



Financing Power Technologies

DG/CHP -- A Wall Street Perspective

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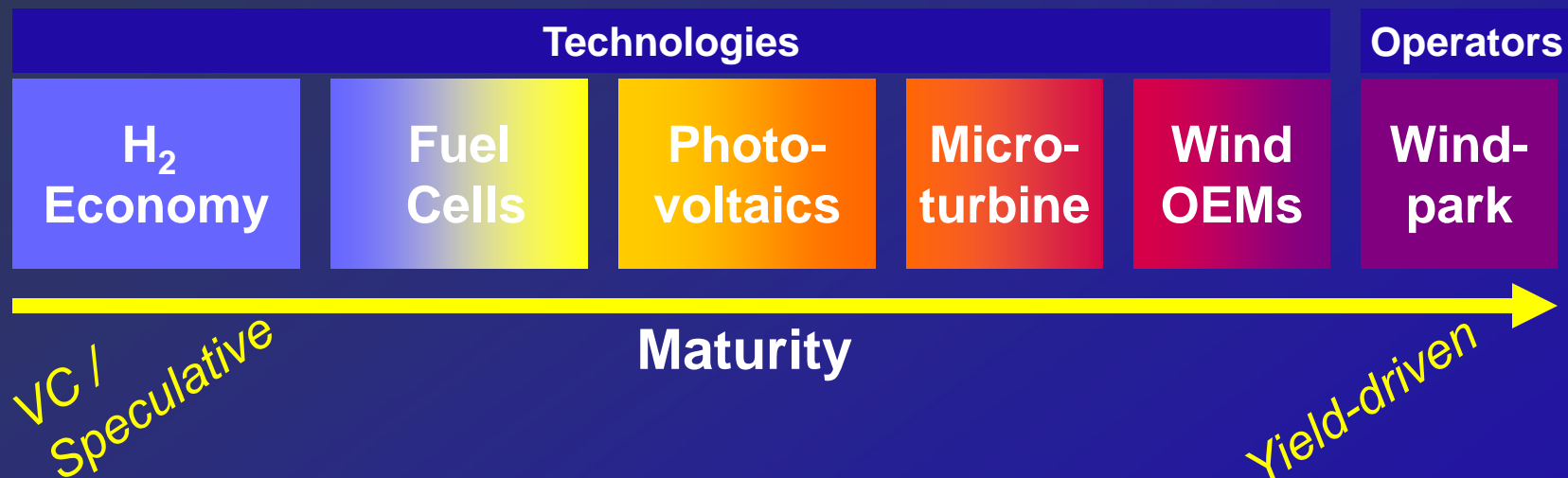
Salomon Smith Barney/Citigroup

Combined Heat and Power in New York State

New York, NY June 2002

Power Technology is now a sector

- ◆ For investors, Power Technology and renewable energy is a thematic space, comprised of a variety of technologies and end-markets
- ◆ A variety of risk exposures is available based on the level of maturity:

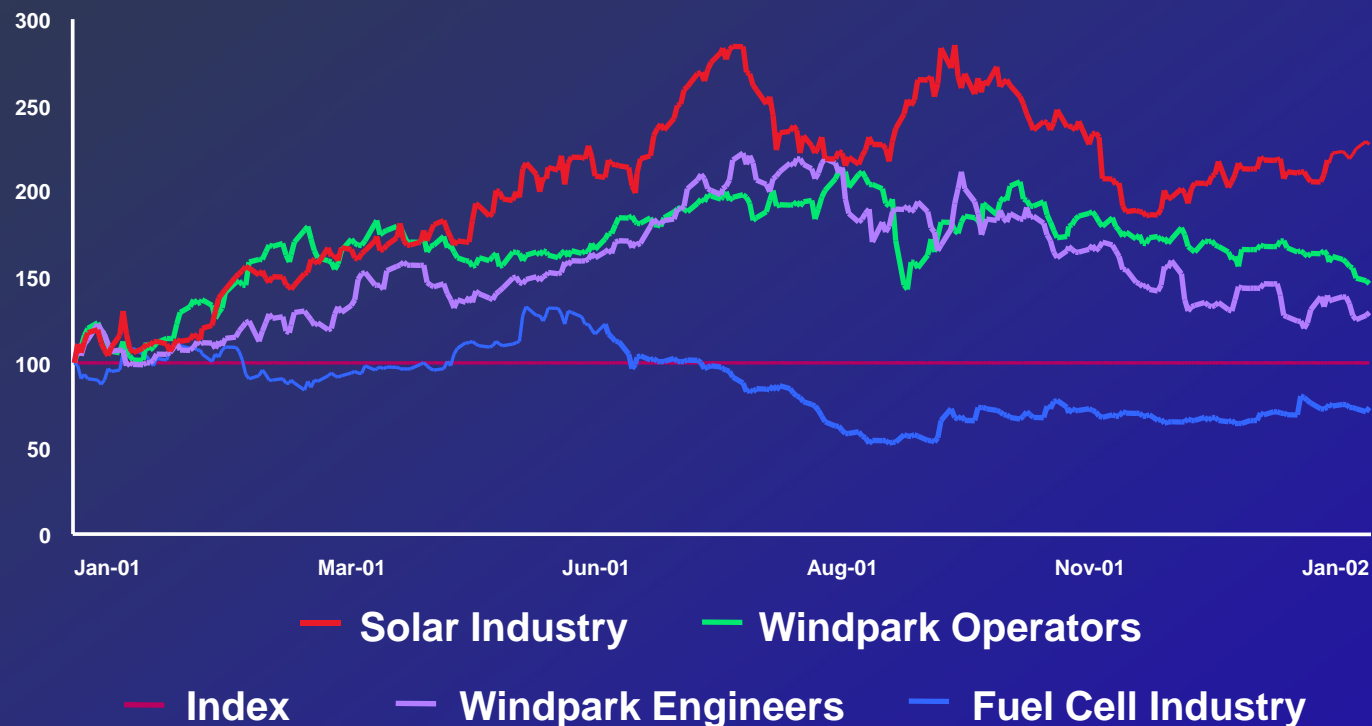


Investors view this range of technologies as one sector

Investor Sentiment & Valuation

Comparison of the sub-sectors

- ◆ Solar and wind companies have fared better in recent markets than higher-risk fuel cell investments



The lower risk solar and wind power sub-sectors have outperformed the more speculative hydrogen economy

A new valuation environment

The sector was fundamentally re-valued during 2001

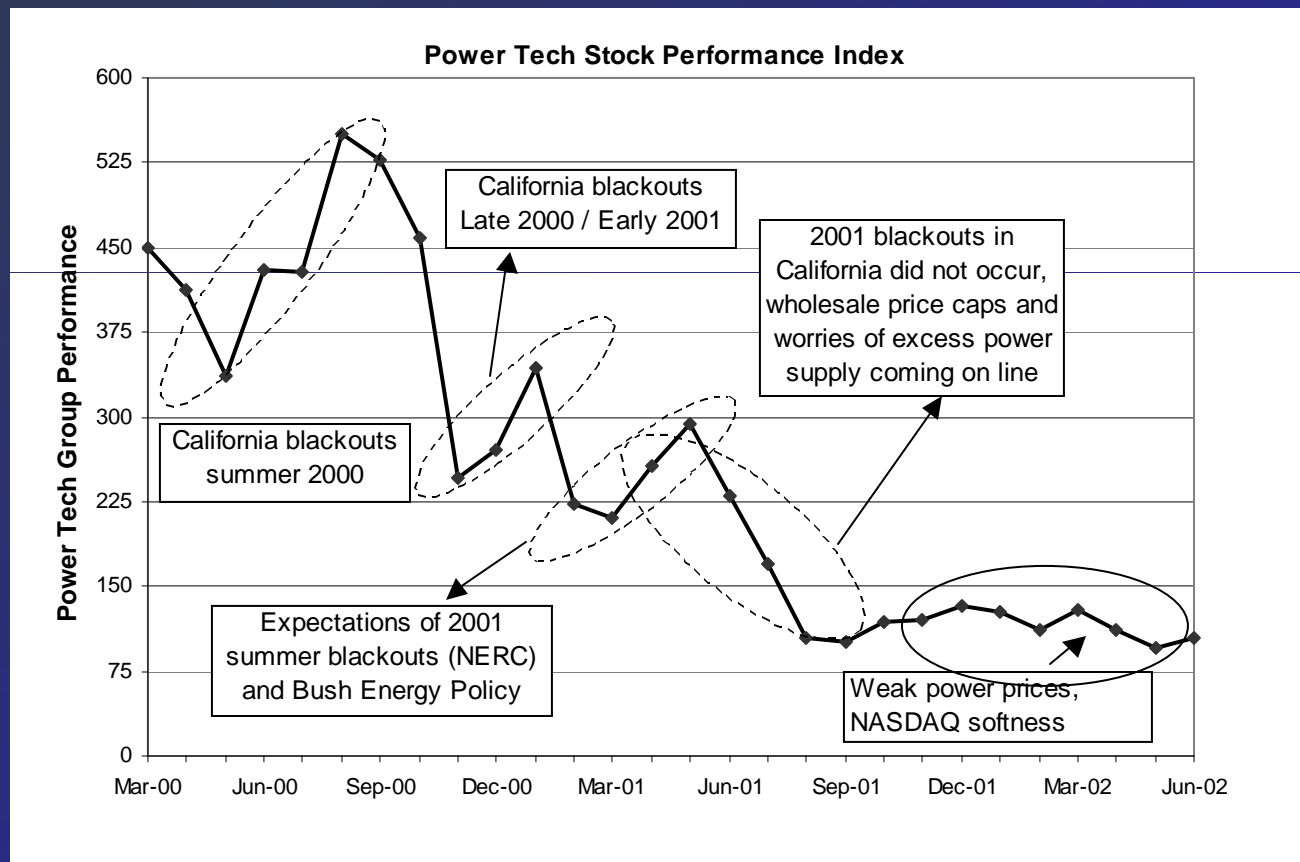
- ◆ What changed in 2001:
 - Negative pre-announcements from leading participants
 - Restricted access to capital markets
 - Slow-down in roll-out of Digital Economy reduces visibility
 - Power surplus and the impact on Distributed Generation
 - Blackouts never materialized – California, New York
- ◆ Moreover, since September 11:
 - Electricity prices have bottomed out, news flow evaporated
 - NASDAQ decline reflected in Power Tech stocks
 - But, focus shifted to energy self-sufficiency and security

New valuation parameters...

- ◆ Companies with commercial sales today:
 - From discounted cash flow models to commercial sales multiples
- ◆ Companies with early commercial sales:
 - From 18% to 20% discount rate, plus:
 - Additional 2% discount for those with uncertain funding outlook
 - Further 2% discount if EBITDA breakeven beyond 2005
 - Trading 'bottoms' expected at cash value per share
 - Timing to market and 'concept' stories remain very uncertain

Salomon Smith Barney revised its valuation methodology reflecting this new environment, but...

Power Tech shares remain news-driven



...news flow has been light, coupled with a weak NASDAQ and soft electricity prices caused by the economic slowdown

Macro events still drive valuation

◆ Freedom CAR

- Freedom CAR program to replace Partnership for a New Generation Vehicle Program in 2002 in conjunction with North American automotive OEMs (funding under the old PNGV program ranged from \$125-\$150 million per year)

◆ German Government endorses Combined Heat and Power program

- Promoting combined heat and power (CHP) plants by offering close to \$4 billion in subsidies
- Incentives between €0.01-0.05 / kWh to new and modernized power plants, depending on the generation source -- fuel cell CHP pegged at 5.11 Eurocents per kWh

◆ Bush Energy Program

- Energy independence remains foremost issue leading into Senate's National Energy Policy debates started in late January/early February

◆ California Power Authority

- California and other states initiating programs to shift away from central power grid infrastructure to Distributed Generation – economics, power quality and reliability

DG/CHP theme still resonant w/ investors

Central Generation

- Capacity constraints
- Significant transmission and distribution losses
- Increasing demand for quality and reliable power
- Environmentally harmful
- Rising cost of generation

Distributed Generation/CHP

- Local power generation
- No transmission and distribution lines needed nor T&D losses
- Improved reliability and quality
...inherently supplies more nines
- DG/CHP Environmentally cleaner
- Economic benefit – no T&D charges

Many fundamental reasons support the notion that DG/CHP could account for 15-20% of the global electric power supply by 2020

Investment Criteria

Investment criteria for DG/CHP Opps.

Underlying

- ◆ Management
- ◆ Technology – does it work?
- ◆ Strategic Partners/Market Access

Performance

- ◆ Milestones – critical targets
- ◆ Cash availability
- ◆ Execution – depends on management

**Criteria are the same for public investors and Venture Capitalists,
as many investments are pre-IPO**

Meeting milestones will be key...

- ◆ Stock price volatility likely will continue until these companies show they are no longer 'concept stories', but viable, self-sustaining entities

Estimated Power Technology Universe Break-Even Analysis

	<u>Comm'l Sales</u>	<u>EBITDA</u>	<u>Free Cash Flow</u>	<u>Net Income</u>
Plug Power	2001	2005	2005	2005
Ballard Power	2002	2005	2006	2005
Capstone Turbine	1998	2003	2004	2003
Fuel Cell Energy	2002	2004	2005	2004
Active Power	1998	2003	2004	2003
Proton Energy	2001	2005	2006	2005
Beacon Power	2002	2004	2005	2003
Hydrogenics	2002	2005	2006	2005

...while cash remains critical

- ◆ Most companies are adequately funded to execute

Salomon Smith Barney Power Technology Universe -- Cash on Hand Analysis											
Company (\$ in mil. ex per sh.)	Ticker	Stock Price 6/11/02	Shares Outstanding (millions)	Market Capitalization (millions)	Cash at Last Quarter End	Avg. Capex. Estimate (next 3 yrs.)	Net Cash per Share Today	Quarterly Optg. Burn (millions)	Optg. and Capital Burn/Q. (millions)	Cash Sufficiency (quarters)	Date (Est. Month) to run out
Ballard Power	BLDP	\$18.58	105.0	\$1,951	\$359	\$50	\$3.42	\$35	\$47.50	7.56	April-04
Fuel Cell Energy	FCEL	\$10.00	39.1	\$391	\$258	\$25	\$6.60	\$12	\$18.25	14.14	December-05
Plug Power	PLUG	\$6.99	50.0	\$350	\$85	\$5	\$1.70	\$10	\$11.25	7.56	April-04
Hydrogenics	HYGS	\$7.07	48.0	\$339	\$65	\$8	\$1.35	\$5	\$7.00	9.29	September-04
Proton Energy	PRTN	\$3.82	33.2	\$127	\$163	\$6	\$4.90	\$6	\$7.50	21.73	October-07
Beacon Power**	BCON	\$0.38	43.0	\$16	\$29	\$3	\$0.67	\$4	\$4.75	6.11	December-03
Capstone Turbine	CPST	\$1.90	77.4	\$147	\$164	\$17	\$2.12	\$10	\$14.25	11.51	April-05
Active Power	ACPW	\$4.07	41.0	\$167	\$104	\$5	\$2.54	\$6	\$7.25	14.34	December-05

**company-provided estimates

Capital markets may be closed for now, but as milestones are achieved, investor confidence should return. Many of the stocks in the power technology sector are trading at cash value today.

Focus on execution

- ◆ Well-defined end markets
- ◆ Definitive need for technological change
- ◆ Defined product lines
- ◆ New product introduction timelines (milestones)
- ◆ Commercial production, sales today
- ◆ Order Inflow, growing backlog
- ◆ Strategic relationships
- ◆ Earnings visibility

As early stage DG/CHP companies develop, valuation will focus on three things: execution, execution, and execution

Conclusions

- ◆ We have entered a new valuation environment
- ◆ News and macro events drive valuations, recent announcements give cause for guarded optimism
- ◆ Early stage companies need to successfully EXECUTE business plans to gain investor confidence
- ◆ Companies with a REAL product may precipitate yet another valuation shift

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