HOSPITAL BUILD MAGAZINE

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Ted Jacob Engineering Group Inc

Hospital Build magazine had the opportunity to sit down with Leader's in Healthcare speaker, Ted Jacob, President of Ted Jacob Engineering Group from Oakland, California, USA, at the Arab Health Exhibition & Congress 2010.

Q: Describe biggest achievement for Ted Jacob as a business this year?

A: Well, this year has started off very well with us being recognised by Arab Health as a "Leader in Healthcare". In 2009, we were awarded several significantly challenging & large size hospital projects. One being the Cleveland Clinic Hospital in Abu Dhabi, which will have a very high level of sustainable design features using TJEG innovations developed as part of our R&D commitment for sustainable healthcare facilities.

Q: Can you tell us about your speech at 'Leaders in Healthcare' here at Arab Health?

A: I spoke about the 'Net Zero' Energy for Hospital Buildings, a new topic to the Middle East and also to the US for the hospital side. I used examples of projects that proven to have readily available technologies to accomplish a fairly good level of energy saving and a smaller carbon footprint. The presentation caused some interesting reactions, as it's quite futuristic in its thinking on how we're going to achieve 'zero energy' by 2025, and 'zero carbon footprint' by 2030.

Q: What practical steps are taken to achieve more sustainable healthcare facilities in the region?

A: The Masdar City in Abu Dhabi is quite an accomplishment regarding the quest for a carbon neutral footprint, but in healthcare, there's hardly anything done here. We're using the Cleveland Clinic Abu Dhabi as a model for the region. We used an improved version of 100% outside air with heat recovery that have used on all of our projects for the last 10 years that is adopted for the UAE. We integrated the HVAC system with double skin wall. What we're doing is taking the exhaust air from the building and putting it between the two sections of the wall to reduce heat gain from outdoors. Another key benefit from this design is the elimination of condensation on the outside wall, which means less maintenance. There are three components that helps make a building green – first would be to design the system as efficiency as possible; second is the use of
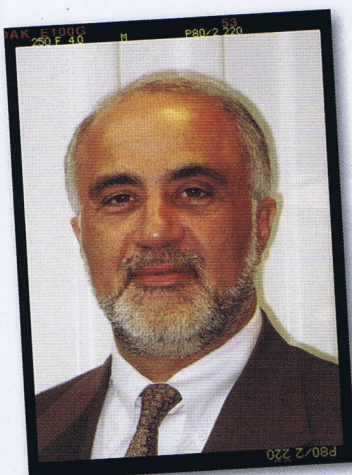

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renewable energy; and third component is to buy energy from a green source. The challenge would be how the design team will apply these innovation technologies that best fit the project goals and to achieve zero carbon.

Q: How do you convince people that green thinking is the way forward?

A: On every project, the client is looking at cost first. Every sustainable design feature that TJEG proposing is cost neutral or within three years payback achieving increased energy savings and better indoor air quality. For a project that TJEG worked on in San Francisco, we received validation from a third party for the cost savings achieved based on our innovative design concepts. The project was submitted to PG&E, a US-based utility company that offers incentive rebates for energy saving. Based on the analysis carried out by PG&E personnel, the project got awarded with half a million dollars in rebate. This is the largest rebate ever given by PG&E for a similar sized project. The total energy savings achieved by our mechanical and lighting innovations were 37%, and PG&E stated that they had never seen such results before. My key message is to innovate and implement. You've got to be thinking all the time and taking advantage of the technologies available to you. **HB**

↘ *PROFILE*

Dr Ted Jacob, President of Ted Jacob Engineering Group Inc, based in Oakland, California, USA, spoke about 'Net Zero' Energy for hospital buidlings at the prestigious 'Leaders in Healthcare' conference at Arab Health Exhibition & Congress 2010.