficiency initiatives:*

- *Reduced operating and maintenance costs and improving energy and facilities performance*
- *Helping combine energy projects and maintenance projects to not only save operating and maintenance costs but also help replace old and inefficient equipment and systems in the facility.*
- *Reduced greenhouse gas emissions and minimized use of fossil fuels*
- *Promoting sustainability at their facilities*
- *Assist in complying with American College and University Presidents Climate Commitment as majority of the institutions have signed up for the same*
- *Become a steward in their community to promote energy conservation*
- *Take advantage of applicable incentives and rebates to reduce overall project costs*

**3. Has the climate of acceptance evolved over time? If so, why? how?**

- *The climate of acceptance has definitely evolved over the years as more and more of our clients have become aware of promoting energy efficiency in their facilities through the use of effective technologies available in the market place today to reduce their operating and maintenance costs. This is propelled by the rise in energy costs in CA over the years, limited or lower budgets available for operating and maintaining utilities and systems and aggressive push by the utility companies and the state to promote energy efficiency in facilities through the various legislations, incentive programs and low or zero interest loans offered to our clients. The climate of acceptance is also propelled by the current impetus to lower greenhouse gas emissions as mandated by AB32, the signing of American College and University Presidents Climate Commitment*

*by major education institutions, promotion of sustainability in facilities, promotion of renewable power sources through federal and state incentives and minimizing use of fossil fuels.*

**4. Do Savings By Design and similar energy efficiency programs foster common energy efficiency goals? If so, why? how?**

*Yes, they do by*

- *offering these programs to all clients through their utility companies*
- *referencing current Title 24 Part 6 energy code as a baseline so that all clients can be evaluated on a common baseline*
- *Offer both design team and owner incentives for promoting energy efficiency*
- *Promote demand offset savings and demand response*
- *Force the design team in adopting an integrated design approach (efficient envelope, fenestrations, and lighting and mechanical systems) to maximize their incentives*

**5. Is code compliance a reasonable tool to optimize achievement of energy efficiency targets? What are some challenges and opportunities that arise because of energy code mandates?**

- *Energy code in CA has always been the most stringent in the nation and has continued to become more and more stringent over the years to promote energy efficiency in facilities. Code compliance definitely guarantees minimum efficiency performance of facilities and provides the opportunity for facilities to incorporate energy efficiency measures in their design and reap the benefits of lower operational and maintenance costs.*
- *The challenge with the energy code compliance particularly through the performance method does not guarantee that each of the component and systems in a building are being designed efficiently. This compliance approach looks at the overall energy budget and does not guarantee that each of the prescriptive requirements (envelope, fenestrations, mechanical and lighting systems) are being met and complied with. The energy code and available compliance programs/model also offer fixed control credits currently for daylight and occupancy/programmable controls and thus do not currently have the ability to project actual savings resulting from these controls in a facility. The available compliance programs also have limitation on modeling the various type of new technologies/systems that are currently available and being designed and implemented in facilities. There are also limited programs available currently for use in compliance with the current energy code.*

**6. How does a project team tie design performance to building performance?**

- *By correctly modeling the facility to project overall energy budget/consumption in the facility*
- *By promoting metering for all utilities and systems to measure building performance*
- *By offering and designing systems and technologies that are easier to understand and operate by the facility personnel*
- *By ensuring all design elements used to project building performance have been incorporated correctly into construction*
- *By ensuring the proposed sequence of operations and all system (mechanical, lighting and plumbing) controls as designed are incorporated correctly into construction*

- *By promoting commissioning of facilities to ensure the building is operating as designed to maximize energy conservation and minimize operating and maintenance costs*
- *By promoting measurement and verification of overall energy performance of the building and comparing the same to modeled energy consumption*
- *By providing an energy dashboard that provides constant feedback on total energy consumption of each of the building systems and allows the facilities personnel to ensure that building systems are operating as designed.*
- *By ensuring all of the facilities personnel responsible for operating and maintaining the facility are adequately trained in the building systems, implemented sequence of operation and control systems provided in the facility.*

**7. These days, which is a more important energy efficiency goal for clients: building sustainability or ZNE?**

- *Sustainability is definitely at the forefront of most of our clients. The energy efficiency component of sustainability has always been a top priority of our clients. With the current CA Strategic Energy Plan mandating all commercial buildings to be ZNE by 2030 and all residential facilities to be ZNE by 2020 and the Executive order B18-12 signed by the Governor requiring all new state facilities and major renovations to be net zero energy by 2025, more and more clients are becoming aware of net zero energy buildings and we will see more and more of our clients pursuing at least few of the newer buildings proposed at the campus to be ZNE. This trend will continue to definitely grow in the future with both the energy codes and the industry aligning towards the ZNE mandates set forth in the CA strategic Energy Plan.*