



Ohio Green Pathways – Keynote Address

May 19, 2011

Good morning everyone!

I have been asked to talk with you about how to gear up for the green economy. What kind of education should you invest in; what kind of job should you try to get; and what kind of industry should you focus on?

The fact you are here indicates to me that you believe in the green economy. You believe that sustainability, green buildings, clean energy, and closed-loop systems are the way of the future. And you want to be part of one of the greatest movements of our time.

Like you, I believe in the green economy. In fact I believe it has only begun and that in 5-10 years the market for green will be several times larger than it is today. Green living and working practices will become pervasive in everything we do. In the same way the flight age, space age, computer age, and internet age changed our lives in the past, the sustainability age will do the same for us in the future.

Why? Because sustainability is about eliminating waste in a society and world that can no longer afford to be wasteful. What person, business, or other entity in these lean and mean times wants to spend money on waste? Waste means higher prices, lost profits, lost jobs, more pollution, and a lower quality of life.

One hundred years ago the world population was 1 billion. Today it is 7 billion and it will increase to 10 billion in the next 50 years. Can we afford to mine, drill, pump, deforest, burn, dump, pollute, and basically rape and plunder our way to prosperity like we have in the past? I think sustainability is the new paradigm or mindset that will allow us to survive and thrive in the present and future.

More and more businesses are thinking this way we well. Again, in those waste streams are profits! Architects are designing homes and businesses to be more resource efficient. Engineers are designing cars, planes, and trains to be more resource efficient. And manufacturers are designing heat pumps, refrigerators, lights, and other appliances to be more resource efficient.

Think of some of the largest and most successful businesses in the world. GE is leading the way with energy-efficient locomotives and aircraft engines; Toyota is leading the way with energy-efficient hybrid cars; Wal-mart is leading the way with energy-efficient compact-florescent lights; and countless other companies are leading with their own solution to help green the world.

Also think of the educational and government sectors that are helping drive the green economy. Schools, colleges, hospitals, museums, military bases, and other institutional and non-profit entities are becoming very progressive in adopting and promoting green best practices and programs. This is because they have a long term view and can think in terms of life-cycle cost and benefits.

Given this backdrop, what education should you pursue to become attractive in the green job market? What type of job should you target and what experience might you first need to win that job? And what industry has the best long term growth potential so that your investment in education and training is rewarded over the course of your career?

Let me start with the first question: What education should you pursue to become attractive in the green job market? As the President of a company that has hired and yes fired many people in the past, I would encourage



you to first decide if sustainability is in fact one of your passions. Because if it is not, the last thing I want to tell you is to spend your money on a major or certification that puts you in a job that you hate.

We spend way too much time of our day and our life working to not LOVE what we do. In fact I find that people who love what they do are usually very good at it. That is why I differentiate those who simply want a job and trade their time for money ... from those who want to pursue a career and follow their passion.

Give me a person who is passionate about his/her work, and I will take them over another person who has more education and experience any day of the week. This is because their passion will allow them to learn what they need to learn, whereas pre-existing knowledge and skills alone will not. Therefore, do yourself, your family, your employer, and your co-workers a favor and first determine who you want to be and what you stand for ... and the income opportunities will naturally follow.

There are many great causes out there looking for great people. Attach yourselves to one of them. If it's not sustainability, are you more passionate about something else? How about addressing other world problems like poverty, disease, war, terrorism, or social injustice? We need more people who do what they love, and who as a result make a bigger impact on their company and the world.

Now, I know that not everyone is gifted with a passion for something ... and that sometimes it takes time before you learn what that passion is. For example, I didn't acquire a passion for sustainability until about 7 years ago. So if you don't know what your passion is yet, don't be concerned. The more you read and experience things that are of interest to you the greater the chance they will become your passion. Hopefully, for some or all of you, sustainability is your passion.

Assuming it is, the second step is to pursue education and training in this burgeoning field. And while majors and certifications are certainly one way to declare your passion to prospective companies, they aren't the only way. You can learn a great deal about sustainability by simply reading about the subject in magazines, books, and on the Internet.

If a major or certification is something you want to pursue, I think at this point in the evolution of the green economy, the broader you go the more flexibility and options you will have. Broad exposure to sustainability design and construction practices would be better for most people than a very narrow and specific trade or skill.

Very rare is the person who knows they want to design green roofs, service wind turbines, or research new solar technologies. It is usually more practical to pursue a general studies program and then drill down into specific job opportunities within your company and let them provide the necessary training. Personally, I obtained my degree in mechanical engineering – which was broad enough to allow me to pursue careers in the aerospace, HVAC, oil and natural gas, and plastics industries upon graduation.

At a high level, you should become conversant in the language of sustainability. You should know the reduce, reuse, and recycle model. You should know the difference between energy conservation, energy efficiency, and renewable energy. You should know about the LEED rating system for buildings and various green strategies. You should know the sources of our electricity and the pros and cons of each. And you should know about smart meters, electric vehicles, and other emerging technologies.

But your ultimate value to me as a prospective employee is not what you have learned in the past, but your capacity and desire to learn in the future ... to help address the ever-growing needs in my company. Are you resourceful? Do you have a strong work ethic? Are you a team player? Can you work independently? Are you a problem solver? These personal work traits are far more important to me than a specific technical skill you may have learned in trade school.



Now, let me go to the second question: What type of job should you target and what kind of experience might you first need to win that job? Again, my answer is to follow your passion and not the money. And typically this means searching for the right company before searching for the right job. A company and its leaders will dictate your future happiness and success much more than any particular job function you perform.

Therefore, you should qualify the company as much as the company qualifies you. What do you like and respect about the company where you are applying for a job? What do you know about the leaders and their business plan? How committed are they to the principles of sustainability? And how can you help them become a leader in their community and/or industry?

Basically, it comes down to culture fit. Is there a good culture fit between you and the company? You will only know this by interviewing and meeting with as many people in the organization as possible. If your passion for sustainability is mutually respected and appreciated, then the chances are the company is a good fit for you. Once this is ascertained, you can focus on the less important matter of whether you can and want to perform the job they have available.

As before, if you do not have a special interest and passion for the company and the job opening, then you should not waste your and their time in applying for it. But if you do, pursue it with all of your energy, professionalism, and perseverance.

I cannot tell you how many people think that the way to apply for a job is to simply email their resume. Hello? Do you realize I receive 100 resumes a week and I only have time to review the top 5-10? If you are serious about the opportunity, how can you stand out? How about sending a personal cover letter? How about a hand written note? How about including 3-5 high quality references so I don't have to ask and chase down this information? How about a follow-up phone call?

And then repeat the process. And then reach out to others in the company in the same way. Ask to have a coffee and/or lunch with the HR manager. Ask for a tour of the company's operations. It is possible the company will tell you to stop, but if they don't I would assume you still have a chance.

I was recently approached by a candidate and he did all these things. But what really told me he wanted to be part of our company was: he offered to take any position in the company no matter how menial - just to get in on the ground floor and have the chance to work his way up. How can you not admire a person who has that kind of passion? As a result, we are currently interviewing him.

The point is, your soft human skills are just as important as your hard technical skills when applying for a job. Business is about people and getting along with others. Don't allow yourself to ever think that as long as you are good at a thing or a task that you don't have to be a good people person. Being a good people person is the most valuable and rewarding skill set you can possibly have in business.

In fact the most important quality I look for – even above and beyond passion - is integrity. Integrity trumps everything else because it is the foundation for every human relationship. Can I trust you and can you trust me? Will you always tell me the truth and will I always tell you the truth. If you don't have this basic building block then you need to change.

Therefore, don't tell me you have a passion for sustainability on the phone and then drive to the interview in a large truck or SUV. Don't tell me you have great people skills and then get defensive when I challenge you with a tough question. Don't tell me you have always wanted a job like the one I am offering when you just got laid off the week before. Honesty is everything.



Finally, let me go to the third and last question: What industry within the green economy has the best long term growth potential so that your investment in education and training will not be wasted on a short-term career? I think the speakers after me might have more to say on this from their research, but from my vantage point I think energy technologies, systems, and solutions have the brightest future.

I say this because energy is one of the largest inputs of our global economy, and energy demand is growing exponentially with a growing population and industrialized and tech-savvy world. Yet our energy sources are increasingly fraught with volatility and risk, from oil to coal to natural gas to nuclear to renewable energy.

The Middle East continues to be a hotbed of political unrest, yet we import twice as much foreign oil now than we did 30 years ago during the first energy crisis. A percentage of every dollar we spend on gas goes to an unfriendly part of the world where we are fighting 2-1/2 wars. Deepwater drilling off our coasts and refining the oil in a hurricane-prone region of the country is also prone with risks as evidenced in the last several years. Coal mining is very dangerous and blowing up mountain tops is not friendly to million-year old mountains and their local populations and ecosystems. Then of course burning that coal produces toxic and GHG emissions that are also bad.

Natural gas is a cleaner fuel but the method of extraction (called fracking) is a potential danger to our ground water supply and the carbon emissions are still very alarming. Nuclear power produces radioactive waste that will be around for thousands of years, and both the technology and waste pose a potential future threat from terrorists and rogue states. Renewable energy is, in my opinion, a bright ray of hope, but there are many legacy stakeholders, lobbyists, and lawmakers who are beholden to the fossil fuel industry – the wealthiest industry in the world – and they want to maintain the status quo.

It's not just about energy supply, it's about energy consumption too. Buildings consume 70% of our total energy supply and hence there is a huge opportunity for architects, engineers, manufacturers, and contractors to reinvent the building industry. Our plane, ship, rail, and road transportation systems consume most of the other 30% of our country's energy. Again, this poses a huge improvement opportunity for countless industries, businesses, and workers.

I don't think we need to place bets on which renewable energy technologies - solar, wind, hydro, or biomass will win in the 21st century. I think we need all of them in order to meet the world's growing energy demand and at the same time make a dent in how much foreign oil and dirty coal we are burning. There is just as much a national security and environmental benefit to renewable energy as there is a job creation benefit.

Other promising energy technologies include batteries, fuel cells, and the smart-grid. Getting our energy supply systems to interact with each other real-time will go a long way to make our economy more energy efficient.

Of course, sustainability is about more than just energy. Clean air and water, fresh and healthy foods, and cradle-to-cradle closed-loop manufacturing systems for everything we make will also need to become the way of the future. But I think energy will be the dominant opportunity in the next 10-20 years.

Lastly, I want to comment on how Ohio and Cincinnati are positioned to compete in this ever-expanding green economy. Based on everything I read about what other countries, states, and cities are doing, I would give our state and city a B.

In 2008 Ohio lawmakers unanimously passed a landmark energy bill that requires investor owned utilities to generate 25% of their energy from advanced energy sources, with half of that coming from renewable energy technologies. This was a very progressive bill at the time and put Ohio in the top 5 of all states when it came to embracing energy efficiency and renewable energy. But since then many other states have enacted similar RPS



laws and some have made them even stronger. Ohio, on the other hand, is discussing weakening this requirement – and this would have a major negative effect on our economy, especially the cleantech sector.

Cincinnati has also initiated some of its own landmark legislation, most especially a property-tax abatement for LEED-silver certified buildings. It has a very active USGBC local chapter and there are numerous programs and initiatives to suggest we are a top 20 green City in America. But we could become a top 10 green city in 5 years with some dedication and commitment from stakeholders across our community.

Therefore, as you look at schools for the type of sustainability programs they offer, ask about how they are walking the talk. Are they just selling classes in exchange for tuition, or are they inspiring their students with real-life examples of how sustainability can improve our lives? Same goes for the companies you interview. Are they walking the talk or are they mainly hiring a sustainability director for PR reasons and to maybe address concerns from their board of directors?

In conclusion, I think sustainability is a necessary way of the future. I think it will impact our lives in ways we cannot even imagine today. I think it will provide tremendous opportunities for smart and hard-working Americans for decades to come. And I think Ohio and specifically Cincinnati have a special role to play in this developing age. Thank you.