

## HAMILTON CLARK QUARTERLY

### HamiltonClark EnergyTech Index™

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There was an overall market correction in May 2006. Most indices experienced double digit declines during May and September. The HamiltonClark EnergyTech Index lost 31% of its value, the AIM market declined by 21% and crude oil dropped by 22%. What does this mean for investments in renewable energy and E&P activities? Maybe it's time to invest.

### The Money Chase

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Biofuels are hot, but most of the large investments have been in corn ethanol projects. Thin film solar and battery technologies have attracted significant investments. Although industry experts report that *cleantech* investments in the first half of the year were in excess of \$1 billion, we believe this number is skewed by large projects and non-energy technologies. What does this mean to those entrepreneurs looking to raise capital who are not in "sexy" sectors?

### AIM Update

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General and limited partners of private equity firms are increasingly embracing the efforts of the London AIM to ease the burden of small company IPOs. There is wide endorsement of AIM offerings both as an exit strategy and as a way to raise "B" and "C" rounds. For CEOs and CFOs of energy technology companies this is an important development.

### Biofuels from Energy Crops

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Corn ethanol and soybean biodiesel have launched the biofuels industry. However, we believe the future is in ethanol produced from energy crops like switchgrass and poplar, and biodiesel produced from dedicated energy crops and algae. The issue is scale and integration. Consequently, the old adage holds true ... it will take longer and cost more.

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## Challenging Assignments ... Experience counts.

Over the years, our Managing Directors have undertaken complex investment banking assignments for energy and energy technology firms. And we delivered.

Client	Transaction	Client	Transaction
ABB	Investment	Maine Public Service	Shareholder Value
Aker Maritime	Valuation	Marathon Oil	Advisory
American Ecology	Fairness Opinion	McCormick Energy	Private Equity
Arco (North Slope)	Production Payment	McCormick Energy	Sale
Arco (U.S.)	Loan	McCormick Oil & Gas	Senior Notes
Atmos International	Advisory	McCormick Oil & Gas	Exchange Offer
BNOC (U.K.)	Project Finance	McRae Oil & Gas	Exchange Offer
Cal Resources	Acquisition	Occidental Petroleum	Loan
Callon Petroleum	Private Equity	Ontario Hydro Services Corp	Shareholder Value
Callon Petroleum	IPO	Petro Alliance	Merger
CalResources	Financial Advisory	Petrobras (Brazil)	Commercial Paper
Castle Peak Power (H.K.)	Project Finance	Petrolane Partners	IPO
Computalog	Merger	Petroleum Geo Services	Acquisition
Dacon Corporation	Sale	Petroleum Information	Merger
Dashiel Corporation	Sale	Petroleum Information	Placement
Eastern Group	Acquisition	Prinos Oil (Greece)	Project Finance
Ecology	Fairness Opinion	Proler International	Bank Debt
Enertec Corp.	Merger	Proler International	Asset Sale
Entex	LBO	Puget Sound Energy	Spin Off
EON AG	Acquisition	RETX.com	Private Equity
Esso InterAmerica	Bonds	Rotating Sleeve Engine Technology	Principal Investment
Esso Malaysia	Project Finance	Ruska Instrument	Sale
Exxon Finance	Notes	Saxon Oil & Gas	Merger
Frontera Resources	Advisor	Saxon Oil & Gas	Exchange Offer
Gaia Technologies	Sale	Schlumberger	Acquisition
Giant Industries	IPO	Securad Inc.	Advisory
Giant Industries	Merger	Shell Oil	Medium Term Notes
GNI Group	Sr. Sub. Notes	Silvatech Industries	Advisory
GNI Group	Acquisition	Solectria Corporation	Sale
GPS Technology	Merger	Solectria Corporation	Spin Off
GX Technologies	Private Equity	STM Power, Inc.	Private Equity, Recap
Hadson Corp.	Sale	Sunshine Mining	Subordinated Debt
Hadson Europe	Merger	Tectonic Energy	Merger
Harken Energy	PIPE	Thor Ventures	Merger
Holt Oil & Gas	Merger	Timoney Technology Ltd.	Advisory
Hydrotech	Sale	Tobin International	Sr. Notes
Insource Technology	Convertible Notes	Trans Texas Gas	Debt Refinancing
Kowloon Electricity (H.K.)	Project Finance	Unocal Corporation	Acquisition
Land & General	Acquisition	WEDGE Dia-Log	Acquisition

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# HAMILTONCLARK

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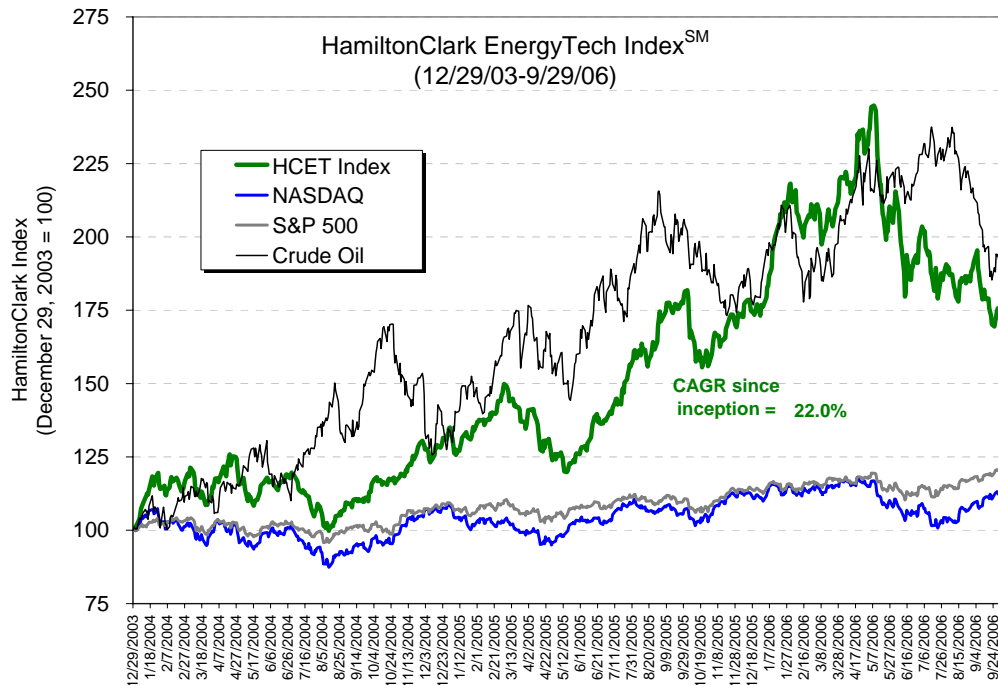
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# HamiltonClark EnergyTech Index™

Himesh Dhungel, PhD

*For the first time since its inception, the HamiltonClark EnergyTech Index<sup>SM</sup> is down 2.1% for the year, underperforming both NASDAQ and S&P 500 indices. The Index lost 31% of its value from its peak in May 2006, closely tracking the decline in oil prices. Renewable energy companies in the Index were hardest hit during this period. Will oil prices continue to fall and the Index continue to decline or is there a chance of recovery in the renewables and E&P sectors?*

*But even with this correction, we believe that energy tech is a good investment sector. For the 33 months since inception, the Index showed a CAGR of 22%.*



Our Index was heavily influenced by the movement in oil prices during the first nine months of this year. When the price of oil was up 21% at its peak, the Index went up 36%. When oil prices declined by 25%, the Index lost more than 30% of its value. Since oil price volatility is expected to continue, we believe the Index will see more swings in the coming months.

The list of companies in our Index and individual performances of each segment shown in the next page suggests that compared to other segments, the E&P sector has done better so far this year. Even though the Index is down 2.1% for the year, the E&P segment is up 10%. Does the sharp drop in renewable and clean energy technologies mean they are overvalued compared to E&P technologies? We think the aggressive valuation of ethanol stocks is over and that they will perform in line with crude oil prices.

COMPANY AND TECHNOLOGY SEGMENT		Share Price (\$/Sh.)		Percent	Mkt Cap	
		3-Jan-06	29-Sep-06	Change	@ 9/29/06	
					(\$ Million)	
<b>POWER GENERATION, POWER QUALITY, CONTROLS AND STORAGE</b>						
1	Active Power	ACPW	\$ 4.09	\$ 2.50	-38.9%	\$ 124.4
2	American Superconductor	AMSC	8.44	9.26	9.7%	307.3
3	Arotech Corporation	ARTX	5.32	1.89	-64.5%	20.0
4	Ballard Power	BLDP	4.19	5.69	35.8%	649.9
5	Beacon Power	BCON	1.83	1.26	-31.1%	74.0
6	C&D Technologies	CHP	7.81	7.10	-9.1%	181.9
7	Capstone Turbine	CPST	3.03	1.40	-53.8%	145.6
8	Cherokee International	CHRK	4.86	3.50	-28.0%	67.1
9	Distributed Energy Systems	DESC	8.09	3.23	-60.1%	126.1
10	Electro Energy Inc.	EEEI	4.77	1.90	-60.2%	42.9
11	Energy Conversion Devices	ENER	41.69	37.04	-11.2%	1,446.8
12	FuelCell Energy	FCEL	8.67	7.61	-12.2%	404.3
13	Hydrogenics	HYGS	3.12	1.36	-56.4%	125.0
14	Intermagnetics General	IMGC	20.53	27.05	31.8%	1,155.4
15	ITM Power	ITM	2.52	2.05	-18.7%	208.1
16	Magnetek	MAG	3.16	3.46	9.5%	101.4
17	Maxwell Technologies Inc.	MXWL	13.62	20.34	49.3%	350.0
18	Mechanical Technology Incorporated	MKTY	2.77	1.86	-32.9%	58.6
19	Medis Technologies	MDTL	15.14	24.71	63.2%	768.7
20	PECO II	PIII	1.69	1.24	-26.6%	33.7
21	Plug Power	PLUG	5.28	4.07	-22.9%	352.2
22	Power-One	PWER	6.17	7.24	17.3%	625.2
23	SatCon Technology	SATC	1.45	1.02	-29.7%	40.3
24	Turbo Power Systems	TPS	0.23	0.20	-9.8%	38.9
25	Ultralife Batteries	ULBI	11.67	10.41	-10.8%	155.3
26	Valence Technology	VLNC	1.57	1.91	21.7%	180.4
27	Vicor Corp	VICR	15.50	11.54	-25.5%	484.5
28	Xantrex	XTX	6.72	7.22	7.5%	207.8
<b>CLEAN TECHNOLOGIES</b>						
29	Azure Dynamics	AZD	\$ 0.95	\$ 0.61	-36.0%	\$ 86.4
30	Catalytica Energy Systems	CESI	1.03	1.11	7.8%	20.3
31	Fuel Tech N.V.	FTEK	8.96	14.89	66.2%	323.3
32	Headwaters	HW	36.37	23.35	-35.8%	987.8
33	Fuel Systems Solutions, Inc.	FSYS	10.38	12.72	22.5%	192.3
34	Evergreen Energy	EEE	17.50	10.47	-40.2%	852.5
35	Millennium Cell	MCEL	1.35	1.06	-21.5%	51.7
36	Quantum Fuel Systems Tech	QTWW	2.69	1.98	-26.4%	117.2
37	Rentech Inc.	RTK	3.72	4.63	24.5%	654.7
38	Syntroleum Corp.	SYNM	9.14	4.79	-47.6%	267.6
39	UQM Technologies	UQM	3.87	2.74	-29.2%	68.9
<b>ENERGY EFFICIENCY, INFORMATION, OPTIMIZATION</b>						
40	Allied Motion Technologies	AMOT	\$ 4.15	\$ 4.80	15.7%	\$ 30.9
41	Badger Meter	BMI	39.51	25.19	-36.2%	354.5
42	Echelon Corporation	ELON	8.09	8.23	1.7%	324.4
43	Intergraph Corp	INGR	49.97	42.88	-14.2%	1,261.8
44	Itron	ITRI	40.29	55.80	38.5%	1,422.5
<b>RENEWABLE ENERGY</b>						
45	Biofuels Corporation plc	BFC	\$ 1.63	\$ 1.05	-35.8%	\$ 52.0
46	Environmental Power Corporation	EPG	6.93	4.49	-35.2%	43.3
47	Evergreen Solar	ESLR	11.33	8.30	-26.7%	557.4
48	Gamesa Corp Tecnologica SA	GAM	15.38	21.13	37.4%	5,141.3
49	Ocean Power Technologies	OPT	1.41	1.26	-11.0%	64.7
50	Ormat	ORA	27.92	32.72	17.2%	1,164.5
51	Solar Integrated Technologies	SIT	3.91	0.48	-87.6%	16.8
52	Spire Corporation	SPIR	7.49	7.02	-6.3%	57.7
53	Suntech Power Holdings	STP	26.94	25.83	-4.1%	3,809.6
54	Vestas Wind Systems A/S	VWS	17.22	25.75	49.5%	4,503.6
<b>EXPLORATION &amp; PRODUCTION TECHNOLOGIES</b>						
55	Atwood Oceanics	ATW	\$ 42.65	\$ 44.97	5.4%	\$ 1,396.0
56	Bolt Technology Corp	BTJ	12.67	13.39	5.7%	74.8
57	Compagnie General de Geophysique	GGY	18.60	31.14	67.4%	2,725.9
58	Core Labs Nv	CLB	38.60	63.80	65.3%	1,615.0
59	Dawson Geophysical	DWSN	31.96	29.70	-7.1%	224.2
60	Dril Quip Inc	DRQ	25.24	33.84	34.1%	1,323.9
61	Englobal Corp	ENG	9.34	6.19	-33.7%	164.9
62	HydriL	HYDL	65.62	56.06	-14.6%	1,310.6
63	Input Output Inc	IO	7.08	9.93	40.3%	788.9
64	Oceanering Intl	OII	26.49	30.80	16.3%	1,668.7
65	Oil States Intl	OIS	34.65	27.50	-20.6%	1,369.3
66	Petro Geo Adr New	PGS	33.30	48.90	46.8%	2,934.0
67	R P C Inc	RES	26.01	18.32	-29.6%	1,189.8
68	Tetra Technologies	TTI	16.67	24.16	44.9%	1,735.6
69	Veritas Dgc Inc	VTS	38.07	65.82	72.9%	2,373.4
Nasdaq			2244	2258	0.7%	
S&P500			1269	1336	5.3%	
Crude Oil (\$/bbl)			63.5	62.9	-0.8%	
HamiltonClark EnergyTech Index™			179.5	175.7	-2.1%	
<b>SEGMENT PERFORMANCE (Index)</b>						
Gen, Controls & Quality			46.2	40.3	-12.7%	
Clean Tech and Fuels			26.6	24.0	-9.8%	
Energy Eff, Intelligence, Opt.			13.0	12.6	-2.8%	
Renewable Energy			20.0	17.6	-12.1%	
E&P Technologies			73.8	81.2	10.1%	

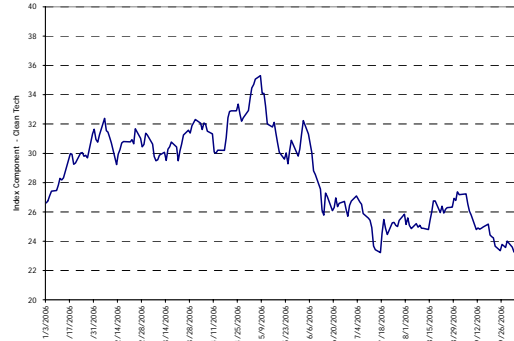
**Performance of Index Components**

**Generation, Controls and Power Quality**



No. of companies 28  
 Market cap \$8.5 billion  
 2005 YTD return -12.7%

**Clean Technologies**



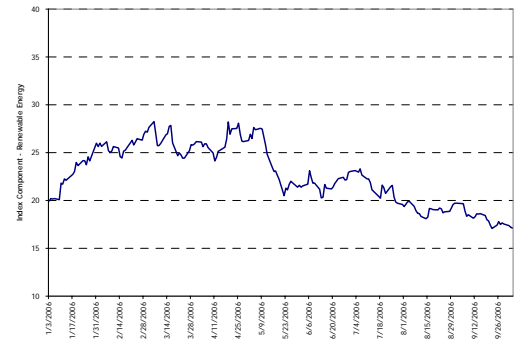
No. of companies 11  
 Market cap \$3.6 billion  
 2006 YTD return -9.8%

**Energy Intelligence and Optimization**



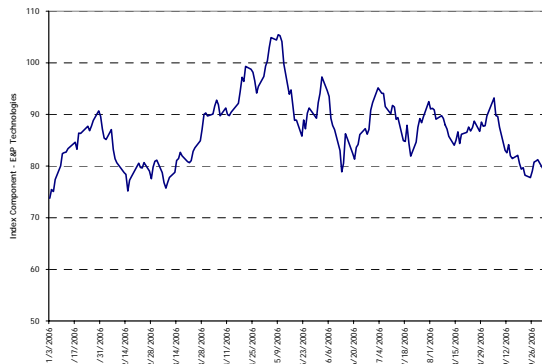
No. of companies 5  
 Market cap \$3.4 billion  
 2006 YTD return -2.8%

**Renewable Energy**



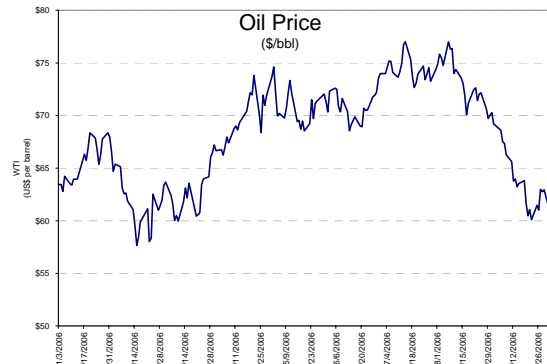
No. of companies 10  
 Market cap \$15.4 billion  
 2006 YTD return -12.1%

**Exploration and Production Technologies**



No. of Companies 15  
 Market cap \$20.9 billion  
 2006 YTD return 10.1%

**Oil Price**



2006 YTD increase -0.8%

# The Money Chase

Himesh Dhungel, PhD

*Biofuels did very well over the last six months. Companies have raised hundreds of millions of dollars for tried and tested corn ethanol projects to cutting-edge genetically modified high yield crops to start-up cellulosic ethanol technologies. Thin film solar and battery technologies continue to attract investor attention. We estimate that there are at least 800 energy tech companies in North America that are seeking approximately \$6 billion of capital.*

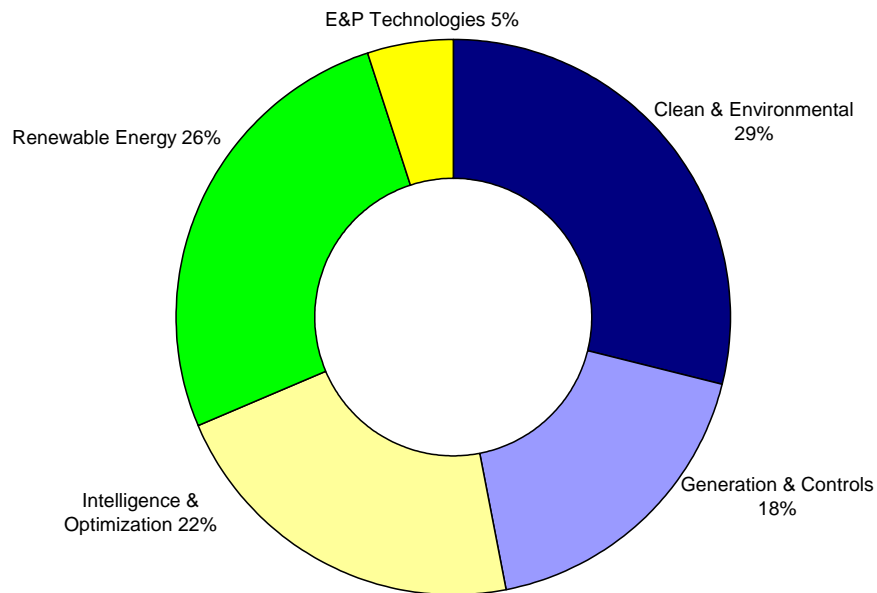
## How we organize the HamiltonClark EnergyTech Database™

<b>Renewable &amp; Sustainable Energy (RE)</b>	
Biomass/Biogas	Pyrolysis, thermal, landfill gas, coal bed methane, digesters
Geothermal	Geomagmatic, geothermal
Renewable Energy Project Developer	Project developers
Renewable Energy Services	Systems integrators, service providers
Solar	Photovoltaics, concentrated PV, solar thermal, solar lighting
Hydro	Generating equipment, wave energy, tidal energy
Wind	Wind turbine and ancillary technologies
<b>Clean Energy Technologies (CT)</b>	
Clean Fuels	Ethanol, clean coal, biodiesel, methanol
Pollution Control/Clean Tech	Emissions reduction, low/zero emission combustion
Clean Water, Environmental Services	Environmental services
Energy Efficiency	Efficient lights, motors, chips, HVAC, variable speed drive
Fuel Cells and Related	SOFC, PEM, air mgmt system, stacks
Hydrogen	H2 generation, storage, transportation
Clean Vehicles	Hybrids, clean engines
Recycling	Waste-to-energy
Other CT	Clean technologies not included elsewhere
<b>Power Generation &amp; Power Quality (DQ)</b>	
DG Enabling Technologies	Power electronics, controls, embedded software
Distributed Generation Equipment	Turbines, Stirling, Brayton, IC engines, CHP technologies
DG Services and Developers	Inside-the-fence, energy service companies
Uninterruptible Power Systems	Batteries, flywheels, back-up, power conditioning/quality
<b>Energy Intelligence &amp; Optimization (EI)</b>	
Market-related Software	Energy B2B, marketplaces, trading software, risk mgmt
Customer Relations/Information	Utility CIS, billing, applications service providers
Enterprise Energy Management	Building energy mgmt., DSM, reporting/analysis
Metering, Sub-metering	Meter, sub-meter technologies
Networks/Telecom	Gateway, wireless device, powerline technology
Utility Asset Management	Superconductor, T&D tech, asset optimization
Other EI	Energy intelligence, not included elsewhere
<b>E&amp;P Technologies (EP)</b>	
Exploration Technologies	Seismic/reservoir data, software, geophysical equipment
Asset Management	Sensors, monitors, remote access, data acquisition
E&P Service	Specialty material, motors, generators, pumps, compressors
Alternative Fuel E&P Developer	Unconventional fossil fuel development

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## The Financing Environment

Investments in alternative fuels have increased significantly in the last twelve months. The beneficiaries of increased interest in this area have been ethanol and biodiesel. Although the absolute amount of investment in biofuels has been large, the number of transactions has been small. Will biofuels crowd out other potentially profitable but less “sexy” investment opportunities? We don’t think so.



There are currently 1,470 companies in the HamiltonClark Energytech Database<sup>SM</sup>. We estimate that there are about 800 companies seeking \$5.8 billion of financing.

## Technologies to Watch

Although there are approximately 800 energy tech companies actively seeking capital, we believe the bulk of the investment activity in the next 12 to 18 months will be focused on biofuels, thin film solar and battery technologies. As oil and gas prices remain volatile and at historically high levels, technologies that make energy consumption more efficient should also attract investor interest. These technologies will find beachheads in commercial and industrial markets first, and eventually in retail markets. Technologies such as mesh networking and demand management, efficient lighting and drive systems will become embedded into plants, buildings and ultimately into homes.

# AIM Update – Private Equity Endorses AIM

John J. McKenna

*At the September DowJones Private Equity Analyst Conference in New York, about 1,000 assembled general and limited partners of the world's leading private equity firms (representing \$250 billion of investing capital) lent their support to the efforts of the London AIM to ease the burden of small company IPOs. In the breakout session about "exit strategies" there was wide endorsement of AIM offerings both as an exit strategy and as a way to raise "B" and "C" rounds. For CEOs and CFOs of energy technology companies this is an important development.*

*This article reviews AIM statistics and attempts to summarize comparable costs with respect to AIM versus NASDAQ. The conclusion is that AIM is significantly less expensive, and a lower risk, than small capitalization NASDAQ offerings.*

**Note: This summer HamiltonClark announced a strategic alliance with the London investment bank Corporate Synergy plc, located at [www.corporatesynergy.co.uk](http://www.corporatesynergy.co.uk) to co-manage offerings on the London AIM. This alliance gives us the ability to co-manage AIM offerings for North American companies.**

## Energy Technology Companies on AIM

The table on the following page lists the 61 energy technology issues that we track on the AIM. Overall, these companies have performed well since their offerings, with 35 companies currently trading at a premium to their IPO price, with a median price appreciation since their respective IPO of approximately 14%.

Over the last six months, activity on the AIM for energy technology issues has been sporadic for two reasons:

- There was an overall correction in the market valuation of energy tech stocks on AIM, principally due to lower oil and natural gas prices. Lower energy prices tended to rally the general market but depressed the energy tech sector which has shown a close correlation to energy prices. (See the HamiltonClark EnergyTech Index article in this report for an analysis of the correction among a number of small cap energy technology stocks. The Index was down approximately 31% from its peak in early May while oil prices fell by 25% during this same period.)
- A number of diversified energy tech funds and one energy tech SPAC closed during this period which took a substantial amount of liquidity out of the energy tech sector. Infinity BioEnergy raised £273 million in a SPAC format for investment in ethanol in South America; Low Carbon Accelerator, a Guernsey-based closed end investment fund raised £45 million for a diversified portfolio of low carbon investments; and at the time of this report the UK Carbon Trust is in the process of concluding a diversified investment company transaction. We see this trend continuing as we believe that oil prices will continue to fall and then start to rise again in Q1-Q2 2007.

This lull in activity however bodes well for post revenue energy tech companies that are in a position to raise additional capital. It is also an opportune time for general partners of venture financed companies to look at AIM offerings as a way to complete B and C round financings at reasonable valuations. Any sudden increase in energy prices will again make AIM the preferred source of follow-on as well as exit financing.

### Energy Technology Companies on AIM

Company Name	FINANCING		Mkt Cap @ 10/13/06 (£MM)	Sector Comment
	Amount Raised (£MM)	Valuation at Listing (£MM)		
1 Acta	£8.0	£44.8	£40.7	Fuel cell
2 Alkane Energy plc	0.0	11.0	12.3	Biogas/methane to electricity
3 Aspen Clean Energy plc	1.0	1.1	8.9	Biofuels
4 Augean	86.1	117.9	83.8	Environmental controls
5 Azure Dynamics Corporation <sup>(1)</sup>	0.0	25.0	67.0	Hybrid electric drive systems
6 Biofuels Corporation	32.7	110.5	34.4	Biodiesel refinery
7 Biofutures International plc	3.0	3.7	10.3	Biofuels trading
8 Camco International	29.9	83.1	66.9	CO2 brokers
9 Ceramic Fuel Cells Ltd. <sup>(3)</sup>	37.2	61.2	90.2	SOFC
10 Ceres Power Holdings	22.0	66.1	134.6	Solid oxide fuel cells
11 China Biodiesel Intl Hldg Co	8.0	38.6	53.6	Biodiesel
12 China Shoto plc	6.0	26.0	38.9	Battery and UPS
13 Clean Air Power Ltd	10.0	26.3	20.9	IC Engine efficiency
14 Clean Diesel Technologies <sup>(2)</sup>	3.6	17.7	21.1	Clean diesel catalyst technology
15 Clipper Windpower	75.0	180.8	540.8	Wind turbine and projects
16 CMR Fuel Cells plc	10.3	38.9	34.6	Stacks for fuel cells for electronics market
17 Compact Power Holdings	10.2	26.1	7.6	Pyrolysis gasification technology
18 Conder Environmental plc	3.5	7.5	3.2	Pollution control
19 Corac Group	14.4	77.7	25.6	IP-based engg. company - PMG, Drives
20 D1 Oils	13.0	34.4	65.5	Bio diesel from energy crops
21 Econergy International	60.0	87.0	80.0	Carbon finance/brokering/consulting
22 EcoSecurities Group PLC	54.0	137.0	158.1	Carbon/CO2 broker
23 Enova Systems Inc. <sup>(2)</sup>	11.5	33.7	34.2	Hybrid electric and electric vehicles
24 Gas Turbine Efficiency plc	5.4	16.0	19.3	GT efficiency enhancing technology
25 Gooch & Housego	5.9	17.8	60.3	Electro-optics; light measurement
26 Great Eastern Energy Company	19.0	19.0	138.9	Coal bed methane
27 GTL Resources plc	24.0	28.4	47.7	Stranded gas to liquids
28 Hydro International plc	0.0	13.5	19.0	Storm and waste water management
29 Infinity Bio-Energy Ltd.	272.9	341.2	583.7	Ethanol project development in S. Americ
30 IPSA Group plc	8.0	14.8	21.0	Independent power plants in South Africa
31 ITM Power	29.0	294.3	131.1	Polymer PEM fuel cells
32 KleenAir Systems International	1.3	8.5	4.1	Nox control technology
33 Kp Renewables	3.0	57.4	8.9	Renewable project development
34 Novera Energy Limited <sup>(3)</sup>	5.3	31.8	26.6	Renewable energy
35 Ocean Power Technologies	25.0	62.8	36.5	Wave technology
36 Offshore Hydrocarbon Mapping plc	15.5	49.3	26.4	Electromagnetics tech for E&P
37 Oxford Catalysts	16.6	64.6	52.8	Catalysts for GTL, fuelcells, H2 production
38 Oxonica	8.3	35.3	67.6	Nano materials
39 PM Group	4.5	12.5	16.7	Engineering services
40 Polyfuel	8.0	23.0	31.1	Direct methanol fuel cell
41 Powerfilm Inc.	9.6	39.6	51.2	Thin film solar PV (a-Si PV)
42 Prometheus Energy Co.	0.0	55.2	47.2	Wastegas (LFG, biogas, CBM) to LNG
43 Protonex Technology Corporation	8.8	36.8	41.1	PEM fuel cells
44 Pursuit Dynamics plc	4.2	17.7	44.9	Pumping technology for cleanups, O&G
45 Questair Technologies <sup>(1)</sup>	6.5	27.8	25.5	Hydrogen and gas purification
46 ReEnergy Group plc	6.5	28.0	21.3	Waste management and power gen
47 ReneSola Ltd.	26.5	79.4	226.5	Solar PV wafers
48 Renewable Energy Holdings	10.0	14.5	18.5	Investments in RE tech and projects
49 Renova Energy plc	9.1	18.2	66.1	Ethanol production and distribution
50 Rurelec plc	14.0	23.0	20.6	Electricification in remote areas
51 Solar Integrated Technologies	12.3	57.2	8.3	PV technology and services
52 Surface Transforms plc	1.3	8.4	2.1	Cabron fiber tech for vehicle systems
53 TEG Environmental plc	1.9	8.2	27.7	Waste reduction technology and service
54 Tinci Holdings Ltd	2.1	37.1	44.5	Flue gas desulfurization (SOx removal)
55 Torotrak plc (Main)	0.0	294.3	34.7	CVT/IVT manufacturer
56 Trading Emissions plc	135.0	135.0	337.9	Carbon emissions trading
57 Tricorn Group plc	1.6	7.7	6.5	Environmental engineering tech service
58 Turbo Power Systems (Main)	31.3	555.3	20.0	Power conversion and supply equipment
59 Turbotech Products plc	4.8	10.9	11.1	Enhanced heat transfer, efficiency
60 Zenenergy Power Plc	0.0	35.9	37.4	Superconductor (HTS)
61 Zytronic	6.6	15.5	35.7	Optical filters technology
<b>Total</b>	<b>£1,243.2</b>	<b>£3,852.0</b>	<b>£4,053.5</b>	
<b>Average</b>	<b>£20.4</b>	<b>£63.1</b>	<b>£66.5</b>	
<b>Median</b>	<b>£8.3</b>	<b>£33.7</b>	<b>£34.7</b>	

Notes:

13-Oct-06

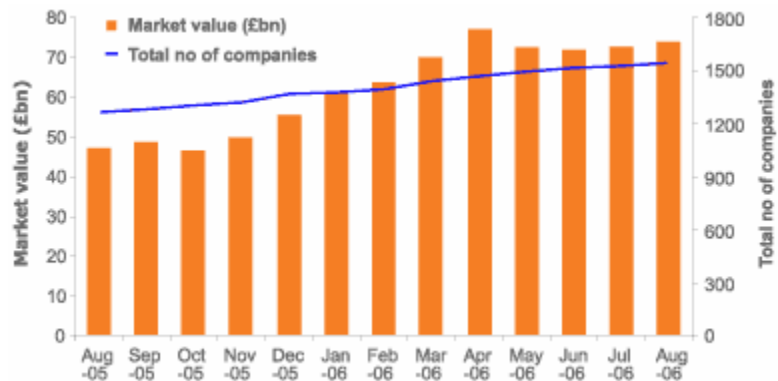
(1) Traded on Toronto Stock Exchange, exchange rate £1.00=CDN \$ 2.118  
(2) Traded on US OTC Bulletin Board, exchange rate £1.00 =US \$ 1.862  
(3) Traded on Australian Stock Exchange, exchange rate £1.00 = AL \$ 2.470

**Quick Tutorial on AIM**

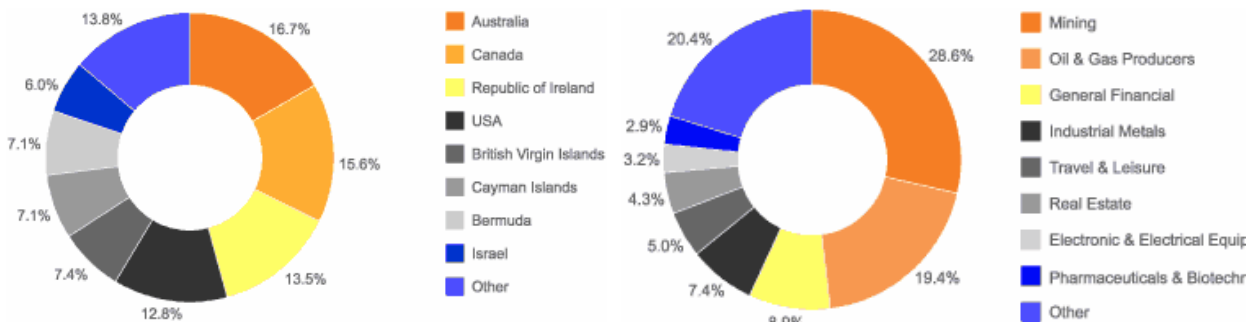
The Alternative Investment Market (AIM) of the London Stock Exchange was originally organized in 1995 as an alternative to NASDAQ for smaller emerging-growth companies that seek to complete an IPO or follow-on offering. According to an October 16, 2006 article about AIM in *Barron's*, “the AIM had 519 IPOs in 2005, compared to only 45 on NASDAQ. These deals raised \$11.5 billion, versus about \$2 billion for new listings on NASDAQ.” These numbers confirm that the larger IPOs went to NASDAQ (average deal size of \$44 million), versus AIM with an average deal size of \$22 million. Some additional observations about AIM include:

- AIM is specifically tailored to growing businesses and combines the benefits of a public quotation with a flexible regulatory approach.
- The large institutional investment base offered in London has allowed the AIM market to grow across a range of sectors. This is not an individual investor market.
- AIM provides companies from all countries and sectors access to the institutional market at an early stage of their development. It is similar to an institutional “quoted” venture capital exchange.
- Since AIM opened in 1995, more than 2,200 companies have been admitted and more than £23 billion has been raised collectively, attracting over 250 non-UK companies, including 43 international companies in 2006.

**AIM market value and total number of companies, through June 2006**



**Country and sector distribution, June 2006**



## We believe that the Primary Reason for this Activity is Cost

### Cash Cost of the Offering

In a typical \$15 million size initial offering, a company might incur total offering expenses of about \$800,000, (5.3% of the offering) not including broker commissions, and about \$1,900,000 (12.5%) including commissions. Many of these fees can be back-end weighted so that they are only paid based on a successful offering. These estimates can be broken down as follows:

	Fixed Fee			Success Based	Total
	Month 1	Month 2	Month 3		
<b>NOMAD and Broker</b>					
Corporate finance transaction fee	\$20	\$20	\$20	\$290	\$350
Placing commissions	-	-	-	\$750	\$750
<b>Legal</b>					
Legal advisor to Company	-	-	-	-	\$300
Disbursements	-	-	-	\$5	\$5
Legal advisor to NOMAD	-	-	-	-	\$50
Disbursements	-	-	-	\$2	\$2
<b>Accounting</b>					
IPO accountancy services	-	-	-	-	\$300
Disbursements	-	-	-	\$2	\$2
<b>Other</b>					
Registrars	-	-	-	-	\$20
PR Advisers	-	-	-	-	\$60
Printers	-	-	-	-	\$30
AIM admission fee	-	-	-	\$8	\$8
<b>Total</b>					<b>\$1,877</b>

In a typical NASDAQ offering in the range of \$15 million, the company might incur costs of about \$1,200,000 (8% of the offering) not including brokerage commissions, and about \$2,270,000 (15.1%) including commissions. Most of this additional cost is for lawyers, accountants and Sarbanes-Oxley related expenses. It is also difficult to negotiate back-end weighted arrangements in the US market.

### Regulatory Risk and Associated Costs

AIM is a self-regulated market among the Nominated Advisors and the London Stock Exchange and consequently, offering documents are not required to be reviewed by the FSA (which is the UK equivalent of our SEC.) This means that the burden of an SEC review, and the difficulty of managing this review by a small company, is eliminated. This does not mean to say that the due diligence process is any less rigorous (many companies actually say that due diligence by AIM professionals is more rigorous than in the US), but the regulatory delays and the SEC "comment" process is eliminated. This is not a criticism of the SEC, which works hard to review and clear companies for their offering, but AIM was designed to put the burden of review on the bankers that bring the offerings. Since almost all of the offerings are taken down by institutional investors, the process is quite similar to US accredited investor procedures.

How much is this worth in "cost" is uncertain, but for a CFO that has participated in numerous comment letters, AIM has much more certainty built into its process.

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### Costs to Maintain a Public Market

We estimate that the costs of maintaining a listing on AIM, assuming a \$50 million public company valuation would be about \$400,000 versus about \$2 million on NASDAQ. The difference in cost relates primarily to 404 compliance under Sarbanes-Oxley (\$500,000), Internal costs for SEC compliance (\$250,000), additional audit fees (\$100,000), increased D&O costs (\$200,000) and about \$100,000 of additional investor relations expense in the US.

### Cost Comparison of a \$15 million Financing of a \$50 million Post Offering Company

<u>Cost</u>	<u>AIM</u>	<u>NASDAQ</u>
Execution of the IPO (success)	\$1,900,000 <sup>(1)</sup>	\$2,270,000 <sup>(2)</sup>
SEC regulatory risk	None	Uncertain
Maintain a Public Market	\$400,000	\$2,000,000

(1) Could be back-end loaded

(2) Unlikely to be back-end loaded

### Conclusion

We have been covering AIM energy technology companies since we formed HamiltonClark in 2004. Throughout this period we have consistently stated that AIM is not for everybody, and there are certain issues that need to be examined before going to AIM. However, with this disclaimer noted, AIM has been a very effective capital market for energy technology companies. With continued high energy prices and a flood of petrodollars into the London market, we estimate that the attraction of AIM will continue. General Partners of venture financed companies should make sure that all their post revenue companies look into this option for their next financing.

As energy prices start to increase (which we feel will happen in Q1-Q2 2007), energy tech stock prices on AIM should increase accordingly.

# Biofuels from Energy Crops – Do the Economics Make Sense?

John J. McKenna and Himesh Dhungel, PhD

*Because our firm focuses principally on energy technology, we did not participate as advisors in the rapid build-up of corn-based ethanol and soybean-based biodiesel production. Ethanol has been produced from corn for centuries, and the production of biodiesel from vegetable oil is really not that complex...the scale has just increased. Instead of looking at biofuels derived from food crops (corn and soybeans) we have ventured into the economics of ethanol produced from energy crops like switchgrass and poplar, and biodiesel produced from a list of dedicated energy crops and algae.*

*We think we know the answer about the economics of biofuels produced from dedicated energy crops. It will be a question of scale and integration...not much different than the oil and gas industry during the early 1900's. It will take longer and cost more than most people think. But we believe that it can be done and done profitably.*

## **Backdrop for Biofuels**

Anybody who scans this article has likely been inundated with reading material about biofuels and the future of this wonderful, renewable source of energy. Scientists at all the national labs are conducting tours for visiting firemen from Washington and the conference circuit is ablaze with activity. Even my barber has asked me for a good ethanol stock pick. Like many technology booms, talk is cheap, practical experience is limited and in the case of cellulosic ethanol – real projects are yet to be developed. So we went back to the last gold rush in alternative energy (synthetic fuels in the late 1970s) and tried to piece together the key economic issues that we believe will separate the winners from the losers.

1. **Need for scale.** Whether scale breeds integration or integration requires scale, we don't know. What we do know is that until the biofuels industry can consistently build, own and operate projects of scale, we do not believe that the industry will be able to offer economics that are compelling to downstream marketers and ultimately to consumers. Our belief is that the minimum scale needs to be at the low end of crude oil refining capacity, or in the range of about 25,000 barrels per day (about 380 million gallons per year).

ExxonMobil's gas-to-liquids refinery in Qatar, arguably the world's leading announced alternative energy plant, will have nameplate capacity of about 150,000 BPD and is likely to cost about \$7 billion or roughly \$47,000 per daily barrel produced. Over the last 12 years Syncrude Canada has spent about \$12 billion and is now producing about 240,000 BPD, at a capital cost of about \$50,000 per daily barrel produced. Both of these projects are integrated, meaning that the developers have contract rights or title to the reserves underlying the economics of their refineries. So, at scale, integrated biofuels from energy crop projects would need to come in at about \$50,000 per daily barrel produced in order to be competitive with leading fossil-based alternative fuel projects; global warming and carbon sequestration arguments notwithstanding.

A 25,000 BPD integrated facility (including the upstream), at \$50,000 per daily barrel produced, will require about \$1.25 billion, almost all equity financed.

2. **Integrated economics.** To date almost all of the venture capital in cellulosic ethanol has been invested in the downstream sector. This phenomenon is quite logical given that venture capital requires a three to five year turn, and inventing a way to combine hydrolysis and fermentation is akin to a blockbuster pharma breakthrough, something that might motivate a large chemical company to buy the young, pre-revenue company. But this is not how we see the economics of the biofuels from energy crop business. The only way that projects will be developed is to take an integrated farm-to-processing plant-to-service station approach just like the major integrated oil companies, squeezing every penny out of the upstream (cultivation), midstream (harvesting and pre-treatment) and downstream (refining, co-product sales and marketing). To date we have not seen this integrated model in the energy crop sector.
3. **Energy crops versus food crop residues.** We believe that cellulosic ethanol from corn residues (like corn stover) is the bridge to energy crops but it's not the end game. We believe that the end game is dedicated crops, crops that can be cultivated purely for yield (tons per acre) and (gallons per ton), in a sustainable manner that reduces the need for chemical fertilizers and irrigation.
4. **Early market subsidies.** Our preference would be to see market-based subsidies (government take or pay contracts) versus loan guarantees. But there must be some form of subsidy program to encourage capital flows into the industry, almost all of which will likely be equity financed until the first plants have operated at design capacity.
5. **Close working relationship with integrated oil companies.** Biofuels from energy crops will not happen unless there is a working relationship with large oil companies. The venture capital community needs to understand this.
6. **Utilize the best available commercial technology.** Like integrated oil companies, integrated biofuels from energy crop companies will need to utilize the best technology from all vendors, not proprietary technology developed in-house.

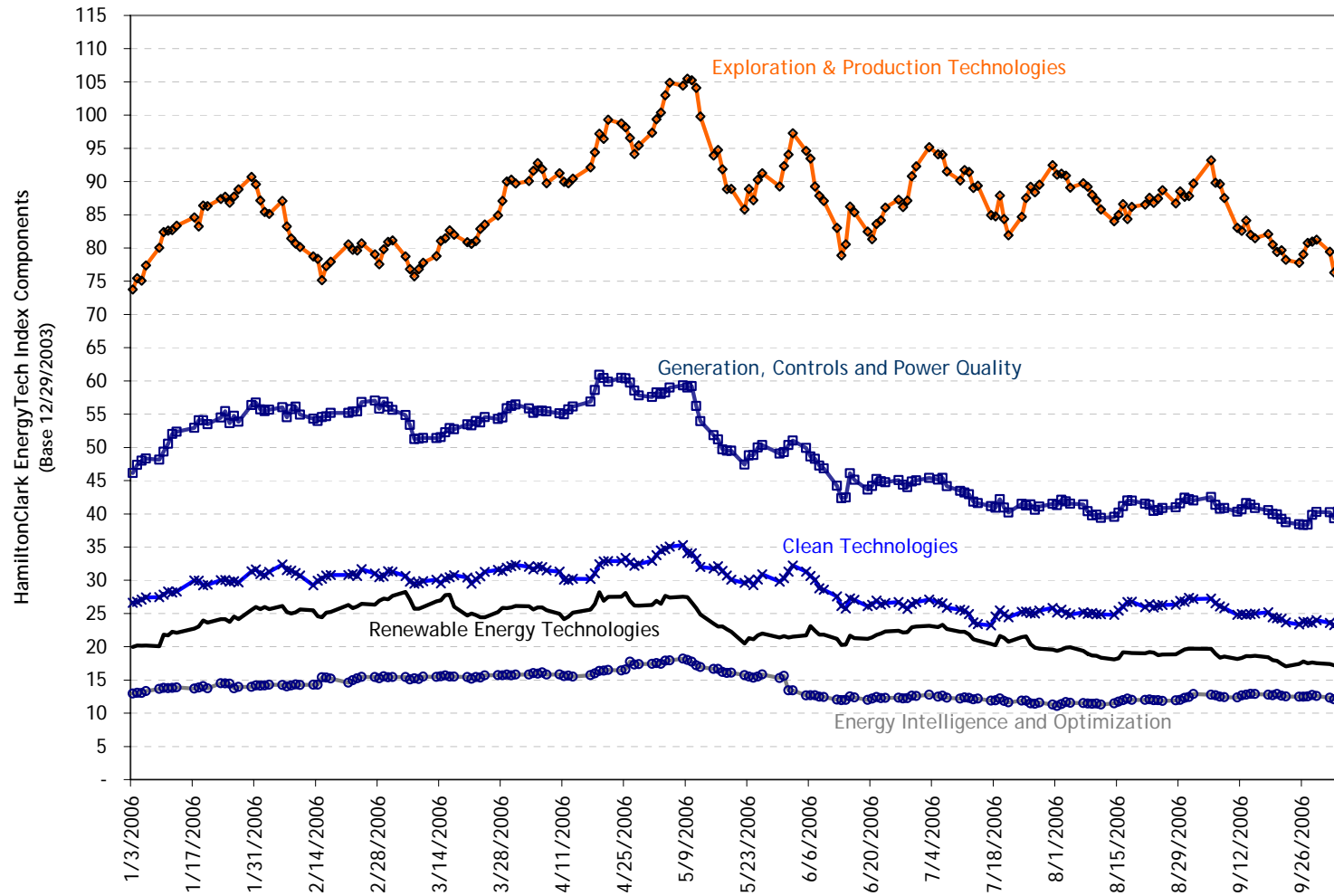
### From Here to There

We plan to publish the results of the up-coming cellulosic ethanol conferences that will take place in Chicago and Washington DC over the next four weeks, and also the conference planned in Arizona this April.

Full Disclosure: HamiltonClark has recently signed a Cooperative Research and Development Agreement ("CRADA") with the National Renewable Energy Lab (including Oak Ridge National Lab) to study the integrated economics of producing fuel ethanol from switchgrass in the southeastern region of the U.S. This CRADA will focus on various sized integrated plants, up to approximately 20,000 tons per day which is estimated to produce between 33,000 to 50,000 BPD. Details regarding this CRADA and our efforts to launch a new company to commercialize the results of the CRADA can be found on our website at [www.hamiltonclark.com](http://www.hamiltonclark.com).

# HamiltonClark EnergyTech Index<sup>SM</sup>

(At September 29, 2006)



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## Authors' Certification

We, John J. McKenna and Himesh Dhungel, PhD certify that the views expressed in this report to the best of our knowledge, accurately reflect our personal views about the subject companies and their securities, and that we have not been, are not, and will not be receiving direct or indirect compensation in exchange for expressing the specific recommendations or views in this report.

HamiltonClark beneficially owned less than 0.2% of the common stock of Azure Dynamics Corporation as of close of business September 29, 2006 and we received investment banking fees in 2005 representing Solectria Corporation in its acquisition by Azure Dynamics Corporation.

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