

FuelCell Energy

FCEL- \$9.88 – NasdaqNM

New Recommendation

Recommendation: Sell Short

Reasons For Short Sale Recommendation

- Over valuation, 15.5 times sales, no earnings since 1997.
- Investor hype over unproven technology.
- Huge stockholder dilution, with more to come.
- 39 quarters in a row of no earnings.
- Production at 10MW, need 75MW to 100MW to break-even.
- Revenue needs to more than double to cover current costs.
- Stock price up 64.7% in last 7 months.
- Years away from break even.
- Unmet management goals.
- Bigger competitors.
- Largest shareholder may also become a competitor.

Financials as of 9-4-2007

52 – Week Low 1-25-2007	\$5.84	Book Value/Shr (mrq)	\$2.18
52 – Week high 8-9-2007	\$9.90	Diluted Earnings/Shr (ttm)	(\$1.36)
Daily Volume Avg.3 mo	1,237,050	Diluted Earnings/Shr mrq)	(\$0.24)
52 – Week Change	8.33%	Sales/Shr (ttm)	\$0.70
Market Capitalization	\$653M	Cash/Shr (mrq)	\$2.47
Shares Outstanding	67.94M	Price/Book (mrq)	4.41
Float	46.53M	Price/Earnings (ttm)	NA
Profit Margin (mrq)	-188.17%	Price/Sales (ttm)	15.5
Operating Margin (ttm)	-197.86%	Revenue (ttm)	\$40.89M
Return on Assets (ttm)	-19.94%	EBITDA (ttm)	-\$68.05M
Return on Equity (ttm)	-39.38%	Debt/Equity (mrq)	0.008
Operating Cash Flow (ttm)	Negative	Shares Short 8-10-07	12.78M
Leveraged Free Cash Flow (ttm)	Negative	% of Float Short	19.8%
Total Cash (mrq)	\$167.54M	Short Ratio 8-10-07	10.1

(ttm) = Trailing 12 months, (mrq) = Most recent quarter, M = Millions, B = Billions, m = Thousands

Business Description (10K)

PRODUCTS

Direct FuelCell® (DFC®) Power Plants

Our core products, the DFC300MA, DFC1500MA and DFC3000, are currently rated in capacity at 300 kW, 1.2 MW and 2.4 MW, respectively and are designed for applications up to 50 MW. Our products are designed to meet the baseload power requirements of a wide range of customers including wastewater treatment plants (municipal, such as sewage treatment facilities, and industrial, such as breweries and food processors), hotels, manufacturing facilities, universities, hospitals, telecommunications/data centers, government facilities, as well as grid support applications for utility customers. Our DFC power plants can be part of a total onsite power generation solution for customers, with our high efficiency products providing the baseload power with grid-delivered electricity and intermittent power, such as solar, or less efficient combustion-based equipment providing peaking and load following energy needs. Our products are also ideal to meet the needs of utilities and RPS mandates.

A fuel cell chemically converts a hydrocarbon fuel into electricity without fuel combustion. The primary byproducts of the fuel cell are heat, water and carbon dioxide. There is virtually no SOX or NOX emissions. A fuel cell power plant can be thought of as having two basic segments: the fuel cell stack module, the part that actually produces the electricity, and the balance of plant ("BOP"), which includes various fuel handling and processing equipment, such as pipes and blowers, and electrical interface equipment such as inverters to convert the DC output of the fuel cell to AC.

Conventional fossil fuel based power plants generate electricity by combustion of hydrocarbon fuels, such as coal, oil or natural gas. With reciprocating engines, fuel combustion takes place within the engine that drives a generator that produces electricity. In a gas turbine combined cycle plant, fuels, such as natural gas, are burned in the gas turbine, which drives a generator. The exhaust heat from the gas turbine is used to boil water, which converts to high-pressure steam, which is used to rotate a steam turbine generating additional electricity. The combustion process typically creates emissions of SOX and NOX, carbon monoxide, soot and other air pollutants.

Our carbonate fuel cell, known as the Direct FuelCell, operates at approximately 1200°F. This temperature avoids the use of precious metal electrodes required by lower temperature fuel cells, such as proton exchange membrane ("PEM") and phosphoric acid, and the more expensive metals and ceramic materials

- Page 2 -

All information contained herein is obtained by Badger Consultants, LLC from sources believed by it to be accurate and reliable. However, such information is presented "as is" without warranty of any kind and Badger Consultants, LLC makes no representation or warranty, express or implied, as to the accuracy, timeliness, or completeness of any such information. All expressions of opinion are subject to change without notice. Badger Consultants, LLC hereby discloses that the clients of Badger Consultants, LLC and we the company, officers, employees and relatives, may now have and from time to time have directly or indirectly a "long" or short position in the securities mentioned and may sell or buy such securities at any time.

required by higher temperature fuel cells, such as solid oxide. As a result, we are able to use less expensive catalysts and readily available metals in our designs. In addition, our fuel cell produces high quality by-product heat energy (700°F) that can be harnessed for combined heat and power (“CHP”) applications using hot water, steam or chiller water to heat or cool buildings.

Our Direct FuelCell is so named because of its ability to generate electricity directly from a hydrocarbon fuel, such as natural gas or wastewater treatment gas, by reforming the fuel inside the fuel cell to produce hydrogen. We believe that this “one-step” reforming process results in a simpler, more efficient and cost-effective energy conversion system compared with external reforming fuel cells. External reforming fuel cells, such as PEM and phosphoric acid, generally use complex, external fuel processing equipment to convert the fuel into hydrogen. This external equipment increases capital cost and reduces electrical efficiency. Additionally, natural gas and wastewater treatment gas have infrastructures that are already established. Consequently, our DFC products do not need to wait for the development of the hydrogen infrastructure for continued commercialization.

Our Direct FuelCells have been operated using a variety of hydrocarbon fuels, including natural gas, methanol, diesel, biogas, coal gas, coal mine methane and propane. Our commercial DFC power plants currently can achieve an electrical efficiency of between 45 percent and 47 percent. Depending on location, application and load size, a co-generation configuration can reach an overall energy efficiency of between 70 percent and 80 percent.

Our carbonate fuel cell, known as the Direct FuelCell, operates at approximately 1200°F. This temperature avoids the use of precious metal electrodes required by lower temperature fuel cells, such as proton exchange membrane (“PEM”) and phosphoric acid, and the more expensive metals and ceramic materials required by higher temperature fuel cells, such as solid oxide. As a result, we are able to use less expensive catalysts and readily available metals in our designs. In addition, our fuel cell produces high quality by-product heat energy (700°F) that can be harnessed for combined heat and power (“CHP”) applications using hot water, steam or chiller water to heat or cool buildings.

Applications

Within these geographic markets, we are targeting applications that we believe have the best potential for repeatable business for our products:

Wastewater treatment plants . For wastewater treatment applications, the methane generated from the anaerobic gas digestion process is used as fuel for the DFC power plant, which generates the electricity to operate the wastewater treatment equipment at the facility or for the grid. Through December 31,

2006, we have installed or have in backlog a total of 5.85 megawatts. Representative installations include:

City of Tulare, California (digester gas, 750 kW)
Sierra Nevada Brewing Company, California (Natural / digester gas, 1 MW)
LA County Sanitation Palmdale Waste Water Treatment Plant (digester gas, 250 kW)
Kirin Brewery, Japan (Natural gas/ propane, 250 kW).

Hotels: Hotels, with their stable baseload heat and power demand profile, are ideal applications for our DFC power plants. A 300-room suburban hotel typically has a baseload power requirement of 250 kW. Through December 31, 2006, we have installed or have in backlog 3.50 MW. Representative installations include:

Sheraton San Diego Hotel & Marina, California (1.5 MW).
Westin San Francisco Airport, California (500 kW).
Sheraton New York Hotel and Towers, New York (250 kW).

Industrial – Manufacturing . Manufacturing companies are also a great application for our combined heat and power fuel cell systems. Through December 31, 2006, we have installed or have in backlog 4.0 MW. Representative installations include:

Gills Onions, California (500 kW)
NGK, Korea (Ceramics kiln, 250 kW).

Institutional – Universities . Universities are excellent combined heat and power applications as many have their own independent grid. In the U.S., there are over 1,000 universities with an average generating capacity of approximately 7 MW. Through December 31, 2006, we have installed or have in backlog 2.5 MW. Representative installations include:

California State University, Northridge (1 MW)
State University of New York - Environmental Science and Forestry, New York (250 kW)
Pohang University, Korea (250 kW).

Institutional – Hospitals . Hospitals are an excellent combined heat and power application, with a critical need for reliable, baseload heat and power for 24/7 operation and the grid for backup. A 300-bed hospital has a typical baseload power requirement of 2 MW. Through December 31, 2006, we have installed or have in backlog 1.25 MW. Representative installations include (all 250 kW):

Chosen University Hospital, Korea
Gruendstadt Clinic, Germany
Bad Berka Hospital, Germany .

Mission-Critical - Telecommunications/Government. Reliability is a key driver for applications at government facilities and telecommunications/data centers. Through December 31, 2006, we have installed or have in backlog 4.5 MW. Representative installations include:

San Francisco Post Office, California (Post Office, 250 kW)
NTT Sendai, Japan (Telecommunications, 250 kW)
Santa Rita Correctional Facility, California (Prison, 1 MW).

Grid Support . Through December 31, 2006, we have installed or have in backlog 1.75 MW. Representative installations include (all 250 kW):

Los Angeles Headquarters of Water and Power, California
Salt River Project, Arizona
RWE Energy Park, Germany

Notice how small most of these applications are. That is why FCEL is still unprofitable.

Direct FuelCell (DFC) Technology

The Company's carbonate fuel cell, known as the Direct FuelCell, operates at approximately 1200 degrees Fahrenheit. This temperature avoids the use of precious metal electrodes required by lower temperature fuel cells, such as proton exchange membrane (PEM) and phosphoric acid, and the more expensive metals and ceramic materials required by higher temperature fuel cells, such as solid oxide (tubular). As a result, the Company is able to use less expensive catalysts and readily available metals in its designs. In addition, the Company's fuel cell produces high-quality, by-product heat energy (700 degrees Fahrenheit) that can be harnessed for combined heat and power (CHP) applications using hot water, steam or chiller water to heat or cool buildings.

FuelCells core products, the DFC300MA, DFC1500MA and DFC3000, are currently rated in capacity at 300 kW, 1.2 MW and 2.4 MW, respectively and are designed for applications up to 50 MW.

Analysis

On July 25, 2005, we recommended our clients sell short FCEL at \$10.25. We covered it less than four months later with a 30% profit. At the time FCEL was a company with a \$500 million market capitalization and a history of losses, with promises of profitability around the corner and \$4.29 in cash per share. It also had 48.3 million shares outstanding.

Today, FCEL is trading near \$10 per share again. What has changed? Nothing for the better. The market capitalization has increased to \$653 million. There are now 67.9 million shares outstanding, an increase of 40.6 percent. The company has lost an additional \$177 million since then and now has only \$2.47 per share in cash, 42 percent less. They are also no closer to profitability now than they were then.

The company funds its' loss by issuing new shares virtually every year to a new class of "suckers", er- investors, with promises that the Holy Grail is just around the corner. The reality is this technology, if it ever works on a large scale, is still at least 8 years away from any meaningful usefulness. The technology seems to work best under perfect laboratory conditions and sometimes not even then.

The Holy Grail for Fuel Cells

A device that creates electricity from a chemical reaction between hydrogen and oxygen. Fuel cells have been used for decades in exotic applications such as powering space capsules, but now they are being developed as batteries to power electric cars that can be ready in a few minutes, rather than needing upto eight hours to recharge like conventional batteries.

Proponents such as Larry Burns, General Motors Corp. vice president of Research & Development and Planning, said in 2005 that by the end of the decade there will be thousands and — eventually — millions of affordable, fun-to-drive FCVs that burn hydrogen instead of gasoline, emitting only a little harmless water vapor from their tailpipes, and it will lead to a new, environmentally friendly "hydrogen economy." **That's not a prediction, he says, it's a promise.** GM is spending hundreds of millions of its own dollars to "create the future."

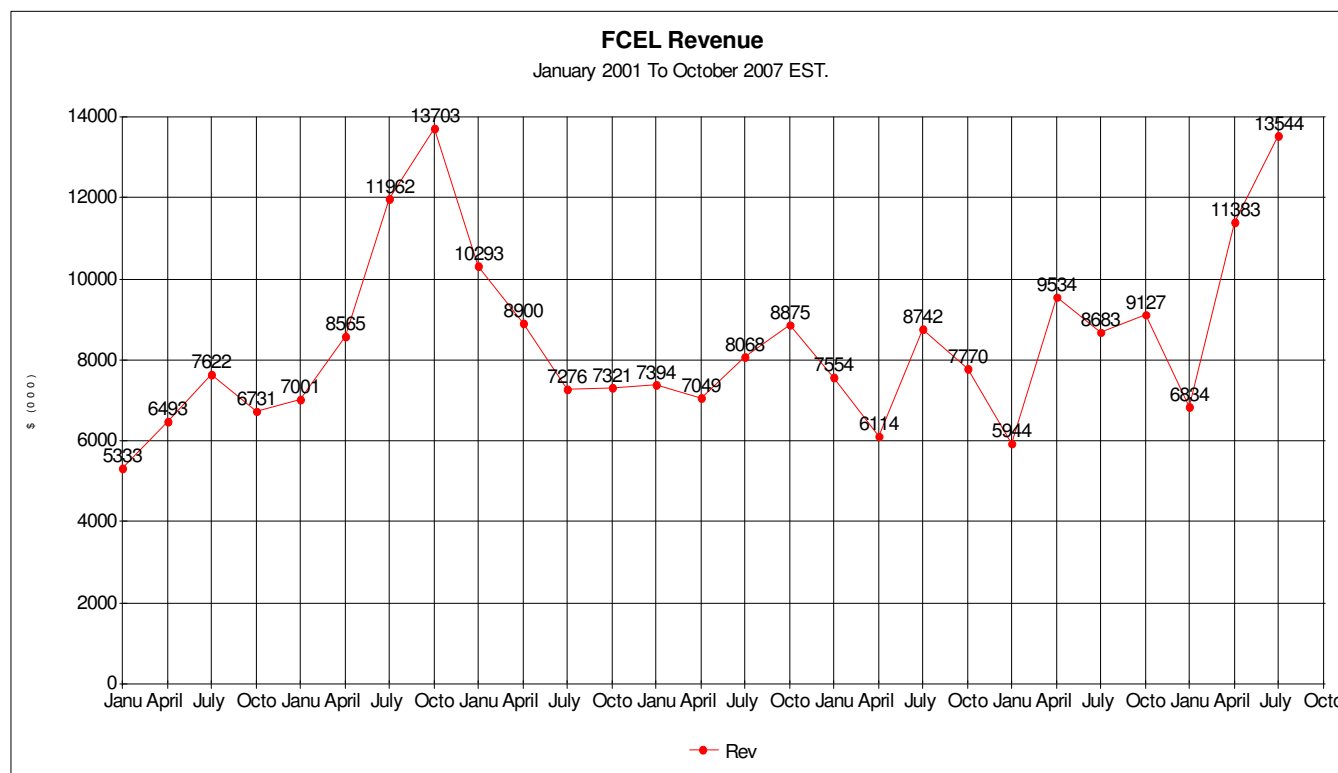
Well, now, two years later and two years until the end of the decade and we are no closer to having thousands or millions of fuel cell vehicles or a "hydrogen economy". Not much of a promise!

All around the world, rival auto makers are joining hands to develop and test hydrogen-powered "clean energy" solutions. In the new hydrogen economy, smog will become a thing of the past, and so will battles between auto makers, governments and environmentalists over emissions and issues such as corporate average fuel economy.

Now this sounds to us as too good to be true. Furthermore, not only is this technology at least a decade away, but every auto maker in the world is spending huge money on it. What are the odds that this little company with \$33 million in revenue will be the winner in this arena? Investors swallow this baloney of the holy grail without looking at the fundamentals. They buy the sizzle and not the steak.

15.5 Times Sales, No earnings

This company has never earned a profit and has not been profitable since October of 1997. This quarter will be 40 quarters in a row of net losses. We believe that it is very likely that this company will never be profitable and that eventually investors will grow tired of waiting for it to happen. In addition, if this company is ever able to make a profit, years from now, there will be so many more shares outstanding that the earnings would be in the pennies. **This company has a little niche business of providing ultra-clean, electric power generation plants for commercial and industrial customers.** We believe that this is all it ever will be. Investors are fooling themselves that this is the next great thing in clean power generation

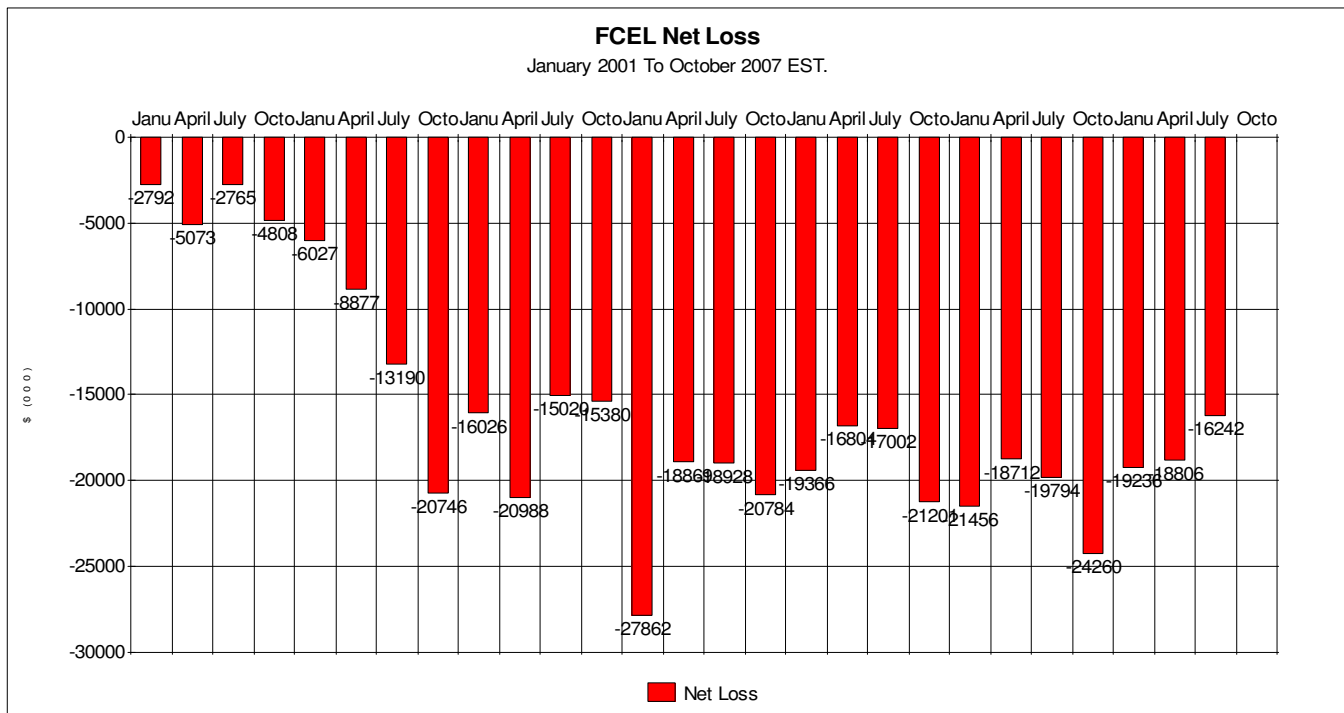


The company had higher revenue in 2002.

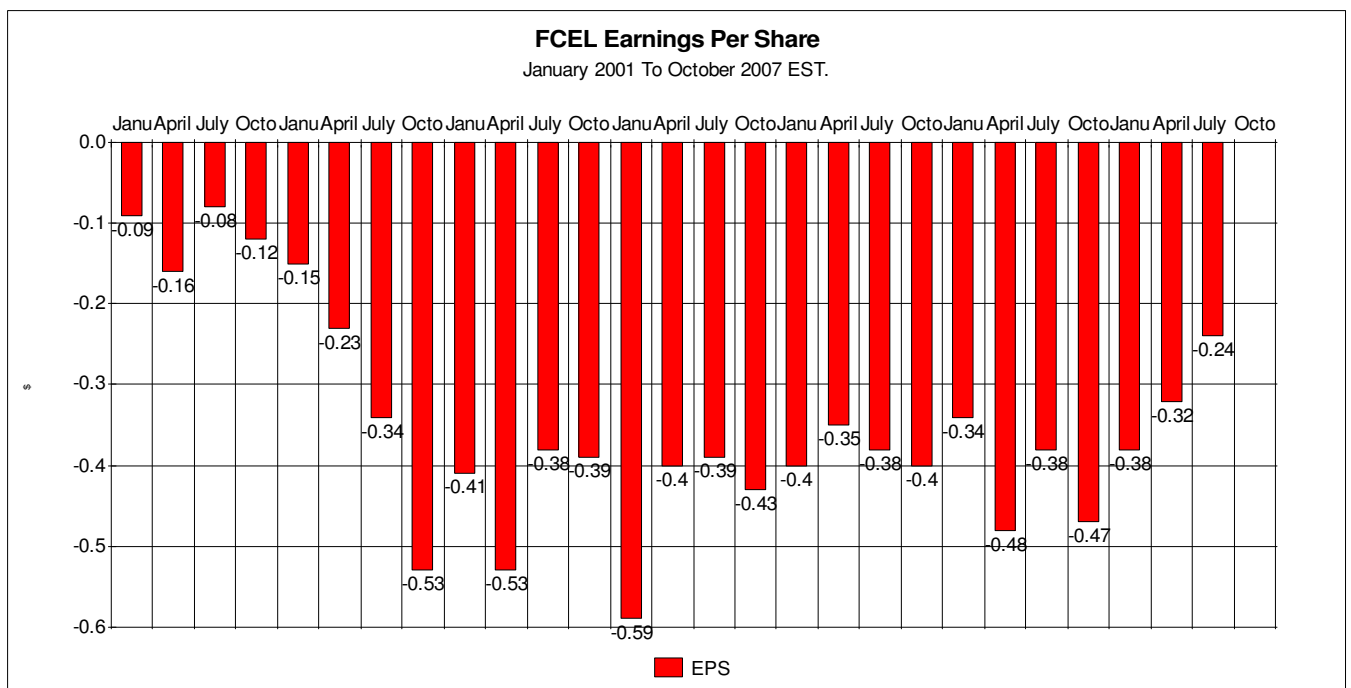
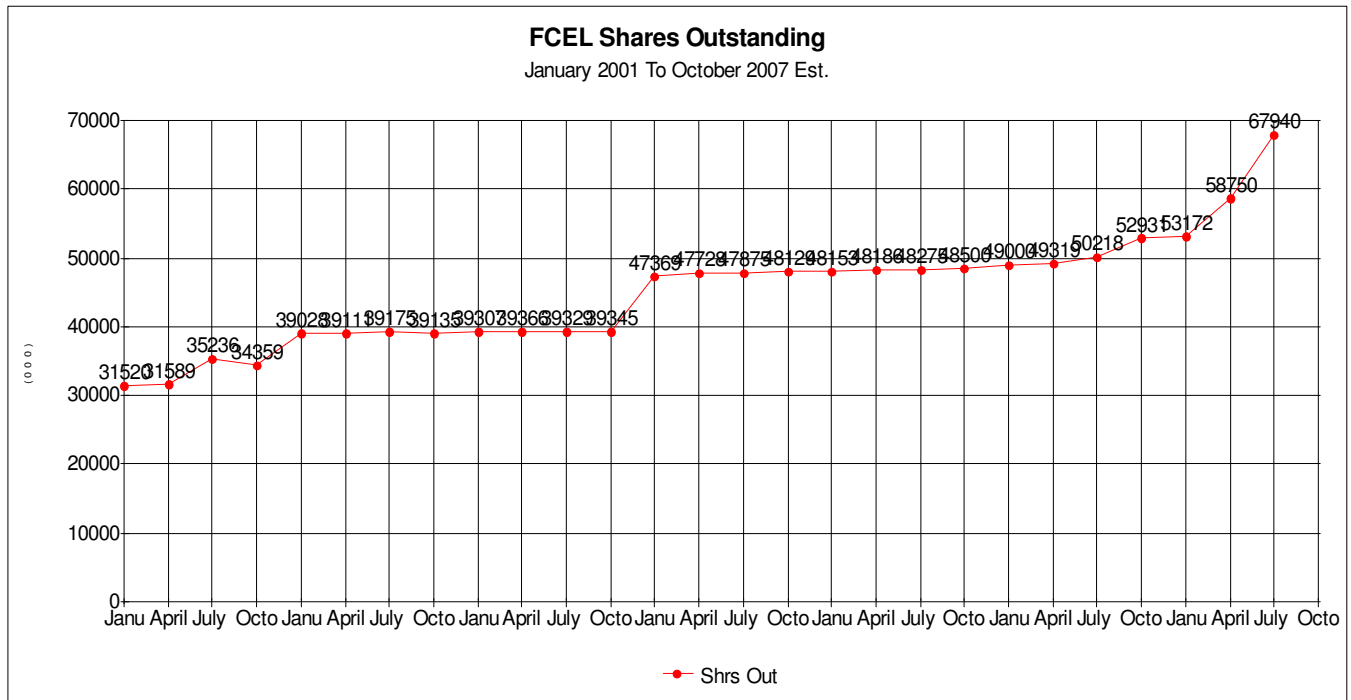
Almost 10 Years of Net Losses

With losses like this it is no wonder that the company constantly needs to issue more shares to stay in business. What amazes us is that they are able to find investors willing to pony up cash for this company. The company has \$106 million in cash or \$2.47 per share but burned through \$11.2 million from operations in the most recent quarter. Revenue for the most recent quarter was \$13.5 million, total expenses were \$31.3 million. **The company would have to double its revenue just to approach break even.**

We forecast continued losses for years and hence the need for more cash in the future, which will most likely come from additional issuance of common shares outstanding. This constantly dilutes existing shareholders. **Existing shareholders have seen their holdings diluted by over 27 percent in the past year.** We expect another 50 percent dilution over the next several years.



The stock has rallied recently because FCEL has trimmed its losses? It still looks pretty bad to us. **The company's current production is 10MW**, up from 6MW in 2005. Currently FCEL has production capability of 50MW, it needs production of 75MW to 100MW to break even. So, **FCEL needs to increase production by a factor of 10 just to break even!** Not going to happen anytime soon.



Earnings per share losses decrease with an increase in shares outstanding. For example, in the most recent quarter ended July 31, 2007, the EPS loss would have been (\$0.30) instead of (\$0.24), without the extra stockholder dilution.

From the 10K: “We have been transitioning from a contract research and development company to a commercial products developer and manufacturer. As such, we have not been profitable since our fiscal year ended October 31, 1997. We expect to continue to incur net losses and generate negative cash flow until we can produce sufficient revenues to cover our costs. We may never become profitable. Even if we do achieve profitability, we may be unable to sustain or increase our profitability in the future. There are substantial uncertainties associated with our achieving and sustaining profitability.”

Unmet Management Goals

Former Chairman and CEO Jerry Leitman originally said FCEL's break even point was at 400MW of annual production when they built their 50MW plant. Then he said the break even point could be reduced to 200MW of annual production. Finally he said that break even could be further reduced to 150MW of annual production. Today FCEL says that break even is at 75MW to 100MW. **FCEL has never produced and shipped more than 6MW in any year!**

Bigger Competitors

From the 10K: Our Direct FuelCell currently faces, and will continue to face, significant competition. We compete on the basis of our products' reliability, fuel efficiency, environmental considerations and cost. Technological advances in alternative energy products or improvements in the electric grid or other sources of power generation, or other fuel cell technologies may negatively affect the development or sale of some or all of our products or make our products non-competitive or obsolete prior to commercialization or afterwards. Other companies, some of which have substantially greater resources than ours, are currently engaged in the development of products and technologies that are similar to, or may be competitive with, our products and technologies.

Several companies in the U.S. are involved in fuel cell development, although we believe we are the only domestic company engaged in significant manufacturing and commercialization of carbonate fuel cells. Emerging fuel cell technologies (and companies developing them) include proton exchange membrane fuel cells (Ballard Power Systems, Inc.; United Technologies Corp. or UTC Fuel Cells; and Plug Power), phosphoric acid fuel cells (UTC Fuel Cells) and solid oxide fuel cells (Siemens Westinghouse Electric Company, SOFCo, General Electric, Delphi, Rolls Royce and Acumentrics). Each of these competitors has the potential to capture market share in our target markets.

There are other potential carbonate fuel cell competitors internationally. In Europe, a company in Italy, Ansaldo Fuel Cells, is actively engaged in carbonate fuel cell development and is a potential competitor.

Other than fuel cell developers, we must also compete with such companies as Caterpillar, Cummins, and Detroit Diesel, which manufacture more mature combustion-based equipment, including various engines and turbines, and have well-established manufacturing, distribution, and operating and cost features. Significant competition may also come from gas turbine companies like General Electric, Ingersoll Rand, Solar Turbines and Kawasaki, which have recently made progress in improving fuel efficiency and reducing pollution in large-size combined cycle natural gas fueled generators. These companies have also made efforts to extend these advantages to smaller sizes.

Large Shareholder Could Become a Competitor

MTU Friedrichshafen GmbH owns approximately 5% of FCEL's outstanding common stock. MTU CFC is currently developing carbonate fuel cell technology. If this technology does not use DFC know-how, MTU CFC must use good faith efforts to license the technology to us. **If MTU CFC is successful but does not grant us a license, it may be directly competing with us while having a significant ownership interest in us, and a seat on our board of directors.** We have agreed with MTU CFC to continue developing products with as much commonality as possible. However, the license agreement between us and MTU CFC provides that each of us retains the right to independently pursue the development of carbonate fuel cell technologies.

Unproven Technology

FuelCells are known for giving off only harmless water vapor, which is very environmentally friendly. What is less known is that they can use toxic chemicals that burn at 1200 degrees Fahrenheit and can be subject to accidents. Additionally, getting them to work in real world environments, outside of a controlled laboratory setting, can be difficult.

On November 14, 2005, Zoot Properties, LLC and Zoot Enterprises, Inc. ("Zoot") commenced an action in the U.S. District Court for the District of Montana, Butte Division against the Company and one of our distribution partners, PPL Energy Services Holding, LLC. The **lawsuit alleged that the plaintiffs purchased fuel cells from PPL that were manufactured by the Company, and that these fuel cells failed to perform as represented and warranted.** Zoot sought rescission of the contract with PPL, totaling approximately \$2.5 million. We reached a settlement agreement on this lawsuit resulting in payments by the Company, net of insurance, of \$0.8 million and the power plants are being returned to the Company.

Conclusion

We believe that this stock will decline again to the \$6 range in the next 12 months, hopefully sooner. There are more losses and stockholder dilution on the way. We recommend investors sell FCEL short with a price target of \$6.