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FORUM: Green Technology

It's Easy Being Green

With green technology a popular addition to new developments, a new sector has developed to turn saving energy into a business.



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We have been very active in the last couple of years with many concerts, events, publications, and getting all the stakeholders together, raising awareness, engaging with different partners. Basically, that has helped to push the country in the right direction. One of our core functions is being a forum, and that means that we are a group of people with lots of knowledge in different areas of green buildings, which can help our stakeholders in making sure that we get to the goals much more effectively than if we were doing it on our own, so to speak. The membership is reflected by the whole building supply chain, from the person that finances it to the banks and lawyers involved in structuring operations. There are also the actual developers themselves, the consultants that design it, the contractors that build it, the material suppliers, and then the owners and operators. This is the entire supply chain, and members and expertise represent every level.

Our primary field is engineering. I am a mechanical engineer, and most of my staff members are engineers and LEED Professionals. We take a subject and work on reducing as much energy from it as we can. The backbone of the company is engineering, and then we have the LEED System. Water and electricity are about 60% of any given building's inputs, and most of it is mechanical and electrical engineering. That is why we are successful in green buildings. Energy and water are the ingredients of a building. LEED is a simple way of making a building. It quantifies elements of the building and gives you a quick and easy way to assemble it optimally. We did this for a long time, and the US Green Building Council asked us to develop education programs. That's the third aspect. We also conduct LEED Education Programs. We teach mostly engineers, architects, NGOs, product suppliers, and those involved in the building industry, the fundamentals, and how to achieve green buildings. That is the first course, and there are also more advanced courses. These three business units are interrelated.

When we began this carbon-based biogas program in 1985, we understood the potential of the technology. We developed a portable, family-sized domestic plant, which worked without the use of carbon and was utilized to manage the organic waste generated within the household. Gradually, we have made the technology more efficient and made it suitable for any institution that is generating waste. At both the institutional and domestic levels, the gas generated through this technology can be utilized to replace cooking fuels. On a larger scale it can be utilized for generating power. Another advantage of this technology is its ability to handle organic waste, whereas other waste management systems can only handle sorted waste. Through the bio-management process we can produce three by-products: energy, liquid fertilizer, and solid fertilizer. The technology hygienically disposes of the waste, producing energy and fertilizer, and in addition, it contributes to protecting the environment from carbon emissions, because methane gas is generated through the breaking down of waste.

When we started our business, we looked at the energy efficiency of existing buildings. We would go into a building and see where energy was being used but did not deliver a service; it was effectively an energy audit. We would tell the clients that we can save them 25% off their energy bills. They can then use their savings to pay us back for the investment we will make. Obviously, it will be two or three years before the client pays the full amount back, just like a bank service. The clients end up extremely happy. Around 19 years ago, electricity was much cheaper, but now everybody wants to save on energy costs. One thing then led to another. We started with some big projects, such as the Trade Center and Terminal 2 at the airport in Dubai. Then, one day, a client questioned why we weren't involved in projects at the building stage, instead of implementing our technology later on. As a result, we opened another service called Energy Value Analysis (EVA). Basically, EVA overlooks the energy designs of the consultants from the energy point of view from the design stage.