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15 Minutes With . . . P2S Engineering VP Kent Peterson

Kent W. Peterson, PE, is chief engineer, vice president and principal with P2S Engineering, and president of the Long Beach Area Chamber's Green Business Council. (Photograph by the Business Journal's Thomas McConville)

From hybrid automobiles to recyclable products to sustainable utility systems, the "green" industry has become a mainstay in today's business environment. The goal for Kent Peterson, P.E., co-founder, vice president and chief engineer of P2S Engineering in Long Beach, is to help bring together the wide array of emerging sectors that have made a profit while becoming more environmentally and socially responsible.

As president of the Long Beach Area Chamber of Commerce's newly formed Green Business Council, Peterson brings to the table more than 20 years of experience in high-performance green buildings, energy-efficient utility plants and innovative control strategies. Born in Kansas, Peterson grew up in Long Beach and graduated with a B.S. in mechanical engineering from California State University, Long Beach (CSULB).

P2S was founded in 1991 by Peterson, his twin brother Kevin, who is now the president and CEO, and fellow investor and principal John Sosoka. Now with 90 employees, the company has gone on to become a leader in mechanical, electrical and plumbing (MEP) engineering and commissioning services. P2S has won numerous awards for some of the most notable energy-efficient buildings in California, whether on university campuses or for the industrial, healthcare and international trade sectors.

The company is also ranked high for its work ethic, offering flexible working hours, a gym and good benefit packages, Peterson said. Celebrating its 20th anniversary this year, the firm is expanding its headquarters to 30,000 square feet of office space (the whole eighth floor and half of the sixth floor) at 5000 E. Spring St. The space is set to Leadership in Energy and Environmental Design (LEED) Gold certified.

Peterson is a past president and distinguished lecturer of the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), a highly regarded association responsible for establishing the standard for high-performance green buildings across the world. He also volunteers for his alma mater, serving on the CSULB College of Engineering dean's advisory council and as chairman of the California State University (CSU) Mechanical Review Board to improve mechanical systems on CSU campuses.

Peterson sat down with Business Journal Staff Writer Sean Belk to discuss P2S, the Chamber's Green Business Council, the latest industry trends and the future of green jobs.

LBBJ: Tell us about your company?

Peterson: The company was founded as a consulting engineering firm, specializing in mechanical, electrical and telecommunication systems. Since then, we have expanded heavily in what I call the green building sector and sustainable technologies. The

Kent Peterson, P.E., is the co-founder, vice president and chief engineer of P2S Engineering in Long Beach. He has more than 20 of experience in high-performance green buildings, energy-efficient utility systems and innovative control strategies. (Photograph by the Business Journal's Thomas McConville)

P2S Engineering, celebrating its 20th anniversary this year, is located at 5000 E. Spring St. The firm is expanding to take up 30,000 square feet at the building. The office space includes a gym for employees and is expected to be Leadership in Energy and Environmental Design (LEED) Gold certified. (Photograph by the Business Journal's Thomas McConville)

company focuses not only on building systems, but also on infrastructure systems. We do a lot of work for the Port of Long Beach, relative to the electrical infrastructure and other port requirements. They're trying to green the port a little bit by making sure that the [shipping lines] have a certain number of ships that plug into electricity and not run their engines while they're in port. So we're involved in those types of projects here locally.

We do a lot of work with the State of California in the higher education sector, colleges and universities, providing LEED projects. Green and sustainable technologies are the future in the building industry; there's no question about that here in California. The California Strategic Energy Plan has buildings targeted as the number one area to reduce energy. The plan has strategic goals that residential construction by 2020 has to be net zero energy, and commercial construction by 2030 has to be net zero energy. So that's substantial reductions in energy use and providing some type of onsite renewable energy in order to accomplish those goals.

LBBJ: When was the Long Beach Green Business Council formed?

Peterson: The green business council officially kicked off in January. So, we're in our infancy. We already have more than 30 member companies in the green business council, which is significant. What that tells me is, we have a fair number of companies that are in the green technology business; whether they're offering green services, green products or green technologies. It could be air pollution control or it could be renewable energy generation. We have a number of companies in the greater Long Beach area that really are excelling in these areas.

LBBJ: What, according to the council, is considered a green product or green service?

Peterson: That's a very good question. A green product or green service is something that's going to have a very positive impact on the environment. In this case it could be that it improves energy efficiency, it conserves water, it reduces air pollution or it generates some type of renewable energy, which is better than burning fossil fuel to get our energy sources. Another green product would be improving recycling, meaning, if we are diverting our waste from land fills then there's somewhere we can improve what we're recycling and getting more recycled content out of projects. Then that's a green product or green service.

LBBJ: What is the fastest growing green trend in the energy sector?

Peterson: There are several fast growing trends in the energy sector. If we look at the energy sector in general, you can separate it into two areas: energy efficiency and renewable energy generation. Renewable energy generation could be defined as solar photovoltaic power for electricity, wind generation for electricity, or even solar thermal for heating hot water systems – whether it's domestic hot water or heating water that goes into buildings. Those are the hot trends in California, especially since the California solar initiative is providing very good incentives on top of what the federal government offers as a tax rebate.

On the energy efficiency side, we're seeing all kinds of movement, not only in building energy efficiency systems, but cars are becoming more efficient [due to increasing] gasoline prices.

California is taking a strong role. In the lighting technology sector, we've seen tremendous improvements in lighting efficiencies. The same goes for the heating ventilating and air conditioning systems in buildings that are becoming much more efficient.

In the sector that we are in, which is in the building area, we're seeing that the greatest gains are coming from integrated building design, meaning architects and engineers are all working together to figure out what are the best building materials to use in order to get the most efficient use of the building. For instance, I can get day lighting to reduce the amount of solar load that's going into the building and to reduce the amount of HVAC, or heating, ventilating and air conditioning, that's going into the building. It still makes the project more economical while being much more energy efficient and environmentally friendly.

LBBJ: Has the emerging green sector helped to displace some of the cutbacks in aerospace engineering in Southern California?

Peterson: Yes, I actually believe it has. I don't have any firm statistics for you, but I can tell you that's true, even in Long Beach. For instance, Long Beach City College is a member of the green business council and it has the largest grant of any college in the United States to do green retraining, meaning, they're training these professionals and non-professionals in these green-type jobs that are out there today. Whether it happens to be someone that might work at an architectural firm or an engineering firm or someone working in the field of energy efficiency retrofits, they have a retraining program going on there and it's a very successful program.

LBBJ: What can you say about the future of green jobs?

Peterson: I think the future outlook for green jobs in California looks very promising, specifically because we have the California Green Building Code [CAL Green], and because California always seems to be the leader when it comes to environmental and energy efficient design. California really leads energy efficient development and pushes forward on some of the goals that we have as a nation. Within the United States, a lot is going to depend on what happens at a federal level with respect to energy legislation as we start to move forward. There's been a lot of energy legislation discussed, but none has been passed over the last few years in Washington, D.C.

The political climate, in my opinion right now, is not favorable for a new energy bill coming out, at least in the next year. We might be a year or two out on the federal level for getting future clean energy legislation. That does not mean it's not favorable for green jobs. Right now ASHRAE, United States Green Building Council [USGBC] and the Illuminating Engineering Society of North America (IES) has Standard 189 as the high performance building standard, just published in early 2010. That standard is being considered by the federal government to be implemented on all federal facilities across the United States. If that comes into play, it will be similar to what CAL Green has done for California. The U.S. Army has already adopted that standard and said all their facilities in the future will need to meet those requirements for high performance green buildings. So that's very favorable on the outlook for green jobs in my opinion.

LBBJ: What advice do you have for someone looking to work in your field, or in the green industry in general?

Peterson: My advice for anyone looking to get into the green industry, which is a very broad industry, is to visit the green business council. Every green business council meeting is held at a different location, and we have a member company highlight the technology of the services that they're providing. It even broadens our horizons, because a lot of us are in very specific sectors of the green industry.

For us, it's phenomenal what's happening in some of these other sectors, whether it happens to be reducing pollution from trains that are down at the port, or reducing pollution from ships that are there. In the end, it's all good for the environment.

Other sectors are looking at how to improve recycling and what are the new recycling techniques. These sectors go outside the boundaries of what we mainly focus on, which is energy efficiency. Some of these other things we can really understand, such as the impact of planting more trees and how that helps the environment and how that offsets the emissions coming from automobiles or the production of electricity in the state.

So, the first thing you want to do if you want to get in the sector would be to understand all the opportunities that are out there. It goes well beyond what I think most of us even understand and . . . the Long Beach Green Business Council is a great place even to just start looking at the company index of the members. You start to get a sense of all the different areas that you can go into that are green technology companies.

LBBJ: Is there anything else you would like to add?

Peterson: The only other thing I would share is that in my experience, the current generation coming out of college is looking at green as being the standard, meaning, they have no choice. They have to live and their children are going to have to live with this probability that the world population by 2050 is going to increase to at least 9 billion people. If you go back to 1960, the world population was under 2 billion people. The world can't sustain that type of growth with the type of energy and resource use that's happening today.

This is what's driving green business out there today. It really is the population curve that is driving that. To me, it's not about carbon emissions and all that; those are problems we got to solve too, but the real problem is we just can't sustain the water consumption that's required for all the plants and crops to generate enough food for the amount of people. We're running out . . . In fact, there's been studies that show the world can sustain a population of about 3 billion people and we're already over 5 billion. ■