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## Industry News

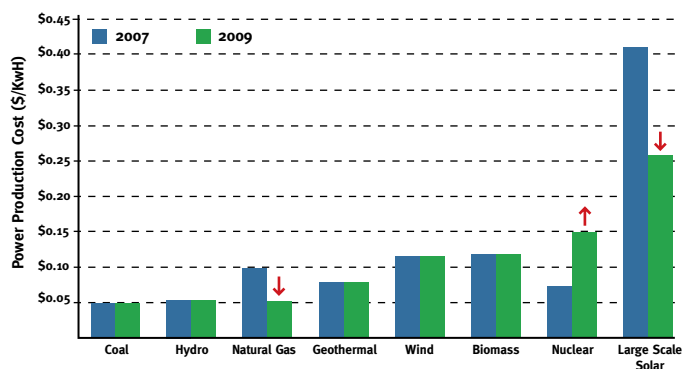
### 1. Shifting Economics of Power Production

The competitiveness of alternative energy investments is determined by a complex array of macro-economic factors including capital costs, commodity prices, regulatory environment (e.g. emissions policies), technology developments, and capacity. There are practical factors too, such as NIMBYism, grid infrastructure, and how new energy sources fit into existing base-load production. The complexity, however, is matched with considerable investment opportunity and we believe those who make informed decisions will be rewarded with superior returns. Here are a few trends to watch:

#### Natural gas – increasingly cost effective

After trading for the last few years in the \$7-12 range per 1,000 cubic feet, the spot price plummeted to as low as \$3 this year. While it has since rebounded, forward contracts are still in the \$5-6 range, and it looks like relatively lower prices will be available in North America for the next few years. Natural gas is not a renewable resource, however new shale deposits and other unconventional sources offer significant long-term supply. And burning this gas for power emits about 50% less carbon than the coal that powers much of North America.

Shifting Cost of Power Alternatives



Source: Investeco's internal estimates

Natural gas has traditionally been used mainly for peaking power (when power demand exceeds the base-load threshold) but when the low capital cost for new gas generators is considered, it now looks more economically viable for base-load power production as well. Recent trends suggest the power industry is responding to this opportunity: total power production in the U.S. was down 4.5% in the first half of 2009 but natural gas fired electricity generation actually grew by 3%. We see this trend in Ontario too: on September 30, the Ontario Power Authority announced a \$1.2 billion contract to build

a 900 MW gas plant in Oakville, and more plants are planned. In the near term, nothing looks more disruptive to the overall power production balance than natural gas.

### **Nuclear – considerably less attractive as capital costs soar**

The economics of nuclear are deteriorating as the estimated capital cost for nuclear reactors becomes clearer. The next reactor to come online in the developed world will be in Finland – the OL3 reactor will be the first operational so-called Evolutionary Power Reactor. It is being constructed by French company Areva in collaboration with Siemens and is being promoted as a cost-effective means of producing low-carbon power. But the reactor has been beset by delays and tension between the plant's developers and their customer, utility Teollisuuden Voima Oy. Final costs are not public but have been estimated in the \$7,000 per kW range. This estimate may be low when compared to Atomic Energy Canada's \$26 billion bid for the construction of two 1,200-megawatt Advanced Candu Reactors, working out to \$10,800 per kW of power capacity. (Figures reported by Tyler Hamilton, in the *Toronto Star* and were NOT refuted by the McGuinty government). In any case, the capital costs for nuclear appear to be substantially higher than even recently estimated. Indeed, two years ago Investeco was estimating capital costs for new nuclear at \$2,500 per kW (about the same as wind). Some regions of the world have fewer alternative energy options, but otherwise we expect few reactors will now be built.

### **Wind – onshore wind is a maturing industry, offshore is in its early days**

The onshore wind market is maturing and like most maturing industries, market interest is shifting from developers to operators. While developers may see the cost for turbines and construction equipment declining slightly, this is more than offset by the scarcity of cheap project financing. In fact, last year a number of smaller developers could not secure any financing, leading to a few bankruptcies. Most developers have seen capital costs, including project financing, increase over the past few years from roughly \$2,000 to \$2,500 per kW. Capital is still available for development but it tends to go to "de-risked" projects – ones with a signed purchase power agreement, proven wind regimes, experienced project management, and secured equipment agree-

ments. The premium price TransAlta has offered for control of Canadian Hydro Developers, Canada's largest wind developer, highlights market interest for established operators. We expect the industry will continue to grow at over 20% annually, but look for consolidation and larger diversified energy companies to win the majority of new power purchase contracts.



Wind's offshore variety could have annual growth in the 40-50% range. Offshore costs more than onshore (about \$4,000 per kW or more) but the capacity factors are often higher. The European Wind Energy Association expects offshore wind to become a significant part of the European electricity supply — up to 17% of total power by 2030 (as much as 150 GW more than the current supply of 1.5 GW). Equipment manufacturers like Siemens, Vestas, and GE all anticipate 20-30% of new sales coming from their more rugged and specialized offshore turbines. The sea can be a hostile environment for these huge machines, but growth could be massive as turbine and platform technology improve and the best land-based sites are taken.

### **Solar – Significant growth opportunity with improving economics**

On September 1, the Chinese government signed an agreement with U.S. company First Solar to build a 2,000-MW solar farm called Ordos in Inner Mongolia. This is four times larger than the largest existing solar farm, Topaz, in California. Most large-scale solar power projects use solar thermal technology to produce steam; this project will use First So-

lar's cadmium telluride solar photovoltaic (PV) cells, which are less efficient at converting sunlight into electricity than standard crystalline silicon cells but can be manufactured at a significantly lower cost. Costs have not been finalized, but the total cost for the Chinese project will likely be in the \$4-5 billion, or \$2,000 to \$2,500 per kW, range. If these estimates are right, technology, project scale, and likely lower Chinese labour costs may be bringing solar into line with wind costs. However, as a benchmark of usual costs, a recent installation by Florida Power and Light of a 110 MW crystalline silicon PV farm had a capital cost of \$6,700 per kW, so the industry may still have some way to go before realizing the cost targets of the Ordos project. Installed solar PV capacity has been growing by 50% annually for the last five years and we expect this rate of growth to continue for the next few years.

### Other Alternatives

Other alternative energy sources such as large-scale geothermal, tidal power, biomass gasification and solar thermal have

continued to develop rapidly through the recession. They can offer exciting investment opportunities, but their application is limited by specific geographic constraints and at best they will have a marginal impact on overall power supply in the near term.

### Final Thoughts

An important backdrop to the economics of power production is a 3.5% decline in global electricity demand this year – the first decline since WWII. And regions with large manufacturing sectors will see demand fall by more than 10%. This reprieve for operators has given them the opportunity to take some of the oldest and most polluting generators offline to upgrade or shut them down entirely. But the population is still growing and urbanizing, electric cars are coming, and our existing infrastructure is getting old. Demand will return – and it is a certainty that our power supply will look very different and much greener in the future.

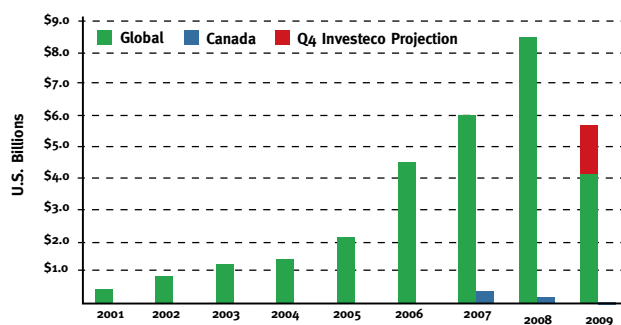
## 2. Global Cleantech Venture Investment Rebounds (but not in Canada)

Global cleantech venture investment is rebounding after declining in the first half of the year; in Q3 cleantech investments jumped to a total of \$1.6 billion after a disappointing \$1 and \$1.2 billion, respectively, in Q1 and Q2. According to the Cleantech Group, an astonishing 134 companies were funded in North America, Europe, China and India in this latest quarter.

“The billions in government funding being allocated globally in clean technology have begun emboldening private capital, which in turn has propelled clean technology to the leading venture investment sector, now eclipsing biotech and IT,” said Dallas Kachan, Managing Director, Cleantech Group. “This trend is likely to continue as large cleantech venture funds get funded. In September, Khosla Ventures announced the close of two new funds totaling \$1.1 billion. Other large VC managers such as Intel Capital, Kleiner Perkins, and New Enterprise Associates also made several cleantech investments in Q3.

Unfortunately, Canada's venture industry is barely participating in these exciting growth sectors, despite the existence of considerable Canadian investment opportunities. According to the Canadian Venture Capital Association (CVCA), Canadian cleantech venture investment totaled less than \$25 million in Q2 and Q3 and accounted for only

**Annual VC Clean Technology Investment**  
North America, Europe, China & India vs. Canada



Source: Cleantech Group LLC

five companies being financed. The CVCA estimates that the venture and buyout sectors have accounted for over 3% of the Canadian GDP in the past several years, but we can likely write off this economic performance in the future if more venture funding is not made available.

This is a double-edged sword. On the one hand, Canadian venture investors like Investeco are seeing

tremendous valuations and almost no competition for deals. But for Canada's future competitiveness it paints a troubling picture. In a recent World Economic Forum report, Canada's ranking on global competitiveness came in at 9th place. However, the country only placed 18th in terms of venture capital availability, which the report labeled a 'competitive disadvantage'.

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### 3. Green Building Boom

According to the Canada Green Building Council, the "green" building sector in Canada grew at an annualized rate of 50% in the third quarter of 2009 and approximately 90% per year over the past five years. This is big news when compared to the broader non-residential construction sector, which, according to Statistics Canada, is expected to decline by over 5% in 2009, after increasing 5-10% per year since 2004.

The reason for this growth in green building is likely more than just environmental benefits (although these are substantial): it is likely because of the very real long-term cost savings provided by energy-efficient buildings when compared to the small up-front investment they require. In fact, Deutsche Bank has estimated that LEED-certified buildings cost only an extra 1-5% more than "normal" buildings to construct, but they provide energy savings of up to 30% per year. This has alternatively been estimated to be an IRR of 30-35% on the extra up-front investment, over a 15-year period.

The green building sector also appears to have ample potential for further growth. According to the inter-governmental Commission for Environmental Cooperation, currently only about 2% of buildings in North America can be classified as "green". And thus far growth in the sector has been mitigated by two main factors, both of which are starting to be overcome. The first is historic lack of consumer knowledge of the economic benefits of green building. However, according to a recent Jones Lang LaSalle Survey, 75% of tenants would now be willing to pay at least a moderate rent premium for green building space. The second is misalignment of the incentives of owners,

who have to pay the increased cost of building to "green" standards, and tenants, who obtain the benefits of green building in terms of lower operating costs. (Historically green buildings have consequently been most popular for owner-occupied buildings, where incentives are aligned.) This problem of lack of owner motivation is also being overcome with government financing programs, such as the \$300 million ecoENERGY building efficiency initiative, and with innovative private financing programs such as "green leases" that incentivise landlords to upgrade premises, and the Clinton Climate Initiative's (CCI) Energy Efficiency Building Retrofit Program that directs operating cost savings on efficient buildings back to the building owners and their creditors, as investment returns. As the effects of these innovations grow so too should the green building sector.





# Investeco News

## 4. Investeco Private Equity Fund III L.P.

The final close for Fund III is currently planned for February 2010. Investeco believes that optimal conditions exist right now for environmental private equity investing: First, there continues to be strong demand for many environmental products and services. Second, a large percentage of government stimulus spending is being focused on our environmental sectors. Third, as the availability of private capital drops (see article on page 3) so to does the competition for the best deals. Finally, significant co-investment funds have been made available to Funds like ours by governments and institutions. If you are an accredited investor, offering documents for Fund III are available on request.



## 5. Triton secures massive underwater timber rights

Triton Logging has completed an acquisition of Clark Sustainable Resource Development, which holds the largest underwater logging concession in the world at Volta Lake in Ghana. The acquisition primarily consisted of a stock transaction, in which 20% of Triton's stock was traded for 100% of CSRD, including the 25-year concession in Ghana considered to hold hundreds of millions of dollars worth of valuable hardwood. CSRD's shareholders include Goldman Sachs, Barclays and the Africa Development Bank.



## 6. EnerWorks sales take off

EnerWorks bookings more than tripled in the third quarter of 2009. Orders have come from residential, agricultural, commercial, and industrial installations, from new distributors of our products as well as long-term partners, and from across North America and the Caribbean. The orders received in the past three months have far exceeded any quarter's bookings in the company's history and all indications are that this favourable trend should continue. In recognition of EnerWorks' success, the company has been named an "Emerging Cleantech Leader" by *Corporate Knights* magazine.



## 7. Biorem completes its largest sale to date

Air filtration company Biorem continues to grow, posting record quarterly sales of \$5.7 million for the period ending June 30, 2009, up from \$3.2 million in the prior year, and is now EBITDA (cash flow) positive. On September 15 the company announced its largest single order ever of \$3.4 million to supply a large biofiltration system in Southern Ontario.



## 8. Rowe Farms opens two more stores

Rowe Farms opened two more retail outlets on Thanksgiving weekend: one in Bloor West Village and one on Queen Street East in the Beach, both of which have enjoyed strong initial sales.



## 9. Environmental Sectors Fund beats MSCI AC index 14 out of the last 21 months

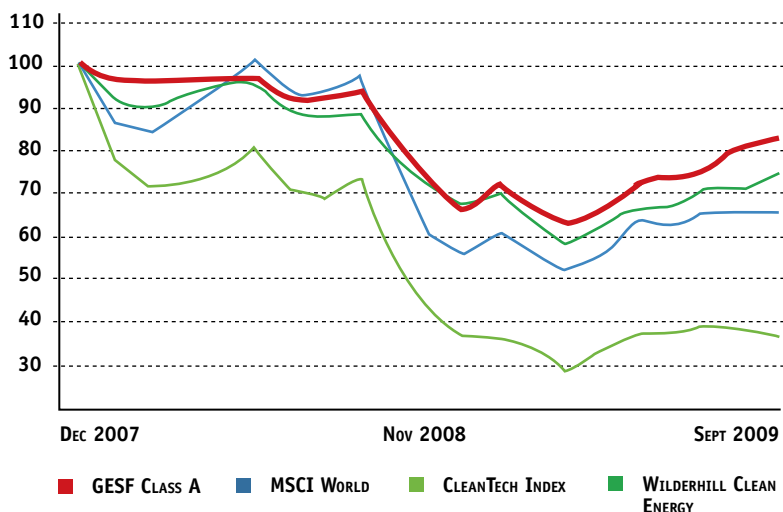
The Investeco Global Environmental Sectors Fund has been outperforming the MSCI All Country World Index two out of every three months since the Fund was launched on January 2, 2008, and by 8.4% overall. Good stock selection and valuation discipline, not sector outperformance, have been the primary drivers. For example, valuations steered us toward selecting alternative power developers and operators like Canadian Hydro Developers, Boralex, and Australia's Energy Developments, and helped us avoid the more volatile solar stocks and wind turbine manufacturers. We also made a strategic allocation to large European infrastructure plays like Siemens, ABB and Schneider Electric, and generally we stayed underweight U.S. companies and exposure to the U.S. dollar. Finally, some

*"The recent market rally in the financial and consumer discretionary sectors is fundamentally unsustainable. Environmental sectors simply offer better risk-adjusted rates of return and should be a core holding in any diversified portfolio"* — John Cook, President, IFC

of our emerging company investments, like Bio-Extraction and water companies Layne Christensen and Pure Technologies, have performed extremely well. These ideas are often generated in co-operation with the private equity team. It is always dangerous to tout performance, but we

believe the Fund should continue to outperform over the next market cycle. It is important to note that since inception environmental indexes have actually underperformed other sectors of the economy, such as health care, consumer staples, and more recently, financials. We believe this will change and environmental sectors will start to diverge and outperform. The broader economy still faces many challenges, such as higher energy prices, water scarcity costs, and new pollution regulations including carbon emissions taxes, but environmental portfolios will actually benefit from these same challenges. Accordingly, there is a diversification benefit to an allocation in the environmental sectors, in addition to potential outperformance.

Global Environmental Sectors Fund vs. Indexes (Jan. 2, 2008 to Sept. 30, 2009)



Source: Morgan Stanley, Yahoo Finance, RBC Dexia

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