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Great Game 2.0
The race for clean energy

By Dr. Joseph A. Stanislaw

Dominance in the great energy game used to mean control over the fossil fuels that often lurked thousands of feet beneath the earth's surface. The one that owned the raw resources controlled the energy 'chess game' and could run the board. Today, however, there is a new game in town. The new Great Game involves liberating energy from geography, and the winners will be those who find the methods to create clean energy from renewables such as wind and solar, carbon-scrubbed oil, natural gas and coal, and nuclear and efficiency systems. This new Great Game is a race for technology.

Every major transformation of our societies was stimulated or driven by a change in technology. Similarly to the way that fire ignited the evolution of man, or the steam engine drove enormous economic development in the Industrial Revolution, the technology for producing clean energies will transform the way the world trades, engages, and connects.

Rome, of course, was not built in a day, nor will be clean energy technologies. There will be snags along the way with these new technologies and they will continue to change and grow as technology develops. The current state of solar technology in the U.S., for instance, might be termed "Solar 1.0." and "Solar 2.0," etc., much like a computer operating system as it continues to evolve and become more sophisticated. Remember on this technology continuum that this Great Game is not for just our current generation. This Great Game will last well into the times of our great-grandchildren, giving the technologies time to become more robust, and for businesses and societies to take advantage of them.

The next few decades likely will be a transitional phase. During this time, resource-rich countries will try to extract value from reserves with semi-clean natural gas serving as a bridge to this new era, but the path for clean development is underway and the chessboard has been rearranged.

The players

Europe

Though we are still in the early stages of the Great Game 2.0, public sentiment and governmental mandates are combining in Europe to make the pursuit of clean energy technology an imperative. In 2008, the European Parliament passed the "20/20/20" plan calling for the European Union, by 2020, to cut greenhouse gas emissions by 20 percent from 1990 levels, increase renewable energy usage by 20 percent, and cut energy consumption through improved energy efficiency by 20 percent. In May 2010, the European Commission proposed that the greenhouse gas reduction target be raised to 30 percent. European businesses are being forced to meet the standards society has set for them while still growing, thriving, and meeting their own corporate objectives.

China

Although Chinese leaders have yet to sign global emissions reduction agreements, a drive for change is still evident. China has taken the environmental technologies developed in the 1970s and 1980s and driven them into commercial enterprises. China is the world's leading producer of wind turbines; it has more stringent fuel economy standards for automobiles than the U.S.; the market for private investments in clean energy technology is more favorable and predictable in China than in the U.S.; and China has positioned itself as the dominant manufacturer of components for renewable energy technologies.

United States

Currently, there is tremendous opportunity for the United States. While for the past several decades research and development in clean technologies, both by the government and private companies, has been declining, the time is ripe for the U.S. to reestablish its technology lead. For the U. S. to become a more effective player in the Great Game, businesses need to increase their research spend while the government needs to encourage and fund more research on clean technologies. This will propel the U.S. forward in the global clean development race. And there are great advantages to be had. The pursuit of new energy technologies will pay dividends in job creation by employing people at all stages of development and deployment including researchers who create the technologies, factories that manufacture them, and workers who install and maintain them.

The pursuit of clean energy is a race analogous to the race to the moon in the 1960s—with the difference that instead of two rivals, there are more than a hundred countries and countless businesses in this contest, and there is no choice but success. Energy is top of mind for the U.S. government, consumers, and businesses. It is now time to back up concern with resources, and thoughts with action.

Every company is an energy company*

To be competitive in this new era a paradigm shift is underway, and corporate executives are beginning to realize that every company is an energy company. Whereas the conventional wisdom once held that *addressing climate change and economic security will limit economic growth,* the company of the twenty-first century will need to build energy into its strategy model or forfeit its future. Dinosaurs, after all, can't dance. Creating this energy strategy could be the first step towards sustainability—and at the heart of sustainability are the fundamental economics of running a business which include resource management basics.

The cost and reliable supply of energy are fundamental to any business' operations, with energy being one of its major operating costs. The sooner companies begin to understand and actively manage their energy use, the faster they'll enter a more enlightened world—one with the potential for significant savings, a better bottom line, greater customer loyalty, a cost edge over competitors, lower business risk, and a company-wide awareness of sustainability that can rein in resource waste across the board.

The business challenge of the Great Game is how to position one's company, and the products or services it offers, to thrive in a new and different world of concern about the environment, resource scarcity, and stakeholder demands for sustainability and responsibility. Technology is key to successful adaptation, and the ability for new technologies to support clean and sustainable energy has never had more potential. The task before all businesses today is to find ways to make that technology work for them in their efforts to play—and win—the Great Game.

The corporate leaders in the Great Game will be the businesses that not only recognize they are an energy company but also take steps to generate their own energy. One way they can accomplish this already exists in the form of windows that are manufactured to generate solar power and automatically turn darker when an interior gets too bright or hot. This automatically changes the way the building functions, as well as the company itself—it becomes an energy producer as well as consumer.

* *Every Company is an Energy Company:* http://www.deloitte.com/view/en_US/us/Services/additional-services/sustainability-climate-change/de5f70f1ba25e210VgnVCM1000001a56f00aRCRD.htm

What's next in the Great Game?

The current confluence of concern over climate change, energy security, resource nationalism, and energy prices has brought us to a point where the world is primed for innovation. Perhaps the most important new factor created in this new reality is the empowerment of the individual—consumption of energy has become a conscious act and an act of conscience. For corporations, this conscious act is the key to economic solvency and sustainability. While the act is about profit—not virtue—virtue is yet achieved.

The businesses and nations that can leverage technology to better utilize clean energy, whether from renewable sources such as the sun and wind, or from oil, coal, gas or nuclear power, will emerge the winners. Which countries and companies that will emerge as kings and queens and which as pawns is unclear, but the timer has been struck.

The Game has begun.

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