

Commencement

Florida Southern College - December 13, 2008

By Hal Roberts

We all have the desire to leave a legacy that shares what we believe to be important—some gift that reflects what we are passionate about. I would like to speak with you about a passion of mine that is “sustainability.” By that I mean sustaining our planet by consuming less non-renewable resources, leaving a smaller environmental footprint, preserving wilderness, educating others about the necessity, and providing innovative, renewable solutions.

The current economic crisis has caused the loss of almost two million jobs in the US. It is predicted to do the same next year. It will affect us all, and the experience will guide many decisions that you make throughout your lives . . . but it will end. However, the competition for energy, its inevitable rising cost, the rapid depletion of natural resources and the deterioration of the environment will continue throughout your lives.

If I may borrow from my own experience: Through my representation of the City of Lakeland’s electric utility, I became interested in energy. Through my love of wilderness, I have always had an interest in preserving natural resources and our environment. I have fished in the Everglades, skied and paddled in the Rockies; hiked, camped and paddled in the Smokies with my family, and toured the Outback, the Alps and Alaska with my wife. We want you and your progeny to see and enjoy the unspoiled wilderness that we have seen.

Mankind is overwhelming the capacity of Nature to provide clean air, water and energy, and we are rapidly destroying wilderness. The industrial revolution that created modern prosperity has destroyed more of nature than was lost in all of previous history. That economic prosperity was energized primarily by burning fossil fuels.

Carbon Dioxide is released primarily by fossil fuel firing, especially from power plants. Greenhouse gases blanket the globe. They persist for decades, even centuries.

There is a rapidly developing “Scarcity of Natural Resources.” We must reconcile our relationship with all other living systems and we must derive much greater benefit from renewable resources. The quality of life and the future of mankind depend upon the preservation of natural resources.

The earth is a closed system, a biosphere. The only resource input into the system is solar energy that reaches the earth daily. Direct solar thermal energy can be used to heat water and buildings, even produce steam to generate electricity. Photovoltaic systems use sunlight directly to generate voltage. Geothermal heat pumps can harvest solar thermal energy that is stored in the shallow earth to heat water and buildings anywhere that people live, anytime. Solar energy is abundant in the Sunshine State. Wind energy is good when the wind blows, especially in the Midwest, but is not economically viable in Florida.

Future generations are dependent upon what we pass on to them. Our legacy consists of what we take, what we create and what we leave behind. There is a Latin phrase that is relevant here: “Non Nobis Solum...”: “Not for us alone.”

Jim Rogers, CEO of Duke Energy, uses what he calls, the “Grandchildren Test.” He says, “When my grandchildren are my age, I want them to think that I made good decisions that are still good.”

Reducing total emissions will become increasingly difficult as demand for energy accelerates with global population expansion, developing economies and improving lifestyles. A new coal fired power plant is added in China each week. In a Flat World, more people are aware of, can afford, and demand the same luxuries that we take for granted.

Clean Energy Technologies (CET's) can bring innovative solutions to multiple global problems; not only energy and the environment, but also employment, economics, the balance of trade, and national security. CET's were considered Alternative in the 1980's, but are now entering the Mainstream. They are the next engine of business and economic growth. Hybrids are the only growing U.S. vehicle segment and Green Buildings are the only growth segment in the construction industry.

Stakeholders are assessing businesses on their carbon risk and their upside potential for reducing emissions. We are part of a new era where new standards are emerging and greater stakeholder expectations are changing the roles of business and institutions in society.

For many years our national energy policy has toggled between panic in time of crisis and complacency when the crisis has passed. A world facing unstable prices, resource shortage, and climate change can not afford to wait. Transition to leaner, greener, less dependency on fossil fuels requires looking beyond the lowest first-cost to consider life-cycle cost, the risks of higher fossil fuel cost and the indirect cost of carbon emissions. CET is now an economic imperative.

Energy efficiency is the cheapest, cleanest and most readily available energy resource. Reduced consumption also reduces the need for additional generation, transmission and distribution capacity. Harvesting renewable energy can optimize the use of natural resources, reduce environmental impact, and add economic value through reduced cost or improved productivity.

In the Cold War era of 1957, the U.S. considered itself the global technology leader, then the Soviets launched Sputnik, the first spacecraft to orbit the earth. It took a man-on-the moon project to focus US innovative talent, regain technological leadership, and our national pride.

Crises and challenges create opportunity. OPEC's oil embargo of the 1970's was an emergency that commanded the attention of the entire U.S., but as supplies flowed again, the public became accustomed to higher prices and our national attention turned to other issues. Our country wasted the opportunity to develop alternatives.

However, that crisis provided the stimulus for research by a Lakeland engineer into an efficient method of extracting renewable thermal energy from the shallow earth to heat fluids and buildings. We eventually formed a company that is now saving energy and emissions in 47 states and 15 countries with that technology. Individuals and companies are searching for and deploying CET's. Our company's website now averages visitors searching for CET from sixty countries weekly.

When fossil fuel sources were first exploited, the world's population was approximately 1 billion, fossil resources were abundant, and the air was clean. In 2008, with a population of 6.7B, and greatly increased demand for energy, the world still relies on the same inefficient, polluting fuel systems developed over 100 years ago.

In America, invention and innovation are our unique excellence. But our prosperity has brought complacency and there has been an erosion of our scientific and engineering base. "In the absence of discontent, there is no innovation." —Deepak Chopra

Rather than paying \$100 billion annually to import fossil fuels, we need a national energy initiative comparable to the man-in-space program where exporting renewable energy technology and energy efficient technology is our national goal. We could become energy independent, employ millions of people, improve our balance of payments and national security, reduce the emissions of greenhouse gases and renew national pride. Tom Brokaw described the WW II generation that *Saved the World for Democracy* as the "The Greatest Generation." The challenge that I see for your generation is to "Save the World for Humanity."

What roles can the Class of 2008 play in addressing these issues? You can be selective consumers, active stakeholders, serve as educators, writers, community leaders, policymakers, business and financial

decision makers; seek investment and employment in green industries and support proactive organizations and government.

As you step into the wonder of building your lives and your careers, we congratulate you and wish you Godspeed.