

## **Cleantech – What Happened? And Lessons Learned.**

BY MARK MURRAY

*Mark Murray is Managing Director of Richmond based Turning Basin Capital Partners, a private equity firm investing in energy related businesses that do not rely exclusively on utility purchasing trends, government subsidies, or regulatory mandates.*

The term “Cleantech” has been defined by investors to include companies that are focused on minimizing negative effects on the environment by using technology to generate and store power, as well as those seeking to increase efficiency, productivity or performance. This sector includes anything from smart meters to LED lighting to solar technology.

If you invested in cleantech companies in the last 5 years, I offer my sincere apologies. The sector is down 17.69% (CTIUS) over the last 5 years, while the S&P 500 is up 18.63% over the same period. Back when it was “cool” to be a cleantech investor, the sector had a myriad of government-backed tailwinds: the production tax credit, the investment tax credit, legislation in the form of Waxman Markey that proposed cap and trade, Department of Energy grants and loan guarantees. These enticements propelled a flood of investment in technologies that promised cheaper solar, time of use rate programs for electric customers, energy storage, etc. etc. Unfortunately, investors have not seen positive signs that those bets will pay off (see: Solyndra (bankrupt), A123 (bankrupt), SilverSpring Networks challenges to go public), which begs the question, why? Lower wholesale energy prices due to a stalled economy have had some bearing, but in my opinion, the single biggest factor preventing growth in the cleantech sector is the culture found within electric utilities and the forces that foster that culture.

I am uniquely qualified to speak to said culture, having just (*cont. on page 2*)

Turning Basin Capital (“TBC”) is a private equity firm with a unique focus on energy related companies found in the lower middle market. Many of these lower middle market companies are presented with growth opportunities that are being driven by macro drivers such as energy independence, global warming concerns, resource scarcity, emergence of technologies and regulatory changes. TBC is a potential source of capital for these companies that are frequently overlooked by the larger private equity funds merely due to their size. TBC looks to focus exclusively on the lower middle market and target companies with adjusted earnings below \$5 million and enterprise values less than \$20 million.

The sectors of TBC focus are:

**Power Generation** – Distributed electric generation is growing due to a number of factors including regulatory drivers. Accordingly, TBC is focused on distributed and renewable generation, combined heat and power, and companies that are supporting the conversion from one fuel to an alternative.

**Oil and Gas Services and Technologies** - Fracking technology is driving the latest oil and gas boom. TBC is focused on technology and equipment providers as well as logistics companies that are seeing growth due to oil and gas drilling in remote areas.

**Resource Efficiency** – Efficiency technologies are gaining economic credibility and are being driven by some state mandates.

**Energy Equipment and Manufacturing** – Specialized equipment is used in the production, transmission and distribution of energy. TBC is focused on companies that have a niche or make that supply chain more efficient.

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### Cleantech – What Happened? And Lessons Learned.

spent three of the most frustrating, albeit interesting and enlightening, years of my life managing the nations’ third largest energy company’s strategic cleantech “fund.” In 2009, I convinced my employer to be in the market to invest in venture stage cleantech companies, in order to get a behind-the-scenes look at the market forces driving said companies and the development of technology. I wanted to determine how those companies would benefit, or negatively impact, the traditional regulated utility business model. During that time, I made a number of investments in the following areas: grid communications, energy storage, data center energy management, solar development and financing, all of which should have been interesting to the utility. With the helpful prodding of the venture capital community, I was able to unearth some real gems and shared my findings and opportunities with the company’s senior management accordingly. Unfortunately, my excitement over creative products and services was routinely met with blank stares and little to no action on the part of management, all of whom were long-time utility employees unwilling to “rock the apple cart.” It is safe to say that there was a complete disinterest in doing anything contrary to what had been done for generations. Inertia ruled, and every new and exciting technology unearthed was about as welcome as a large cobra rising out of the proverbial wicker basket.

The average age of electric utility employee is a staggering 55 years old (Bureau of Labor Statistics), and my experience has taught me that the very notion of finding an even moderately aggressive, innovative thinker amidst the risk-averse culture of a regulated utility is nothing short of ludicrous. Those with twenty to thirty years of employment at a utility can all but taste their pensions, and will do nothing to avoid jeopardizing retirement security. Treading water is the norm in such an environment, and anything deemed “different,” much less “innovative,” is met with scorn. Utilities are, by their very nature, not proactive. They only act when forced to by externalities. Whether due to EPA regulations, state renewable portfolio standards, or the absence of those regulations, utilities behave consistently with the prevailing political winds and respond only to enacted legislation or regulations directly affecting them. In short, utility company management seeks to please their boards and the public by *investigating* companies with novel energy technologies, but the efforts rarely amount to more than window dressing. Good in theory, but a fruitless exercise in practice; the old, “Let’s don’t, but say we did” approach.

Unfortunately, many cleantech companies and their investors have been slow to grasp the effects of the “utility culture” on developing technology. Failing to fully appreciate the passive dynamic, these forward-thinking



#### TURNING BASIN CAPITAL

#### Investment Criteria:

##### Sector

Energy Related Business with a focus on Power Generation, Oil & Gas Services, Resource Efficiency, and Energy Equipment and Manufacturing

##### Type of Investment

Growth equity or buyout

##### Stage Focus

\$6 million or more in revenues with positive EBITDA and little to no technology risk

##### Investment Size

\$2 million to \$10 million of equity

##### Geography

Primarily North America

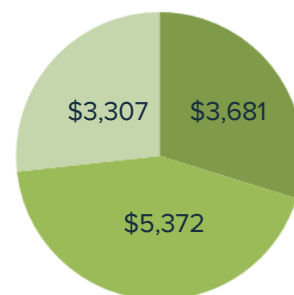
##### Valuation

Attractive EBITDA multiples for growth businesses

##### Lead Investor

Significant or majority ownership with management owning the balance, or in the alternative, minority ownership with visibility to an exit

#### FUNDS COMMITTED BY TRANSACTION TYPE (\$MM) IN LAST 12 MONTHS



■ PE - Expansion ■ PE - Buyout ■ VC

Source: Bloomberg New Energy Finance

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companies have spent the last five years hounding utilities to adopt a newer, better widget or use their innovative software, all to no avail. Unless those utilities have a regulatory driver forcing them to adopt that widget or use that software, those cleantech companies, and by extension their investors, will continue to be sorely disappointed. Just ask those venture investors who bought into the idea of mass utility adoption of a technology; they have been educated from stories like SilverSpring Network, a smart meter company that finally went public after being in a holding pattern for 19 months. SilverSpring faces a number of challenges, but chief among them is the utility industry's waffling about the merits of smart meters and the value of increased communications in the electric distribution network.

So just how does the cleantech community avoid dealing with those pesky utilities? Two main options exist: The companies can lobby, although this is not something venture investors typically want to finance, or they can offer products and services directly to the consumer. Many cleantech investors have finally come to the realization that direct marketing is key, and they have been backing companies that avoid utilities altogether. For example, solar finance companies like Solar City (NASDAQ-SCTY), Sun Run, Sungevity and Clean Power Finance enable consumers to finance solar power on their own rooftops. Consumers are charged by the kilowatt for the solar power produced, thus creating "mini utilities" for each homeowner. In some states, the cost of solar power from these solar finance companies is cheaper than buying electricity directly from the incumbent utility. Consequently, utilities that traditionally have a monopoly electric franchise are losing kilowatt sales to consumers who have elected to finance solar panels on their own home. NRG (NYSE: NRG), the independent power producer has realized this market opportunity and is taking advantage of it. It recently announced that it was financing solar in many states in order to do an end-run around incumbent electric utilities.

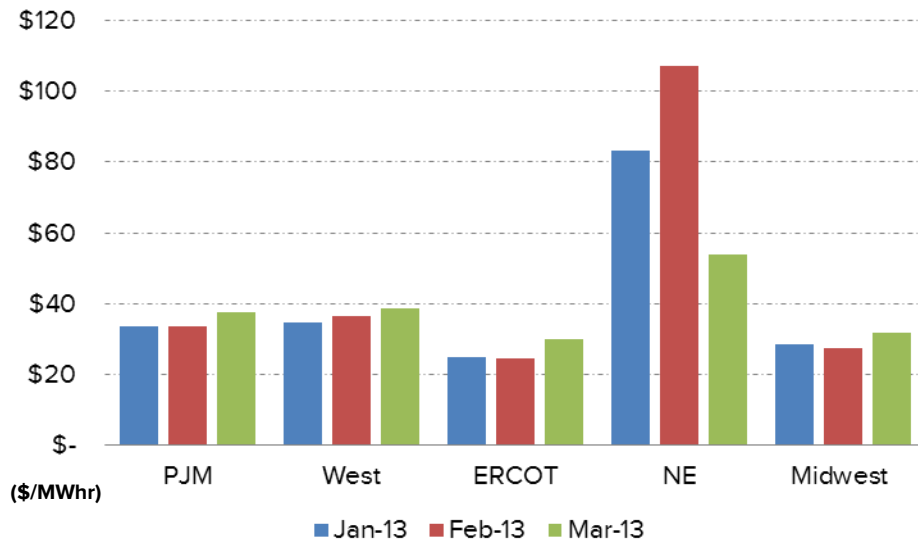
Whatever the future holds, one thing is certain; the regulated electric utility will not be the transformative force changing the way we generate and use electricity. Politicians, lobbyists, and investors will be the drivers of innovation, and the enormity of the potential market will continue to lure cleantech investors to make those transformative bets despite the disappointment of the last five years.

## **Turning Basin Capital Formed to Take Advantage of Macro Energy Trends Impacting Lower Middle Market Companies**

Turning Basin Capital ("TBC") was formed to pursue investments that rely on many of the macro drivers motivating cleantech investors – energy independence, global warming concerns, resource scarcity, technology development and regulatory drivers. But unlike cleantech investors, TBC is taking a different approach in pursuing energy related investment opportunities. TBC is focused on middle market companies that offer products or services that make incremental (not transformative) improvements to the energy supply chain. Instead of making big bets, TBC is focused on profitable closely held businesses that have a proven track record, but are pursuing growth opportunities that are being driven by the aforementioned macro drivers. For example, TBC is interested in companies which reduce the carbon footprint of fracking operations in the oil and gas industry, or those that maintain midstream assets in order to avoid energy losses due to leakage, or those that make the installation of renewable power generation more affordable. Those are just a few of the many examples where Turning Basin Capital has an interest and can make a difference.

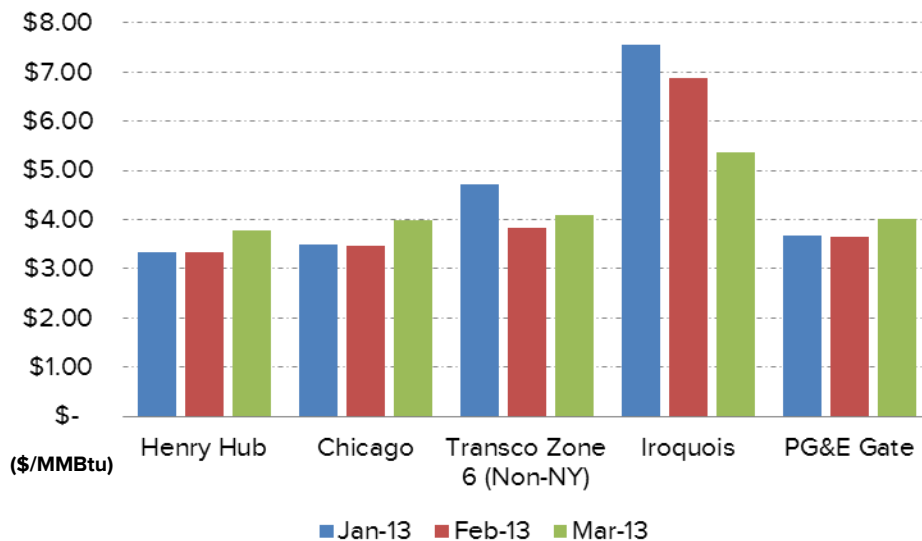
## Power & Gas Prices

Regional ISO Real-Time Power Prices



Source: SNL Energy

Regional Spot Natural Gas Prices



Source: SNL Energy



# TURNING BASIN CAPITAL

A Focus on Energy

April 2013

## Public Comparables

RENEWABLE GENERATION										
	YTD Return		1 Year Return		3 Year Return		5 Year Return			
Wilderhill New Energy Global Innovation Index (NEX)	12.8%		-14.2%		-37.9%		-63.4%			
PowerShares Global Clean Energy ETF (ARCA:PBD)	13.3%		-6.6%		-14.1%		-17.9%			
COMPANY NAME	Stock Price	Stock Price	Price/52-	Equity	Enterprise	P/E Ratio	EBITDA	Revenue	EBITDA	EBITDA
	1/2/2013	4/3/2013	Week High	Value	Value		Multiple	LTM		Margin
	(\$)	(\$)	(%)	(\$MMs)	(\$MMs)	(x)	(x)	(\$MMs)	(\$MMs)	(%)
American Superconductor Corp. (NasdaqGS:AMSC)	2.8	2.7	54.2	164.9	134.8	NA	NA	95.6	(34.7)	NA
EMCORE Corporation (NasdaqGM:EMKR)	4.4	5.6	83.1	69.0	158.8	NA	NA	175.6	(19.0)	NA
Enphase Energy, Inc. (NasdaqGM:ENPH)	3.8	5.9	61.7	56.7	209.0	NA	NA	216.7	(26.1)	NA
First Solar, Inc. (NasdaqGS:FSLR)	32.0	26.3	71.0	3,605.5	1,847.5	NA	2.7	3,368.5	694.3	20.6
Green Plains Renewable Energy, Inc.	8.2	11.6	93.2	490.5	757.0	29.6	10.7	3,476.9	70.6	2.0
Real Goods Solar, Inc. (NasdaqCM:RSOL)	0.8	2.0	69.3	3.9	56.1	NA	NA	92.9	(14.3)	NA
SolarCity Corporation (NasdaqGM:SCTY)	12.3	19.1	93.5	314.9	1,663.3	NA	NA	128.7	(47.9)	NA
SunPower Corporation (NasdaqGS:SPWR)	6.1	10.7	77.4	993.4	1,689.0	NA	44.2	2,417.5	38.2	1.6
Suntech Power Holdings Co. Ltd. (NYSE:STP)	1.6	0.4	13.9	952.8	1,870.7	NA	NA	2,679.1	(116.8)	NA
Trina Solar Limited (NYSE:TSL)	4.5	3.6	44.8	881.8	858.8	NA	NA	1,296.7	(195.0)	NA
<b>Mean:</b>							NA	NA		
<b>Median:</b>							NA	NA		

OIL & GAS EXPLORATION & PRODUCTION										
	YTD Return		1 Year Return		3 Year Return		5 Year Return			
S&P Oil & Gas E&P Select Industry Index (SPSIO:IND)	3.7%		-5.4%		39.9%		7.8%			
SPDR S&P Oil & Gas E&P ETF (ARCA:XOP)	9.8%		-0.7%		13.0%		3.0%			
COMPANY NAME	Stock Price	Stock Price	Price/52-	Equity	Enterprise	P/E Ratio	EBITDA	Revenue	EBITDA	EBITDA
	1/2/2013	4/3/2013	Week High	Value	Value		Multiple	LTM		Margin
	(\$)	(\$)	(%)	(\$MMs)	(\$MMs)	(x)	(x)	(\$MMs)	(\$MMs)	(%)
Anadarko Petroleum Corporation (NYSE:APC)	76.1	84.0	94.2	21,882	55,944	17.7	7.3	13,307	7,628	57.3
Apache Corp. (NYSE:APA)	80.7	74.9	76.2	31,331	42,735	15.2	3.4	16,834	12,390	73.6
Diamond Offshore Drilling, Inc. (NYSE:DO)	69.8	67.4	87.7	4,576	9,379	13.0	7.0	2,936	1,337	45.5
Enbridge Energy Partners LP (NYSE:EOP)	28.9	29.7	94.4	5,248	16,202	23.3	15.1	6,706	1,072	16.0
Enterprise Products Partners L.P. (NYSE:EPD)	51.9	59.6	97.4	13,296	69,831	22.0	16.6	42,583	4,213	9.9
Helmerich & Payne, Inc. (NYSE:HP)	57.1	59.0	85.0	3,835	6,279	10.9	4.8	3,264	1,308	40.1
Marathon Oil Corporation (NYSE:MRO)	31.7	33.2	92.6	18,283	29,710	14.9	3.3	15,724	8,911	56.7
Noble Energy, Inc. (NYSE:NBL)	103.3	115.2	98.7	8,258	23,308	21.5	8.9	4,037	2,621	64.9
Occidental Petroleum Corporation (NYSE:OXY)	78.2	81.1	84.8	40,048	71,368	14.2	5.2	24,172	13,701	56.7
Plains Exploration & Production Company (NYSE:PXJ)	47.5	46.2	95.4	3,956	15,547	19.9	8.8	2,565	1,773	69.1
<b>Mean:</b>							17.3x	8.0x		
<b>Median:</b>							16.5x	7.2x		

OIL AND GAS FIELD SERVICES										
	YTD Return		1 Year Return		3 Year Return		5 Year Return			
Dynamic Oil Services IntellidexSM Index (DWOTR)	16.6%		10.0%		45.6%		-6.9%			
PowerShares Dynamic Oil & Gas Services ETF (ARCA:PXJ)	20.2%		10.6%		13.1%		-0.8%			
COMPANY NAME	Stock Price	Stock Price	Price/52-	Equity	Enterprise	P/E Ratio	EBITDA	Revenue	EBITDA	EBITDA
	1/2/2013	4/3/2013	Week High	Value	Value		Multiple	LTM		Margin
	(\$)	(\$)	(%)	(\$MMs)	(\$MMs)	(x)	(x)	(\$MMs)	(\$MMs)	(%)
Basic Energy Services, Inc. (NYSE:BAS)	11.8	11.9	66.2	374	1,219	23.2	4.1	1,374.9	299.0	21.7
C&J Energy Services, Inc. (NYSE:CJES)	21.4	20.5	80.8	600	1,265	6.1	3.8	1,111.5	336.0	30.2
Halliburton Company (NYSE:HAL)	35.7	38.8	88.1	15,790	38,199	13.9	6.3	28,503.0	6,087.0	21.4
Heckmann Corporation (NYSE:HEK)	4.1	4.0	77.6	848	1,555	NA	32.5	352.0	47.9	13.6
Key Energy Services, Inc. (NYSE:KEG)	7.2	7.2	46.8	1,287	1,937	10.8	4.6	1,960.1	421.1	21.5
McDermott International Inc. (NYSE:MDR)	11.2	10.4	76.5	1,952	1,960	12.1	4.6	3,641.6	422.1	11.6
Oceaneering International, Inc. (NYSE:OII)	55.9	63.9	95.2	1,815	6,889	24.0	11.4	2,782.6	605.1	21.7
RPC Inc. (NYSE:RES)	12.7	14.0	80.3	899	3,175	11.0	4.8	1,945.0	663.4	34.1
Schlumberger Limited (NYSE:SLB)	71.4	74.0	90.3	34,858	103,969	18.2	9.4	42,149.0	11,020.0	26.1
Superior Energy Services, Inc. (NYSE:SPN)	21.8	24.1	85.3	4,231	5,597	9.5	4.5	4,568.1	1,244.6	27.2
<b>Mean:</b>							14.3x	5.9x		
<b>Median:</b>							12.1x	4.7x		



# TURNING BASIN CAPITAL

## A Focus on Energy

April 2013

### ENERGY EFFICIENCY

	YTD Return		1Year Return		3 Year Return		5 Year Return			
Cleantech Index (CTIUS)	9.2%		3.4%		10.2%		-18.9%			
PowerShares WilderHill Clean Energy ETF	17.7%		-19.7%		-19.4%		-25.2%			
COMPANY NAME	Stock Price	Stock Price	Price/52-Week High	Equity Value	Enterprise Value	P/E Ratio	EBITDA Multiple	Revenue LTM	EBITDA	EBITDA Margin
	1/2/2013 (\$)	4/3/2013 (\$)	(%)	(\$MMs)	(\$MMs)	(x)	(x)	(\$MMs)	(\$MMs)	(%)
Ameresco, Inc. (NYSE:AMRC)	10.0	7.3	52.2	261.8	489.2	18.2	10.0	631.2	49.0	7.8
Echelon Corporation (NasdaqGS:ELON)	2.8	2.3	50.6	83.8	58.1	NA	NA	134.0	(3.5)	NA
EnerNOC, Inc. (NasdaqGS:ENOC)	12.2	16.0	86.1	240.0	313.6	NA	112.0	278.0	2.8	1.0
ESCO Technologies Inc. (NYSE:ESE)	38.2	39.4	92.8	631.3	1,170.6	25.4	14.1	680.7	83.1	12.2
Itron, Inc. (NasdaqGS:ITRI)	45.6	44.8	92.4	1,009.5	2,070.7	16.5	7.8	2,178.2	265.3	12.2
PowerSecure International, Inc. (NasdaqGS:POWR)	8.0	12.0	93.7	111.1	205.1	NA	21.6	162.0	9.5	5.9

Mean: 20.0x 13.4x  
Median: 18.2x 12.0x

### INDUSTRIAL SERVICES

	YTD Return		1Year Return		3 Year Return		5 Year Return			
S&P 500 Industrials Select Sector Index (IXI)	7.6%		11.8%		43.5%		11.6%			
Industrial Select Sector SPDR ETF (XLI)	9.1%		13.5%		15.1%		4.7%			
COMPANY NAME	Stock Price	Stock Price	Price/52-Week High	Equity Value	Enterprise Value	P/E Ratio	EBITDA Multiple	Revenue LTM	EBITDA	EBITDA Margin
	1/2/2013 (\$)	4/3/2013 (\$)	(%)	(\$MMs)	(\$MMs)	(x)	(x)	(\$MMs)	(\$MMs)	(%)
EMCOR Group Inc. (NYSE:EME)	35.0	38.8	90.8	1,357.2	2,324.6	17.9	7.6	6,346.7	304.7	4.8
Furmanite Corporation (NYSE:FRM)	5.6	6.5	95.6	119.1	2,153.1	NA	NA	326.5	22.0	6.7
Matrix Service Company (NasdaqGS:MTRX)	11.8	14.4	83.4	211.1	251.8	22.4	6.0	799.8	42.1	5.3
Mistras Group, Inc. (NYSE:MG)	25.0	23.3	86.4	193.3	343.6	28.8	5.2	482.3	66.0	13.7
Team, Inc. (NYSE:TISI)	38.1	38.3	82.0	245.0	728.1	23.3	9.1	701.0	80.1	11.4

Mean: 23.1x 7.0x  
Median: 22.9x 6.8x

### MID & SMALL-CAP EQUIPMENT AND SERVICES

	YTD Return		1Year Return		3 Year Return		5 Year Return			
IQ Global Oil Small Cap Index	8.4%		2.4%		NA		NA			
IQ Global Oil Small Cap ETF (ARCA:IOIL)	9.2%		3.4%		NA		NA			
COMPANY NAME	Stock Price	Stock Price	Price/52-Week High	Equity Value	Enterprise Value	P/E Ratio	EBITDA Multiple	Revenue LTM	EBITDA	EBITDA Margin
	1/2/2013 (\$)	4/3/2013 (\$)	(%)	(\$MMs)	(\$MMs)	(x)	(x)	(\$MMs)	(\$MMs)	(%)
Dresser-Rand Group Inc. (NYSE:DRC)	58.5	58.0	91.5	1,094.9	5,342.8	24.7	12.5	2,736.4	426.5	15.6
Dril-Quip, Inc. (NYSE:DRQ)	75.3	82.6	93.8	1,066.4	3,090.4	28.1	16.4	733.0	187.9	25.6
Exterran Holdings, Inc. (NYSE:EXH)	22.4	24.9	91.0	1,702.3	3,333.2	NA	7.3	2,803.6	457.9	16.3
Forum Energy Technologies, Inc. (NYSE:FET)	25.8	26.9	92.0	1,162.2	2,850.0	15.4	9.8	1,414.9	289.6	20.5
MYR Group, Inc. (NasdaqGS:MYRG)	21.9	22.5	87.5	254.7	451.4	14.1	5.6	999.0	79.9	8.0
Newpark Resources Inc. (NYSE:NR)	8.2	8.5	87.9	513.6	942.3	13.7	6.8	1,038.0	138.7	13.4
Oil States International Inc. (NYSE:OIS)	72.6	77.5	88.4	2,465.8	5,310.6	9.5	5.8	4,413.1	916.0	20.8
Powell Industries, Inc. (NasdaqGS:POWL)	42.5	52.1	87.0	310.1	528.4	16.0	7.3	713.7	72.5	10.2

Mean: 17.4x 9.0x  
Median: 15.4x 7.3x



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