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Environmental Investing: Investors and Innovations

Cary Krosinsky

Editor

It is a true honor to join the *Journal of Environmental Investing (JEI)* as Editor alongside Publisher Angelo Calvello and Managing Editor Mary Cavanagh. Following its first appearance in 2010, with the issue entitled “Beyond Copenhagen,” the *JEI* successfully established itself as an interdisciplinary, peer-reviewed, open-access journal that publishes original research in all areas at the intersection of the environment and investing.

This current issue features individuals who are influencing and driving investment dollars and strategies globally in a most essential direction. Leading organizations, such as the International Energy Agency and the World Bank, are calling for an acceleration of the momentum toward environmental investing. To enable a clean energy transition over the coming decade and to avoid the worst ramifications of climate change, trillions of dollars in new investments will be necessary. The *JEI* will be helping to enable this transition by catalyzing global practices. Toward this end, as you will see throughout 2015, we will feature

- a relaunched, interactive website
- expanded original content
- amplified direct engagement with asset owners, fund managers, and other stakeholders, especially students

In addition, the next issues of the *Journal of Environmental Investing* will focus on the following topics:

- The Social Implications of a Global Energy Transition
- Air, Land, and Water: Implications for Investment Strategies
- Case Studies of Climate Bonds and Green Infrastructure
- Further Case Studies of Environmental Investing (including a first-ever global ranking of best strategies)

While an expansion of the new *JEI* website will accommodate and support this broadened sphere of inquiry, we will, however, remain open access because we believe that cost should not be a barrier to accessing critical information on environmental investing. We

are also seeking sponsorships and opportunities to perform co-branded research, and welcome your inquiries and suggestions.

By engaging in practical case studies of concepts and solutions that work and that could potentially be scaled to fit changing scenarios, demographics, and so on, the *JEI* will help point the way toward a future that simultaneously benefits the shareholder and society writ large. The most exciting opportunity we have is to play a role in enabling the energy and environmental transition we require as a society; it is an opportunity that has every chance of becoming an economically positive achievement as well. Even if the *JEI*'s role is a small one in this transition, we will have succeeded—but measurable success will require your participation.

Please feel very free to contact me at any time with your thoughts, your papers, and your own ideas as we head into 2015 and 2016 with a clear need for positive societal change that we can only achieve together.

With best wishes for a happy and successful New Year,

Cary Krosinsky

**John Chaimanis,
Co-Founder and Managing Director, Kendall Sustainable Infrastructure
(KSI)**

United States



Where do you see opportunities for powerful, effective investing today?

Mr. Chaimanis: Energy. Clean, renewable energy, which does not have a commodity input.

Producing energy from the free inputs of the sun and the kinetic energies of water and wind are profoundly simple and elegant business models. Last year approximately US\$250 billion was invested into profitable renewable energy projects. In order to meet the total global growth in demand for power, that number reasonably could be US\$1 trillion every year for the next thirty (which is Cere's number for combating climate change).

An investor's objectives should be to maximize returns while minimizing risk of loss. When you invest in a fossil energy business, you face a substantial risk of loss—for example through supply constraints, commodity input price volatility, risk of fines and lawsuits due to contaminants causing disease to local populations or contaminating the environment. When you own a piece of a solar project that has zero commodity input and zero emissions but generates that same exact electron that comes from a risky fossil plant (like coal), you have a low-risk, high-return value proposition that will last for 20+ years without all of the negative externalities.

This isn't just an environmental game changer; it is a huge wealth creator. Wind, solar, and hydro-power are all cheaper than "clean coal," new nuclear, and in many regions, natural gas power generation. The era of renewables being more expensive than fossil fuel has passed.

There are a number of points in the value chain at which to invest with varying risk/reward profiles, such as owning stock of a manufacturing company or private venture placements into a development company. I generally prefer direct ownership of infrastructure through a private vehicle for three reasons: it is tangible and has an underlying real value, it is not correlated to public markets, and the impact is direct and quantifiable. When the investment in a project is timed properly, and the project is properly underwritten, the returns last for decades in a proven low-risk investment. From that point forward, an investor can be confident that every kilowatt-hour of energy sold from the renewable project is a kilowatt-hour not sold from a fossil plant.

In addition to infrastructure, I believe that product delivery innovations have promise, albeit with higher risk. Generally, investing in energy does not have the same exponential return expectation associated with the Internet; rather, progress is incremental, and often built on decades of improvement and refinement. Renewable energy investments should be based on fundamental analysis as opposed to, say, the hypothetical value of page views per day. As an energy investor, I am generally skeptical of "financing innovations" and public securities seeking to tap into cheaper costs of capital, largely because they seem to lack accountability and blur the true value proposition of owning real assets directly.

What sector has had the most significant impact on the renewable energy landscape thus far? Why?

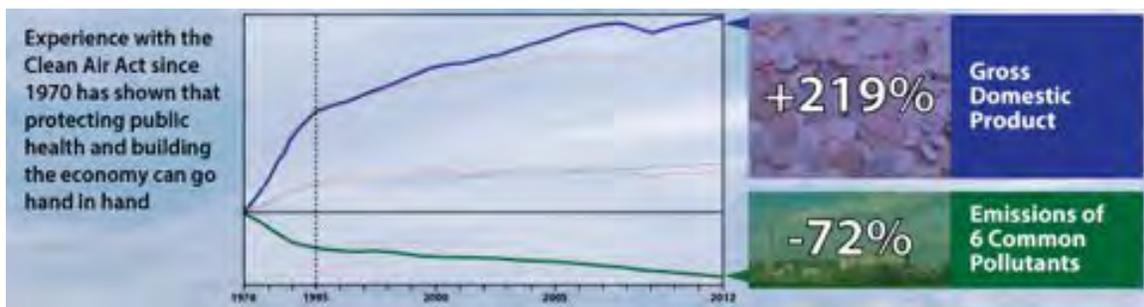
Mr. Chaimanis: The banking industry has had the most significant impact on the renewable energy landscape. For over 25 years, for-profit banks have been financing modern profitable renewable energy projects. Banks represent the bellwether of a

commercially attractive opportunity. Generally, banks represent one of the most risk-averse investors, and they conduct some of the most thorough underwriting of technology, risk mitigation, and the ability to sell power profitability, with a certainty of return of principle.

Adoption of new infrastructure technology has never been instantaneous; whether in the form of transportation, mass communication, or energy. As a sector, government deserves recognition for early identification of key technological advances and for bringing a vision to their greater potential commercial value. This is not intended to detract from the amazing improvements in manufacturing, such as pushing the theoretical energy limits of wind energy or cutting the cost of manufacturing silicon used in solar PV (whose price has dropped over 400% in less than five years). Rather, this is to say that government has successfully created a framework for the renewable industry to thrive within, just as it did with the oil industry nearly a century ago.

To understand renewable energy, you have to understand the history of the power business. Utilities were legislatively created and granted monopolies over territories in order to protect the long-term investment required to recover the large upfront capital cost. The oil industry was granted incentives, tax breaks, and subsidies to allow it to mature as an industry (the vast majority of these subsidies and tax credits still exist today). Federal tax credits and state mandates (also called Renewable Portfolio Standards) have fostered the adoption of renewables. As long as the fossil fuel industry receives special treatment through tax incentives and subsidies, the renewable industry should be afforded the same treatment to maintain on par.

The most meaningful action for renewables and for our environment was the Clean Air Act of 1970, which established a framework to hold polluters accountable. Today, coal plants in the US are being shut down because of upgrade requirements or actions against them, all with ties back to the Clean Air Act. This is not a subsidy, but a legal framework that creates a market valuation of externalities like air pollution.



Energy Consumption +47%, Population Growth +53%, Vehicle Miles Traveled +165%

Debates about environmental issues and solutions are common among the public and governments. What role do you think investors could play in establishing active working relationships with all stakeholders to effectively address environmental challenges?

Mr. Chaimanis: There is no debate that making a smart investment involves limiting risk and maximizing return. Warren Buffet, Goldman Sachs, Wells Fargo, TIAA CREF, and Met Life have independently shared their opinion by making well over \$15 billion dollars of investments into renewables. These investments aren't public relations moves; rather these investments represent their position that investing in renewables produces attractive returns.

Money and special interest groups, not science or prudent investing, fuel the debates. The fact is that renewables displace fossil fuels as an energy source, and that means lost revenues. This is not an overnight transition, but it is well underway and this incumbent isn't interested in losing any market share.

On the surface, the value proposition of renewable energy is profoundly simple. In practice, it is a complex industry and experts in the space should be involved in guiding the ultimate investment decision.

Institutional investors have the ability to develop internal expertise. Individual investors should educate themselves about the real cost of renewable power versus fossil power by considering the real risks of input supply, commodity price risk, and environmental impacts. They should have an open dialogue with their advisors and trusted investment professionals about their concerns with the risks and costs to the bottom line associated with fossil investments contrasted with the benefits of renewables. This will create awareness, generate demand, and ultimately increase the deployment of capital in the space, thus improving our environment.

BIOGRAPHY

Mr. Chaimanis is the co-founder and managing director of Kendall Sustainable Infrastructure (KSI), a private equity firm that invests in low risk and high-yield clean-energy assets by using a strategy that evolved from his many experiences in the energy industry. At KSI, Mr. Chaimanis is focused on deal execution, investor engagement, and fund management. He works closely with family offices and institutions to meet their return and impact objectives through investments in contracted solar energy, wind energy, and hydro-power projects.

In 2005, Mr. Chaimanis began working in clean energy finance since it formed the perfect

match with his business interests and his passion for making a positive impact. After working with regional project developers in the New England area, he joined a subsidiary of Edison International in California, where he acquired and developed 250MW of wind energy projects, investing over US\$500 million dollars. He was part of a core team that transformed this traditional power company into a renewable energy leader.

Mr. Chaimanis regularly advises clean energy startups, and consults with investors looking to understand the clean energy investment landscape. Mr. Chaimanis is published in the *Family Office Review*, is the author of an energy-investment business case at Babson College, and has lectured at Colby College and California State Polytechnic University.

Always passionate about making an impact, in his career prior to working in energy investing, Mr. Chaimanis founded a charter school.

Mr. Chaimanis holds an MBA from Babson College and a BS in finance from Villanova University. He has also earned certification from US SIF for Sustainable and Responsible Investing (SRI).