Yale SCHOOL *of* MANAGEMENT
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"SuperStock or Mr. Nobody??"

Recommendation:

SELL

Types of Recommendations

Buy – 20% undervalued

Hold – Fairly valued.

Sell – 20% overvalued

Disclaimer: Please see the disclaimer at the back of this report for important information.

February 27, 2002

Market Cap	$129 million
Stock Price (02/26/02)	$2.39
Target Price	$1.84
P/E	N/A
EV/EBIT	N/A
52 Wk High	$16.00
52 Wk Low	$2.23

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Recommendation: Sell

- Residential stationary power is still far from becoming cost competitive.
- HPOW faces strong competition in PEM technology.
- PEM technology is ill suited for stationary power generation.
- There is no strong alliance to carry HPOW to the finish line.
- A discounted cash flow scenario analysis provides support for a valuation, which is below the current stock price.

Business Strategy

H-Power Corporation's main business is in developing stationary power units for residential customers using Proton Exchange Membrane (PEM) technology. The residential co-generation units (RCU) provide between 4.5 - 20 k/W power, which meets the need of the average US home. PEM technology is becoming widely accepted in the industry as a low temperature technology applicable for a wide range of uses. It has relatively high efficiency compared to other low temperature technologies, but is still relatively inefficient compared to high temperature technologies such as Molten Carbonate. HPOW is focusing on the rural, off grid residential market distributing through ECO Fuel Cell LLC a division of Energy Co-opportunity Inc (ECO), an association of over 300 rural electric cooperatives. ECO has exclusive rights to sell and distribute HPOW's fuel cells to over 37 million residences that are part of the electric cooperatives, with a minimum commitment to buy 12,300 units over several years based on HPOW meeting certain product specifications.

Priced out before the start

While it is estimated that there are 300,000 houses that are off-grid in the US and potential customers of HPOW, the cost of PEM fuel cells is prohibitive for residential use. UTC Fuel Cell, a competitor of HPOW and a subsidiary of United Technologies, has developed a similar product and has not been able to reduce the cost of PEM below $4,500 per k/W in capital cost. UTC estimates to make this technology viable for industrial users, the cost would have to come down to $1,500 k/W, something that could be feasible by 2003 and for residential users the capital cost would have to be below $1000 per k/W. It will be much harder to create fuel cells that generate small amounts of power for residential use at that price. UTC estimates that it will not have a viable residential option available until at least 2005. UTC is in a much stronger position on PEM technology then HPOW, due to a large corporate backing and several alliances in portable PEM applications. Currently HPOW is still in the late-stage testing of its residential units and expects commercialization of the units for early- adapters in late 2002. Most of these units will be subsidized by the company and ECO and run on either natural gas or propane. In the best-case scenario, the company does not see itself at commercialization until 2005. One way, HPOW is addressing the high cost of the power is by creating a net metering system that would allow a customer to sell power back to the grid. This system is still in an early stage of development.

In addition to the high cost of PEM power, it is debatable as to whether PEM technology is the correct technology for stationary distributed generated power. The low temperature environment of PEM is important for vehicles and electronics, which have no way of using the heat by-product. In residential situations however, a high temperature fuel cell can become even more efficient in providing a total energy solution because the heat by-product can be used to heat water or provide space heating, in addition to being more fuel-efficient. In addition, FCEL (HOLD) has already lowered its cost per k/W to $1,500 based on molten carbonate technology for industrial units, well ahead of PEM technology.

US and Abroad

It is hard to believe that HPOW will catch-up to its US competitors, not to mention Japan and Germany. The 2002 budget allows for $1.5 million dollars to be spent on fuel cell research and development spread out over 10 years. Less then 0.6% of this allocation is for stationary fuel cell technology, with almost all of it allocated for vehicle application R&D. There are several state initiatives that support stationary distributed power generation, but HPOW does not seem well placed to tap into those funds especially since New Jersey, where the company is located, does not have a state-sponsored initiative for stationary power and does not have a history of state sponsorship. Japan and Germany both sponsor companies and users to encourage fuel cells for industry and residences. Germany introduced a subsidy on a per k/W basis and Japan has provided incentive to companies, including Toyota, to apply fuel cell technologies to stationary power uses. It is highly likely that the increased government support that international companies receive will further hurt HPOW's position in the US market in the future.

Alternative strategies

A smaller part HPOW's business includes portable and mobile uses for PEM fuel cells such as electronic devices that require batteries and personal electronics. HPOW has three products in the stages of early development ranging in power from 50 watt- 250-watt cells that power road signs, wheel chairs and golf-carts. This part of the business looks far more promising as there are many benefits to fuel cells over traditional batteries including:

- Non-toxic
- Higher efficiency
- Lightweight
- Longer life
- Re-generative and therefore require no recharging

While there is potential in this market, HPOW is once again behind the competition for mass commercialization of portal PEM fuel cells. The company is only in early stage development of this product and does not expect to have a marketable product until 2004. UTC, BMW and Seimens claim to be in late-stage development of portable products and have well-established networks in place to distribute the product once it is ready for market. HPOW does not currently have any substantial alliances geared towards the

distribution of its portable products, but does have a loose agreement with Mitsui & Co. for distribution in Japan with no minimum commitment.

Growth

While there are growth drivers in place to make fuel cell technologies viable, most of these do not carry over to the residential market. Initiatives for cleaner energy are focused on the automotive industry and industrial markets that must meet certain environmental standards. Deregulation may encourage residences to choose their energy supplier carefully, but the cost of distributed power is still prohibitive for most residences and in the US there are few incentives to take on the extra cost. Grid congestion is one of the main arguments to support the demand for residential power generation, but power outage for a residence is much less costly then to a business.

The lack of strong alliances will prohibit HPOW from taking advantage of other applications for its technology or extending its business strategy and therefore limit its growth. If all proceeds as the management expects, the company will be fully commercialized by 2005 and have growth rates of 150% including ECO's commitment. (Scenario 1).

Management

The management team at HPOW is generally geared towards research and development. Dr. Gibbard, the CEO, had previously operated a research facility before joining HPOW is 1997. The operations manager similarly has a research and technology background. The lack of commercial business skill on the management team could be the reason for the heavy reliance on ECO to market and distribute their product and ultimately for the less then aggressive sales strategy. Given that ECO has dragged out its commitment to purchase units based on specification problems, this does not seem like a winning strategy, and it is unclear whether management recognizes this. Management also owns approximately 64% of the shares, which would account for the thin trading of the stock. This might provide superficial support to the stock's current price as management and insiders would be reluctant to sell their shares underwater, regardless of the actual valuation. It should also be noted that, due to the lack of liquidity in the stock, any sales of stock by management could rapidly decrease the stock price.

Risk Factors

There are several additional risk factors facing the company and that could materially effect its survival. These risk factors have been built into the scenario discounted cash flow valuation (please see exhibits 1 – 4).

1. HPOW will run out of funds before its reaches commercialization and markets will not react favorably and allow for additional financing. We believe this is a real possibility especially since the commitment from ECO is on a delivery basis.

2. HPOW will not become price competitive to make its technology commercially viable. We believe that HPOW may reach a price competitive point, but not before its competition.

3. ECO will not have the funds to follow through on its commitment to purchase units or will continually push back the start date of the agreement

4. HPOW will not be able to afford the R & D necessary to successfully launch a portable product.

5. If patent disputes erupt over PEM technologies, HPOW does not have the financial or the strategic-alliance muscle to win.

Exit/Buyout

Buyout possibility does exist for HPOW and selling itself may prove to be its best option. It is not likely that the company will be purchased at a significant premium to its current price.

Institutional Ownership

Institutional holders own approx 10.1%
Insiders owns 64%

The institutional ownership of this company is fairly low at 10%. Over the last three months the amount of institutions owning the stock has decreased by 4%. In contrast, other more prominent fuel cell stocks such as Fuel Cell Energy are able to boast institutional ownership positions north of 25%.

Valuation:

Multiples should not be used to value fuel cell companies for a variety of reasons:

- There are no EBITDA, EBIT or earnings figures to compute and apply any ratio to.
- Sales figures for the various fuel cell companies can be misleading as they include pre-commercial sales involving special contracts with current alliance partners and government subsidies. Price/Sales is therefore, not a useful measure.

Discounted Cash Flow Analysis:

As with any early stage company, the best approach in trying to predict a company's future potential is through the use of a discounted cash flow model using scenario analysis.

According to company information, industry beliefs and our assessment of the worst case situation there are basically four different scenarios that HPOW faces:

- High growth as a result of early commercialization in 2005,
- Moderate growth in combination with commercialization in 2006, and,
- Low growth as a result of deferred commercialization in 2007.

- No growth and bankruptcy.

We assigned an unbiased 25% probability to each of these scenarios because we are neutral on the commercialization potential for the company, as it has pushed off its projections for commercialization a few times. The latest guidance has been a commercialization date of 2005. Within each of these scenarios it is important to do a further sensitivity analysis using discount rates between 32% and 26% in combination with terminal growth rates between 3%, which keeps pace with the economy and 5%, which includes a growth premium.

Growth, Growth and More Growth!!!

H Power growth rates can be broken down into two categories; government contracts and commercial products. Based on company information and due to the lack of substantial government contracts the future will not see an increase in this area above the 2001 figures. The real main driver behind the discounted cash flow model (please see attached exhibits 1 to 4) is the growth rates in commercial products. It is reasonable to assume that until H Power actually commercializes its product we will only see a doubling of revenue on pre-commercialized products to reflect expected increases in demonstration units. After commercialization we can expect increases up to 150% year over year for the short term as the company begins to ramp up sales

It is an industry accepted fact that companies involved in the stationary market and that utilize molton carbonate technology could expect to reach EBITDA/Sales margins of 24-28% once the company matures. In the attached model (please see appendix) this assumption is implicit in each of the three different scenarios three to four years after the start to commercialization.

Need Cash?

Under the more optimistic scenario 1, which assumes commercialization expectations in line with management, H Power will exhaust its current cash position of $49 million by next year. As the company has no operating profit, or gross profit, to rely on until much later in the future, it will be forced back into the equity markets. Unlike some of its competitors, H Power cannot rely as much on its alliance partner's deep pockets. Under the current capital market conditions and the company's current price a secondary issue within the next year could further depress the stock price.

Valuation Conclusion

Overall, the discounted cash flow approach for H Power supports a lower valuation of $1.85 than the current stock price of $2.45. In addition, if we consider the negative impact of the cash flow shortage over the next couple of years and the difficulty of a micro-cap company years away from positive cash flow to receive funding, we can include an even greater discount to our valuation price.

Stock Price Graphs

If you compare the stock price performance of H-Power with the Wilder-Hill Fuel Cell Index (compiled by the Hydrogen Fuel Cell Institute), which is composed of all the major fuel cell producers and other alternative energy producers, you will notice a great deal of similarity. The most recent stock price performance does not seem to indicate that H-Power is trading differently than its peers. However, there does seem to be a consolidation in share price since August around current levels.

Liquidity is definitely an issue for any institutional investor since the 200 and 50 day average volumes are both in the neighborhood of 350,000. With a current stock price of $2.45 this does makes H Power a very illiquid investment for many institutions.

Chart provided by Bigcharts.com.

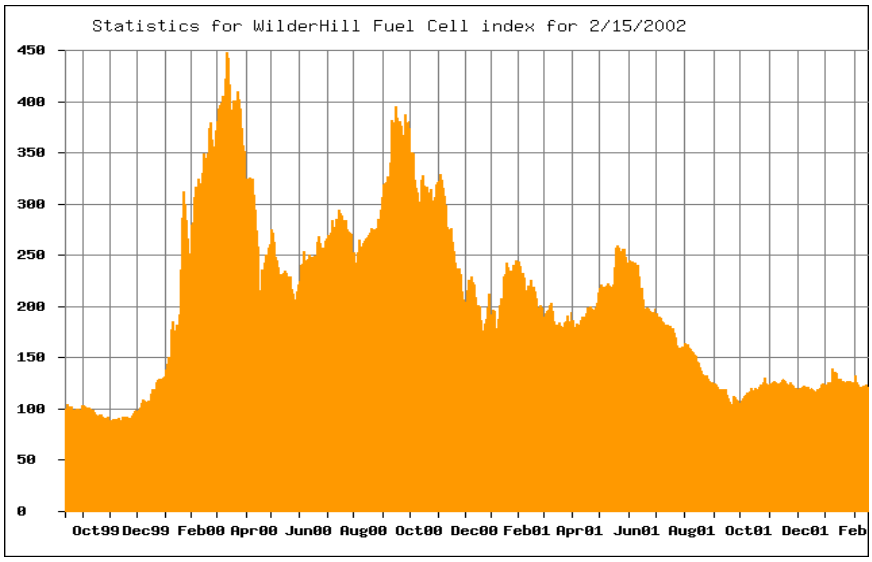

Chart provided by Hydrogen Fuel Cell Institute.

H-Power Corp.

Valuation Summary

Exhibit 1

		Value	Probability	Contribution
Scenario 1	High Growth	213,830,222	25%	53,457,556
Scenario 2	Moderate Growth	135,323,648	25%	33,830,912
Scenario 3	Low Growth	49,291,568	25%	12,322,892
Scenario 4	No Growth	-	25%	-

Implied Enterprise Value:	**$**	**99,611,360**
Less Debt		**266,424**
Implied Equity Value:	**$**	**99,344,936**
# of shares outstanding		**53,853,000**
Implied Share Price	**$**	**1.84**
Current Share Price	**$**	**2.45**

H-Power Corp.
Historical and Projected Income Statement
Scenario 1 - Hyper Growth Commercialization 2005
Exhibit 2
in (000's)

						for the years ending May 31,								
	1999	2000	2001	2001 Six Months Ended	2002E	2003E	2004E	2005E	2006E	2007E	2008E	2009E	2010E
Revenues													
Government Contracts	$ 517	3,003	2,169	220	440	400	400	400	400	400	400	400	400
% growth rate	*N/A*	*481%*	*-28%*		*10%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Commercial Products	501	677	1,474	945	1,890	3,780	7,560	18,900	47,250	118,125	295,313	738,281	1,845,703
% growth rate	*N/A*	*35%*	*118%*		*100%*	*100%*	*100%*	*150%*	*150%*	*150%*	*150%*	*150%*	*150%*
Total revenues	1,018	3,685	3,643	1,165	2,330	4,180	7,960	19,300	47,650	118,525	295,713	738,681	1,846,103
Costs and expenses:													
Cost of contracts	466	2,609	2,994	164	328	298	298	298	298	298	298	298	298
Cost of products	614	848	2,499	1,132	2,264	3,780	6,804	11,340	23,625	35,438	73,828	184,570	461,426
Research and development expense	3,051	5,339	13,466	10,631	21,262	8,360	7,960	3,860	9,530	23,705	59,143	147,736	369,221
Sales, general and administrative	3,813	12,565	11,846	4,107	8,214	3,344	3,184	3,860	7,148	11,853	29,571	73,868	184,610
Total costs	7,944	21,361	30,805	16,034	32,068	15,782	18,246	19,358	40,601	71,293	162,840	406,473	1,015,555
Income (loss) from operations EBIT	$ (6,926)	(17,676)	(27,162)	(14,869)	(29,738)	(11,602)	(10,286)	(58)	7,049	47,232	132,872	332,208	830,548
Cash Taxes **35%**	0	0	0	0	0	0	0	0	2,467	16,531	46,505	116,273	290,692
Depreciation and Amortization	482	655	784	464	928	376	716	1,737	4,289	10,667	26,614	66,481	166,149
Changes in Working Capital	660	(754)	1,288	281	562	-	-	-	-	-	-	-	-
Capital Expenditures	(919)	(1,125)	(2,877)	(5,335)	(10,670)	(5,225)	(7,960)	(7,720)	(9,530)	(17,779)	(29,571)	(73,868)	(184,610)
Free Cash Flow to the Firm	$ (6,703)	(18,900)	(27,967)	(19,459)	(38,918)	(16,451)	(17,530)	(6,041)	(659)	23,589	83,410	208,549	521,395
as a % of revenue	*-658%*	*-513%*	*-768%*	*-1670%*	*-1670%*	*-394%*	*-220%*	*-31%*	*-1%*	*20%*	*28%*	*28%*	*28%*

Notes:
(1) % increase for research and development contracts maintained at a 10% increase to reflect DOE and DOD potential need.
(2) Continuing value calculation used the (WACC/R-G) equation due to the difficulties posed by the NOPLAT method from the nature of the company's growth prospects.
(3) Government contracts will not be increased from this period forward.
(4) Upon commercialization the Company's target is a gross margin around 35%.
(5) Upon commercialization the Company's target SG&A as a % of revenues should be around 16%.

Valuation Table	Discount Rate		
CV Growth Rate	32%	29%	26%
5%	149,052		
4%		206,582	
3%			285,856

Weighted Average Implied Value
213,830

H-Power Corp.
Historical and Projected Income Statement
Scenario 2 - Moderate Growth Commercialization 2006
Exhibit 3
in (000's)

						for the years ending May 31,								
	1999	2000	2001	2001 Six Months Ended	2002E	2003E	2004E	2005E	2006E	2007E	2008E	2009E	2010E
Revenues													
Government Contracts	$ 517	3,003	2,169	220	440	400	400	400	400	400	400	400	400
% growth rate	*N/A*	*481%*	*-28%*		*10%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Commercial Products	501	677	1,474	945	1,890	3,780	7,560	15,120	37,800	94,500	236,250	590,625	1,476,563
% growth rate	*N/A*	*35%*	*118%*		*100%*	*100%*	*100%*	*100%*	*150%*	*150%*	*150%*	*150%*	*150%*
Total revenues	1,018	3,685	3,643	1,165	2,330	4,180	7,960	15,520	38,200	94,900	236,650	591,025	1,476,963
Costs and expenses:													
Cost of contracts	466	2,609	2,994	164	328	298	298	298	298	298	298	298	298
Cost of products	614	848	2,499	1,132	2,264	5,670	6,804	12,096	22,680	47,250	94,500	147,656	369,141
Research and development expens	3,051	5,339	13,466	10,631	21,262	8,360	11,940	11,640	7,640	18,980	47,330	118,205	295,393
Sales, general and administrative	3,813	12,565	11,846	4,107	8,214	6,270	7,960	11,640	15,280	14,235	23,665	59,103	147,696
Total costs	7,944	21,361	30,805	16,034	32,068	20,598	27,002	35,674	45,898	80,763	165,793	325,262	812,528
Income (loss) from operations EBIT	$ (6,926)	(17,676)	(27,162)	(14,869)	(29,738)	(16,418)	(19,042)	(20,154)	(7,698)	14,137	70,857	265,763	664,435
Cash Taxes **35%**	0	0	0	0	0	0	0	0	0	4,948	24,800	93,017	232,552
Depreciation and Amortization	482	655	784	464	928	376	716	1,397	3,438	8,541	21,299	53,192	132,927
Changes in Working Capital	660	(754)	1,288	281	562	-	-	-	-	-	-	-	-
Capital Expenditures	(919)	(1,125)	(2,877)	(5,335)	(10,670)	(4,180)	(6,368)	(9,312.00)	(9,550)	(18,980)	(23,665)	(59,103)	(147,696)
Free Cash Flow to the Firm	$ (6,703)	(18,900)	(27,967)	(19,459)	(38,918)	(20,222)	(24,694)	(28,069)	(13,810)	(1,250)	43,690	166,836	417,113
as a % of revenue	*-658%*	*-513%*	*-768%*	*-1670%*	*-1670%*	*-484%*	*-310%*	*-181%*	*-36%*	*-1%*	*18%*	*28%*	*28%*

Notes:
(1) % increase for research and development contracts maintained at a 10% increase to reflect DOE and DOD potential need.
(2) Continuing value calculation used the (WACC/R-G) equation due to the difficulties posed by the NOPLAT method from the nature of the company's growth prospects.
(3) Government contracts will not be increased from this period forward.
(4) Upon commercialization the Company's target is a gross margin around 35%.
(5) Upon commercialization the Company's target SG&A as a % of revenues should be around 16%.

Valuation Table	Discount Rate		
CV Growth Rate	32%	29%	26%
5%	86,581		
4%		129,665	
3%			189,725

Weighted Average Implied Value
135,324

H-Power Corp.
Historical and Projected Income Statement
Scenario 3 - Low Growth Commercialization 2007
Exhibit 4
in (000's)

						for the years ending May 31,								
	1999	2000	2001	2001 Six Months Ended	2002E	2003E	2004E	2005E	2006E	2007E	2008E	2009E	2010E
Revenues													
Government Contracts	$ 517	3,003	2,169	220	440	400	400	400	400	400	400	400	400
% growth rate	*N/A*	*481%*	*-28%*		*10%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*	*0%*
Commercial Products	501	677	1,474	945	1,890	3,780	7,560	15,120	30,240	75,600	189,000	472,500	1,181,250
% growth rate	*N/A*	*35%*	*118%*		*100%*	*100%*	*100%*	*100%*	*100%*	*150%*	*150%*	*150%*	*150%*
Total revenues	1,018	3,685	3,643	1,165	2,330	4,180	7,960	15,520	30,640	76,000	189,400	472,900	1,181,650
Costs and expenses:													
Cost of contracts	466	2,609	2,994	164	328	298	298	298	298	298	298	298	298
Cost of products	614	848	2,499	1,132	2,264	5,670	11,340	15,120	22,680	45,360	94,500	189,000	295,313
Research and development expenses	3,051	5,339	13,466	10,631	21,262	8,360	11,940	19,400	22,980	45,600	85,230	118,225	236,330
Sales, general and administrative	3,813	12,565	11,846	4,107	8,214	6,270	7,960	11,640	15,320	15,200	28,410	47,290	118,165
Total costs	7,944	21,361	30,805	16,034	32,068	20,598	31,538	46,458	61,278	106,458	208,438	354,813	650,106
Income (loss) from operations EBIT	$ (6,926)	(17,676)	(27,162)	(14,869)	(29,738)	(16,418)	(23,578)	(30,938)	(30,638)	(30,458)	(19,038)	118,087	531,544
Cash Taxes **35%**	0	0	0	0	0	0	0	0	0	0	0	41,330	186,041
Depreciation and Amortization	482	655	784	464	928	376	716	1,397	2,758	6,840	17,046	42,561	106,349
Changes in Working Capital	660	(754)	1,288	281	562	-	-	-	-	-	-	-	-
Capital Expenditures	(919)	(1,125)	(2,877)	(5,335)	(10,670)	(6,270)	(7,960)	(11,640.00)	(12,256)	(15,200)	(37,880)	(47,290)	(118,165)
Free Cash Flow to the Firm	$ (6,703)	(18,900)	(27,967)	(19,459)	(38,918)	(22,312)	(30,822)	(41,181)	(40,137)	(38,818)	(39,872)	72,027	333,687
as a % of revenue	*-658%*	*-513%*	*-768%*	*-1670%*	*-1670%*	*-534%*	*-387%*	*-265%*	*-131%*	*-51%*	*-21%*	*15%*	*28%*

Notes:
(1) % increase for research and development contracts maintained at a 10% increase to reflect DOE and DOD potential need.
(2) Continuing value calculation used the (WACC/R-G) equation due to the difficulties posed by the NOPLAT method from the nature of the company's growth prospects.
(3) Government contracts will not be increased from this period forward.
(4) Upon commercialization the Company's target is a gross margin around 35%.
(5) Upon commercialization the Company's target SG&A as a % of revenues should be around 16%.

Valuation Table	Discount Rate		
CV Growth Rate	32%	29%	26%
5%	17,077		
4%		45,145	
3%			85,652

Weighted Average Implied Value
49,292

H-Power Corp.

Source of Funds and Liquidity Analysis

Exhibit 5

	2002	2003	2004	2005
Current Cash Position	$ 49,179,445	$ 10,261,445	$ (9,400,203)	$ (33,748,652)
Expected Cash Needs				
Scenario 1	(38,918,000)	(16,450,982)	(17,529,782)	(6,041,182)
Scenario 2	(38,918,000)	(20,221,982)	(24,693,782)	(28,069,382)
Scenario 3	(38,918,000)	(22,311,982)	(30,821,782)	(41,181,382)
	(38,918,000)	(19,661,648)	(24,348,448)	(25,097,315)
Cash Shortfall	$ 10,261,445	$ (9,400,203)	$ (33,748,652)	$ (58,845,967)

Disclaimer