

Energy Technologies & Services

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Power Tech: The Juice Runs Low

POWER TECH: THE JUICE RUNS LOW



CALIFORNIA LOCKS THE DOOR

On August 27, 2001, the California Public Utilities Commission (CPUC) released a draft decision that would suspend the right of California utility customers to “direct access”—that is, their right to choose an alternative energy service provider (ESP) other than the incumbent utility distribution company. In its decision, the CPUC noted that in order to sell the bonds to cover the state’s recent purchases of electricity, “...it will be necessary to control the conditions under which ratepayers (generally large users, such as industrial customers) ‘exit the system’.” The Commission further stated:

“This is a time when large customers might be tempted to switch from utility bundled service to energy service providers in order to avoid some of the impact of higher rates and take advantage of lower spot market prices. This is precisely the wrong time to encourage such behavior.”

Thus, with several penstrokes, the CPUC would rip out the heart of a deregulated market: the right to choose.

SUMMARY AND INVESTMENT CONCLUSION

What a difference a year makes! Last year at the time of our first Power Technologies & Growth Conference, the power tech stocks were flying high. This year, they are flying low. Several things have hurt us—slowing economy, weak market, lowered profit expectations at a couple of the companies. But, in addition to these, we think the deregulation debacle in California has played a major role in scaring investors away from the sector.

Because of California, the near-term outlook for deregulation is not good. We believe this will continue to have a negative impact on the stocks. However, while we see no near-term

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catalyst to turn the sector, we look for a number of developments this coming year that will have positive *fundamental* impacts on the industry:

- **FERC's RTO initiative-** The Federal Energy Regulatory Commission (FERC) is pushing for the formation of four super-Regional Transmission Organizations (RTOs). These RTOs will break down trading barriers and pave the way for new investment in the grid. Despite resistance from the states, we think FERC will get this done.
- **National Energy legislation-** With the shift in power in the Senate resulting from Senator Jeffords' defection to the Dems, we think energy legislation will favor emerging technologies, particularly renewables, and be market-oriented—both positives for the new power industry.
- **Supreme Court decision on scope of FERC's authority-** The line between state and federal jurisdiction is increasingly blurred as more and more power is traded and transmitted between distant points. Some states say the FERC has gone too far in asserting its jurisdiction; Enron and other power marketers say it hasn't gone far enough. We believe the Supreme Court's decision in this case, to be heard this year, will either bless a more powerful FERC or sow the seeds for legislation that will. This is fundamentally positive for the industry and points us toward a seamless, national market for power.

Picking the power tech stocks to hold for the coming 12 months, **FuelCell Energy** (Strong Buy) and **AstroPower** (Buy) are our best picks. We think FuelCell is poised for commercial take-off of its Direct FuelCell systems—right product, right market, right time. We upgraded this stock to Strong Buy at \$44, before the big market swoon; we have to like it today, in the mid-teens. AstroPower is the only company in the power tech group with real earnings and real growth today. It recently (August 1, 2001) announced an agreement to acquire Atersa, a Spanish solar company, and we think this acquisition could add 5-10% to 2002 earnings. With its earnings momentum, AstroPower is the best *defensive* stock in the power tech group.

For investors with longer horizons and a stomach for risk, we recommend a bundle that would include **Active Power** (Buy), **Beacon Power** (Buy), **H Power** (Buy) and **SatCon** (Buy). These stocks have all been swept down in the broader technology sell-off and trade at or near their lows. As a consequence, the rates of return to investors are potentially in excess of 100% per year, if they can make their numbers. The rates of return are based on earnings estimates that are two or more years down the road; hence, there is significant risk as there is a high likelihood that one or several will not make their numbers.

We are on the sidelines with Hold ratings on **American Superconductor** and **Evergreen Solar**. With American Superconductor, the uncertainty created by FERC's RTO initiative has dried up new investment in the grid and hurt the company's near-term sales prospects; with better visibility on the endpoint of the RTO process, we could get more positive. With Evergreen Solar, the company's recent decision to postpone a planned capacity expansion caused us to reduce estimates; renewed access to capital (or a new source of capital) could bring us back to that story.

DEREGULATION: THE INVESTMENT THESIS

Four years ago, we began to identify the investment opportunities that would follow in the wake of the deregulation of the power industry. It was our view then, and remains today, that deregulation holds the key to unlocking these investment opportunities, for several reasons:

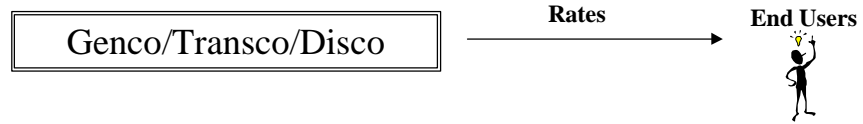
- First, we believe that regulated markets are not fertile breeding grounds for new technology—in fact, innovation may be actively discouraged in regulated markets because of the risk aversion of the regulators. In contrast, the competitive forces in an open market stimulate innovation and attract entrepreneurs.
- Second, we believe that the price signals of an open market, coupled with the ability of customers to choose what and from whom to buy, are necessary conditions for investment in new technology. Prices in regulated markets typically reflect average, rather than marginal, costs, thus obscuring the peaks that would encourage consumers to find ways of using less electricity or generating cheaper power themselves.
- Third, without deregulation, new generating companies (gencos) face an uphill battle in gaining market share from the incumbent utilities that control access to the customer. This limits trading volumes in the wholesale power market and relegates pure marketers (e.g., non-gencos) to small niche market opportunities.

The positive investment thesis was simple:

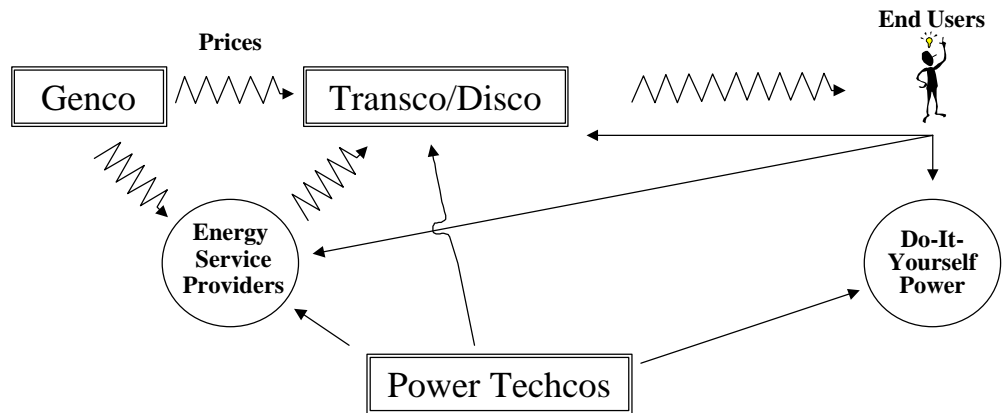
- Deregulation at the state level would separate the transmission and distribution functions of the power industry from the generation function. Transmission and distribution would remain regulated, while generation would be liberalized.
- Price signals would flow from the deregulated gencos, through the transmission companies (transcos), through the distribution utilities (discos), to the ultimate end users, the customers.
- Customers, both large and small, would be freed from bondage to their local utility and given the freedom to choose what to buy and from whom.
- This freedom of choice, coupled with the price transparency of the deregulated market, would result in a more efficient allocation of resources. It would create opportunities for new service providers (the ESPs) and open the option of do-it-yourself power—distributed generation at point-of-use. Over the long run, it would lead to the development and adoption of new cost-effective, energy-saving technologies and to the decommodification of power through introduction of products tailored to the needs and desires of specific consumers—green power, for example.

Figure 1: Regulated Versus Deregulated Markets

Regulated Market



Deregulated Market

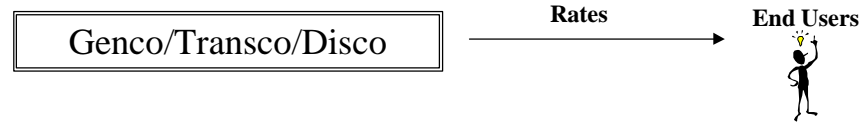


Source: CIBC World Markets.

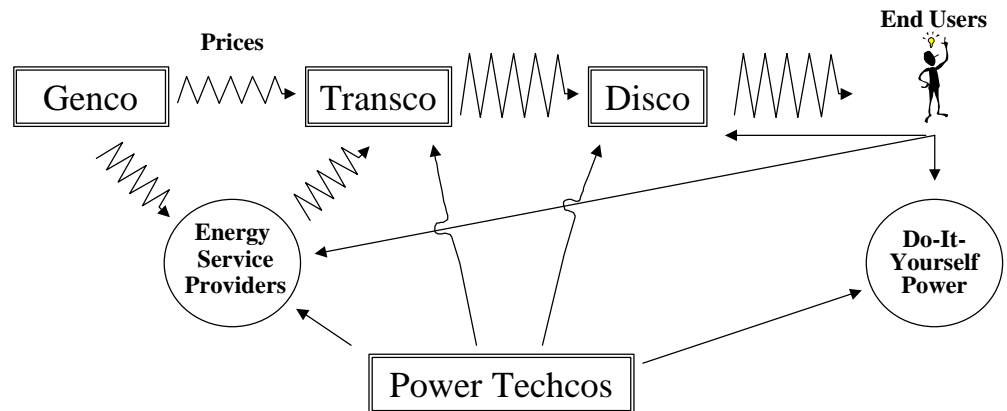
In December, 1999 the Federal Energy Regulatory Commission took deregulation at the national level a step further by issuing its Order 2000. This Order began the process of reforming the ownership and management of the transmission grid, forcing the separation of control of the grid from control of generating assets. The FERC’s most significant recent action on transmission (July 2001) set as a goal the formation of four, super-Regional Transmission Organizations. These RTOs would greatly facilitate the buying, selling and moving of power between utilities by minimizing the seams and boundaries that currently Balkanize the grid and allow the overlaying of multiple transmission charges (so-called “pancaking” of rates). The apparent bias of the Commission is, in our view, toward adoption of Locational Marginal Pricing (LMP) as the mechanism for pricing transmission services. This approach would yield even greater price transparency in the industry, adding the marginal cost of transmission to the marginal cost of generation. Thus, in our view, the FERC’s agenda for reform of the transmission grid would contribute further to the efficient allocation of resources in the industry and to the forces encouraging commercialization of new technologies, particularly distributed generation.

Figure 2: Further Evolution of Deregulated Market

Regulated Market



Deregulated Market



Source: CIBC World Markets.

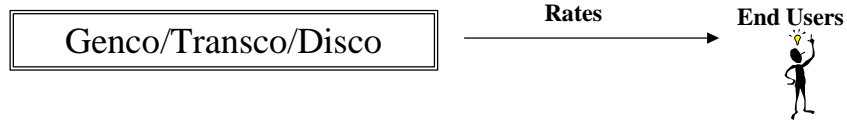
It was states that had high power costs—California, for example—that led the way on deregulation. The lure of deregulation is its presumed ability to lower prices and generate consumer benefit—the healthy results of competition and the introduction of more efficient technologies. Studies of the post-deregulation telecommunications, airlines, natural gas and other industries bear this out, with real price reductions, in some instances, greater than 50% ten years after deregulation (see *Economic Deregulation and Customer Choice: Lessons for the Electric Industry*, Crandall and Ellig, 1997). In an industry the size of power, with a history of 80-odd years of regulation and a reputation for inefficiency, the potential benefits of deregulation were thought to be very large.

CALIFORNIA DERAILS DEREG

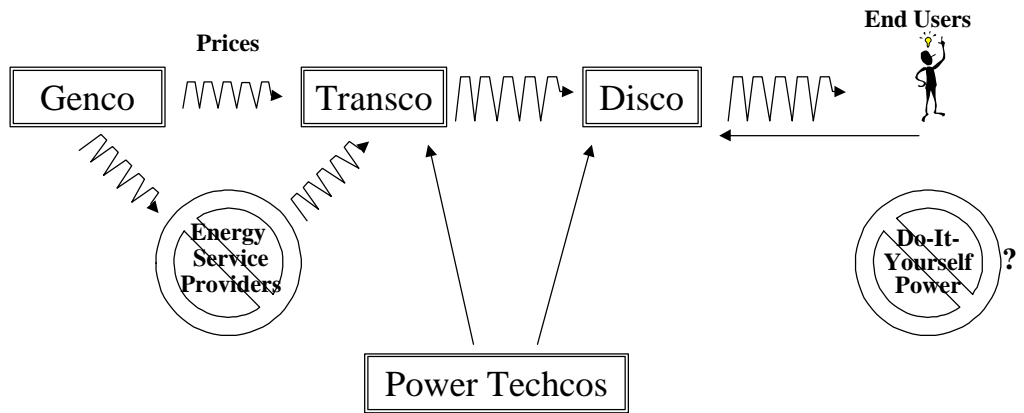
The power crisis in California is now posing a threat to deregulation. A year ago, we would have reported that 25 states were moving forward with deregulation. Today, five of these states have delayed deregulation or suspended it indefinitely, directly in response to the California crisis. In California itself, deregulation’s bellwether state, deregulation is all but dead. Caving to the State’s pleas, the FERC has imposed price caps on wholesale power sold in California and 10 other interconnected Western states. While these caps do not eliminate price signals entirely, they clearly tame them. Worse, as noted above, the CPUC will move shortly to abandon retail choice in the state. The suspension of retail choice will last as long as the State, through its Department of Water Resources, is buying power to supply the State’s utilities, as it is viewed as a necessary condition for the State to sell \$12.5 billion in bonds to pay for its power purchases. The fate of do-it-yourself (DIY) power under the new regime is unclear. Logically, it would seem at risk, particularly for the larger commercial and industrial customers who have the capital and know-how to exit the system via DIY power.

Figure 3: Impact of California on Market Structure

Regulated Market



Deregulated Market



Source: CIBC World Markets.

California’s problems are now being cited as a reason to go slow on the formation of the super-regional RTOs. The states that make up the PJM power pool (Pennsylvania, New Jersey and Maryland) are resisting the FERC’s request that they merge PJM with the New York and New England power pools (NYPOOL and NEPOOL, respectively) to form a super-regional Northeast pool. PJM is working well today, they argue. Given how badly and how unexpectedly things went wrong in California, why risk messing up PJM by forcing its marriage with two less-effective transmission pools?

THE CASE AGAINST DEREG

While much of the dialog on deregulation has focused on California’s flawed execution, we sense the subject of debate is turning to the merits of deregulation *per se*. Several of the power industry’s unique *physical* characteristics introduce complications to deregulation that we did not have to deal with in other industries that restructured. For example, we have no way to store power on a meaningful scale, which means that supply and demand must be maintained in instantaneous balance. It is also fundamentally impossible to track an electron as power flows from its point of generation to its point of use—the flow of power at any given moment is a function of the supply and demand for power at that moment throughout the grid. This makes auditable commerce in power far more challenging than buying and selling commodities such as natural gas, where supply and delivery can be confirmed molecule by molecule.

The *economic* case for deregulation is also being challenged. A recent article in The Electricity Journal entitled *Heresy? The Case against Deregulation of Electricity Generation* (May 2001) lays out an economist's case against deregulation. The author's central assertions are as follows:

- ***Rather than lowering prices, deregulation will lead to higher prices***—Investors will demand a higher rate of return on capital invested in a competitive industry than in a regulated industry—higher risk equals higher return. In other industries, the penalty of a higher cost of capital may be insignificant relative to the efficiency benefits of competition. However, because of the extraordinarily high capital intensity of the power industry, one can see, at least intuitively, how deregulation might put upward pressure on electricity prices.
- ***The cost of being short generating capacity exceeds the cost of carrying excess capacity***—The economic impact of power shortages are especially onerous for businesses that run on 24/7 schedules—data processing centers, Internet service providers, and the like. The point of indifference between being short capacity and being long capacity, as defined by the pseudonymous author, Dr. Price C. Watt (!), is the point at which the expected value (probability times cost) of being short equals the expected value of being long. We do not know what that number is, but we would argue that each of the factors (probability and cost) of the expected value of being short, and, hence, the expected value itself, are rising. The cost of being short is rising because our “new” economy is increasingly sensitive to power, and the probability of being short is rising because of narrowing reserve margins (excess of capacity over peak demand) coupled with the increasing stress that competition in the wholesale market is placing on the transmission grid. Thus, our willingness to invest in excess capacity should also be increasing.
- ***The cost of achieving short-run demand elasticity exceeds the benefit of reducing excess supply***—Another route towards managing the expected value of being short capacity is by increasing demand elasticity. In competitive markets, prices go up, consumers stop buying, and shortages are averted. The short-run demand elasticity for electricity is very low. Few customers have the ability to react quickly to price signals, so there is an inertial momentum to demand. More fundamentally, most customers simply do not get the real-time price signals that would be required for real-time response. Dr. Watt asserts: “I have still seen no evidence that anyone has worked out, even roughly, an argument that the cost of having extra generating capacity is greater than the cost of installing millions of residential time-of-use meters, equipment for communicating real-time prices, and equipment in energy-using appliances to respond to the price information.”
- ***And, lastly, two looming and unsolved problems remain: how to mitigate market power in a deregulated market, and how to manage the planning and operating linkage between generation and transmission***—Certainly, we see evidence to support Dr. Watt's position on market power in the fumbblings of California and the FERC as they attempt to identify instances in which market power was abused in the California market, to quantify the impact of that abuse, and to devise preventive remedies. With respect to the interface

between generation and transmission, we could not agree more with Dr. Watt. In the deregulated power industry, the ownership and management of generating assets and the transmission grid are to be separate. Yet, decisions to deploy iron or wire are linked by both technical and economic considerations.

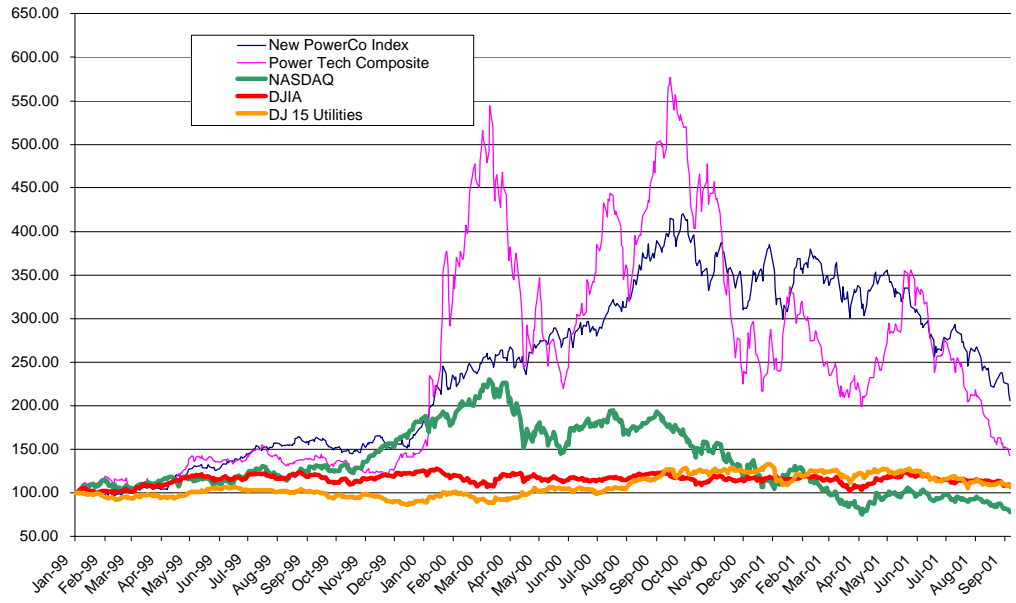
Thus, the article raises, in our view, legitimate issues. Dr. Watt's assertions may or may not be correct—in fact, we disagree with his fundamental conclusion, that the costs of deregulation outweigh its benefits. But, given the degree to which deregulation has destabilized California's market, is there a politician in the land willing to risk his/her political career championing deregulation until we have more definitive analyses of these issues? We suspect that in the near-term, at least, deregulation at the state level is stalled, and with it, the prospects for retail choice and real-time pricing at the retail level. States that have already begun down the road to dereg—Texas, for example—will probably continue on that road unless problems arise, but we cannot imagine that other states, particularly those with reasonable power prices, will initiate the process.

THE INVESTMENT IMPACT OF CALIFORNIA

Given the importance of deregulation to our investment thesis for new power, it comes as no surprise to us, at least, that the new power stocks, both gencos and power tech companies, have had a brutal ride this year. There are forces at work on these stocks beyond California's negative impact—the faltering economic outlook, the weak performance of the stock market generally, the failure of several high-profile power tech companies to meet investor expectations, to name several—but we should not underestimate the effect of the uncertainty introduced into the investment thesis as a result of California's problems. Peter Huber and Mark Mills, authors of an investment newsletter on the emerging new power industry, went so far as to drop Calpine (Strong Buy) from their watch-list of power companies on the grounds that its business has become “too enmeshed” in politics for their comfort.

Figure 4: Price Performance of Power Stocks

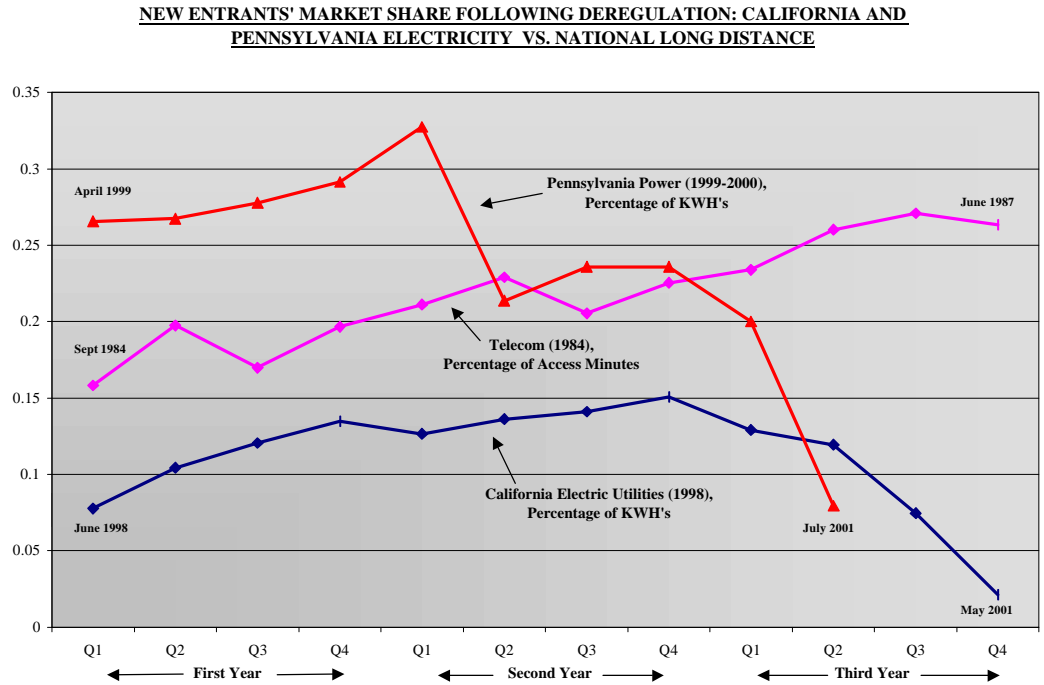
Price Performance of New PowerCos and Power Technology Companies Versus the NASDAQ and Dow Jones



Sources: FactSet, ILX and CIBC World Markets.

We expect no near-term positive news from the deregulation front that would turn the fortunes of these stocks—the opposite, in fact. Shell Energy Services announced September 4, 2001 that it was pulling out of the retail electricity markets in Ohio and Texas, stating that the slow pace of deregulation nationwide was making it “unlikely” the company could reach adequate size to be profitable in the near-term. Just days earlier (August 31, 2001), the Virginia State Corporation Commission, in its first report on the status of deregulation in Virginia, warned that the outlook for retail competition in the state is poor. The most recent market-share data from California and Pennsylvania support the negative outlook for retail choice.

Figure 5: Market Penetration of New Entrants



Sources: FCC, CPUC, PA Office of Consumer Advocate and CIBC World Markets.

THE NEXT 12 MONTHS

Not all the near-term news, however, will be bad. In addition to the progress, or lack thereof, of deregulation at the state level, there are five other high-profile events to be anticipated over the next 12 months that have important implications for investors in the new power industry. Of these five, we expect four to have positive impacts.

1. **California bond deal-** As noted earlier, California intends to issue \$12.5 billion in bonds to cover the purchased power costs it incurred when it stepped in to rescue Pacific Gas & Electric and Southern California Edison as they slid toward bankruptcy. These bonds will not be backed by the full faith and credit of the state or by tax dollars, but will be paid instead through electric power rates. Among the many issues that must be resolved for the state to move forward with this bond deal is the fate of customer choice. The CPUC has acknowledged the necessity of locking customers in; does that include eliminating the DIY option as well? Difficulty in getting the deal done—or worse, outright failure—would add measurably to the chill befalling deregulation. *Our expectation: this deal could be a bloody and prolonged struggle; negative for new power.*
2. **FERC RTO initiative-** In Orders issued July 12, 2001, the FERC directed mediation aimed at the creation of single RTOs for the Southeast and Northeast. The transmission owners in these regions had each proposed three

separate RTOs; for reasons noted above, the FERC has decided to push for four super-regional transmission pools covering the entire country. The timetable set by the FERC calls for mediating sessions to begin within one week of the date of its Order, to continue for a period of 45 days, with a report to be issued within 10 days of the end of the 45-day sessions. The report will contain an outline of a proposal, milestones for intermediate steps, and a deadline for submission of a full proposal. The FERC's push toward super-regional RTOs will be contested by the states, but we think the FERC's jurisdiction and authority to require their formation are clear. *Our expectation: the FERC will prevail, and this is positive for new power.*

3. **National Energy legislation-** President Bush is proposing comprehensive national legislation covering almost every aspect of energy, from drilling for oil in the Arctic National Wildlife Refuge, to creation of a single, unified nationwide transmission grid, possibly even to national interconnection standards for distributed generation. The National Energy Policy, issued May 2001, is the blueprint for this legislation and is generally favorable to emerging technologies and competitive markets. More encouraging, Senator Jeffords' defection from the ranks of Republicans in the Senate and the consequent shift in power toward the Democrats, makes legislation that is favorable to power technology, and to renewable energy sources, specifically, even more likely. *Our expectation: we think there is a good chance of energy legislation this year; this will be both fundamentally and psychologically positive for new power.*
4. **EPA action on multi-pollutant air emission standards for power plants-** The Senate Public Works and Environment Committee will hold two days of closed-door discussions this month on tighter emissions controls for power plants. These talks could pave the way for multi-pollutant legislation, either three-pollutant, as the Bush Administration wishes (nitrogen oxides, sulfur dioxide and mercury), or four-pollutant (NOx, SOx, mercury and carbon dioxide), as Senator Jeffords, the Chair of the Committee, prefers. The hope is that by locking in long-term emissions targets for these pollutants, we can free the power industry from uncertainty about future requirements and create more favorable conditions for investing in power plants. *Our expectation: we think there is good likelihood of action on a multi-pollutant standard; positive for new power.*
5. **Supreme Court decision on scope of FERC's jurisdiction-** The Supreme Court has agreed to hear two petitions challenging the scope of FERC's jurisdiction over power sales. A petition filed by a group of state public service and public utilities commissions contends FERC has gone too far; a petition from Enron argues that FERC hasn't gone far enough. The scope of the FERC's jurisdiction was defined in the Federal Power Act of 1935, which gave FERC (then the Federal Power Commission) the authority to regulate wholesale power sales and interstate transmission, while reserving oversight of retail transactions and intrastate distribution to the states. The problem is, the world has changed markedly since 1935. The degree to which power is now bought, sold and transmitted between distant points almost negates altogether the old model of a vertically-integrated, local utility; drawing the "bright line" between state and federal jurisdiction in the new world of power is difficult, perhaps impossible. We think the Supreme Court's decision on this matter

could be very significant for national energy policy. It would appear to us, for example, that this decision may define the extent to which the Bush Administration can use FERC to pursue its national energy goals, versus seeking new legislation to further its program. *Our expectation: we think this decision will bring into focus the national, interconnected nature of today's power industry. Whether the decision legitimizes broader jurisdiction for the FERC or leads to legislation that achieves the same goal, we think this will be positive for new power.*

RETAIL CHOICE AND THE POWER TECH BUSINESS MODEL

The stalling-out of retail deregulation, at least in the near-term, does force us to revisit our investment thesis in the power tech sector. We would make the following observations:

- ***Companies targeting the retail consumer, both ESPs and technology developers, are most at risk-*** Aside from California's outright disenfranchisement of ESPs, the slow progress on state-by-state deregulation may deny many ESPs the scale necessary for success. This puts at risk companies leveraging retail choice to sell green power, to sell bundled services, or to sell any other differentiated, de-commoditized power product. Also at risk are companies developing technology products aimed specifically at the residential market. We do not see broad penetration near-term of distributed resources in the residential retail market in the absence of strong state and federal incentive programs. H Power and Plug Power (Not Rated), both betting heavily on the residential market for fuel cells, would appear to us at risk, although H Power's position, in our view, is enhanced by its diversification into micro and mobile fuel cell applications. Further, the price signals that would accelerate adoption of peak-shaving technologies such as solar power, will be absent or muted. Having said that, national energy legislation will most likely include provisions that stimulate the residential market, including, hopefully, national interconnection standards, a net metering requirement and tax incentives for buyers.
- ***The road to the market will remain through the distribution utilities-*** In the absence of retail choice, the local distribution utilities will continue to control the customer. We think this means that, in the near-term, at least, distributed resources will be deployed by utilities to support their systems broadly, rather than being dedicated to specific customers. (Obviously, the larger the customer, the more likely that a resource would be dedicated.) Given this system-, rather than customer-, focus, it would appear to us that the bigger the resource, the better—megawatts, not kilowatts. This would favor a company like FuelCell Energy, developing 1+ megawatt (MW) systems and in the early stage of exploring systems up to 40 MW.
- ***Power tech companies developing solutions for the power quality and power reliability market should be unscathed-*** For Active Power, Beacon Power and, to a certain extent, American Superconductor and SatCon, the slowdown in retail deregulation should have no impact. The need for reliable and high quality power is driven by the growth of the information economy.

The risk these firms face in the near-term has more to do with the current recession in technology generally than with state-by-state follow-through on deregulation.

- *We see no near-term catalyst that would reopen the financial markets to power tech. In view of the slowing pace of deregulation, cash burn rates should assume slower-than-anticipated commercialization of emerging technologies and no opportunity to raise additional cash soon- Cash is king. The financial markets have made one of their periodic, ostrich-like moves, and it is clear that power tech companies whose fortunes depend on deregulation will need to husband their cash, as they are unlikely to be able raise additional capital in the near-term.*

Figure 6: Cash Burn of Power Tech Stocks

09/06/2001

Company	Ticker	Stock Price		Low	% off		Total Cash (MM)	Cash/Share	Annualized Cash Burn Rate (MM)	Cash Burn Rate/Share	Market Cap (MM)	Rating
		High	Low		High	Low						
Active Power, Inc.	ACPW	\$ 5.79	\$ 79.75	\$ 5.45	93%	6%	\$ 131.1	\$ 3.32	\$ (26.8)	\$ (0.68)	\$ 228.8	B
American Superconductor	AMSC	11.30	61.50	10.75	82%	5%	131.9	6.49	(112.4)	(5.53)	229.7	H
AstroPower, Inc.	APWR	34.67	63.92	22.62	46%	53%	82.5	5.30			539.7	B
Ballard Power Systems	BLDP	16.39	121.50	16.40	87%	0%	450.6	4.99	(106.0)	(1.17)	1,480.2	H
Beacon Power Corp.	BCON	2.86	10.75	2.46	73%	16%	47.9	1.13	(26.2)	(0.62)	121.6	B
Capstone Turbine Corp.	CPST	4.75	98.43	4.58	95%	4%	200.4	2.64	(90.6)	(1.19)	361.2	
Energy Conversion Devices	ENER	17.58	42.75	14.56	59%	21%	87.7	4.64			332.1	
Evergreen Solar, Inc.	ESLR	4.80	20.75	4.00	77%	20%	34.1	3.02	(20.5)	(1.82)	54.1	H
FuelCell Energy, Inc.	FCEL	12.32	54.37	13.25	77%	-7%	300.3	8.52	(39.2)	(1.11)	434.1	SB
H Power Corp.	HPOW	3.12	35.93	2.75	91%	13%	93.9	1.76	(26.7)	(0.50)	166.6	B
Hydrogenics Corp.	HYGS	3.06	15.01	2.75	80%	11%	74.5	2.09	(5.2)	(0.15)	108.8	SB
Itron, Inc.	ITRI	18.70	21.75	3.14	14%	496%	31.4	2.05			286.6	
KFX Inc.	KFX	3.40	3.85	1.18	12%	188%	0.4	0.02			85.4	
Mechanical Technology Inc.	MKTY	4.65	16.50	2.00	72%	133%	174.9	4.93	(8.5)	(0.24)	164.9	
Plug Power, Inc.	PLUG	9.12	61.87	9.10	85%	0%	120.4	2.72	(65.1)	(1.47)	403.5	
Proton Energy Systems	PRIN	5.70	36.00	5.25	84%	9%	173.0	5.22	(2.0)	(0.06)	188.9	
SatCon Technology Corp.	SATC	5.65	41.00	5.60	86%	1%	75.2	5.19	(17.3)	(1.19)	81.9	B
NASDAQ		1,705.60	4,136.80	1,619.60	59%	5%						

Sources: FactSet, ILX Systems, company reports and CIBC World Markets.

Notes:

- MKTY owns 12 million shares of PLUG, 1.8 million shares of SATC and 3.9 million shares of BCON, valued at \$130 million as of the close of 9/6/01. As of 6/30/01, MKTY estimates its remaining net operating loss carry-forwards to be approximately \$2.3 million.
- SATC owns 9.7 million shares of BCON and 4.62 million shares of MKTY, valued at \$49 million as of the close of 9/6/01. As of 9/30/00, SATC had net operating loss carry-forwards of approximately \$39 million and \$30 million for federal and state income tax purposes, respectively.

CONCLUSION

The transition from a regulated market to a deregulated, competitive power market cannot happen overnight. The capital intensity of the industry, the long lead times required to add capacity, the lack of short-run price elasticity on the demand side, all contribute to the length of time required for the transition. Deregulation is not a sprint, but a marathon. We remain convinced that the benefits of deregulation are substantial and trust that this view will prevail even as states, consumers and investors suffer through these first days.

Stock prices (as of 9/6/2001) of companies mentioned in this report:

Active Power (ACPW-OTC, \$5.79, Buy)^{1,3}
American Superconductor (AMSC-OTC, \$11.30, Hold)^{1,3}
AstroPower (APWR-OTC, \$34.67, Buy)^{1,3}
Ballard Power Systems (BLDP-OTC, \$16.39, Hold)
Beacon Power (BCON-OTC, \$2.86, Buy)^{1,3}
Calpine (CPN-NYSE, \$29.69, Strong Buy)^{3,4,6}
Capstone Turbine (CPST-OTC, \$4.75, Not rated)
Edison International (EIX-NYSE, \$13.60, Not rated)
Energy Conversion Devices (ENER-OTC, \$17.58, Not rated)
Enron (ENE-NYSE, \$30.49, Buy)²
Evergreen Solar (ESLR-OTC, \$4.80, Hold)^{1,3}
FuelCell Energy (FCEL-OTC, \$12.32, Strong Buy)^{1,3}
H Power (HPOW-OTC, \$3.12, Buy)^{1,3}
Hydrogenics (HYGS-OTC, \$3.06, Strong Buy)^{1,2,3}
Itron (ITRI-OTC, \$18.70, Not rated)
KFx (KFX-AMEX, \$3.40, Not rated)
Mechanical Technology (MKTY-OTC, \$4.65, Not rated)¹
PG&E (PCG-NYSE, \$16.30, Not rated)
Plug Power (PLUG-OTC, \$9.12, Not rated)
Proton Energy Systems (PRTN-OTC, \$5.70, Not rated)
SatCon Technology Corp. (SATC-OTC, \$5.65, Buy)¹
Shell (SC-NYSE, \$48.45, Not rated)

¹ CIBC World Markets Corp., or one of its affiliated companies, makes a market in these securities.

² CIBC World Markets Corp., or one of its affiliated companies, has performed investment banking services for this company.

³ CIBC World Markets Corp., or one of its affiliated companies, managed or co-managed a public offering for this company within the last 3 years.

⁴ Company has a convertible included in the CIBC World Markets convertible universe.

⁶ The CIBC World Markets Corp. analyst(s) who covers this company also has a position in its securities.