Sent: Thursday, July 06, 2000 10:41 AM
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Subject: IN THE NEWS----------------THURSDAY, JULY 6, 2000

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Dow Jones Newswires
Calif. State Senator Says ISO Board Restructuring Imminent
By Jason Leopold

LOS ANGELES—The state agency largely responsible for ensuring a competitive power market in California will soon be restructured, much in the way lawmakers restructured the electricity industry in 1996, amid concern that it has become too much of a market player.
In an interview with Dow Jones Newswires, state Sen. Steve Peace (D-El Cajon), said the governing body of the Independent System Operator board will soon evolve into one that is made up of gubernatorial appointees as we move into "a tough summer." He didn't give a time frame for the overhaul but sources suggest the changes will be made as early as August.
The current ISO stakeholder board will act as advisors and won't have voting privileges or make critical decisions that impact the multibillion dollar electricity industry. Some members of the stakeholder board could become members of the new board. Sen. Peace, who was one of the architects of deregulation, said he may fold the governing board of the California Power Exchange and the ISO into the California Energy Commission.
The senator said the current ISO board, which includes merchant generators and investor-owned utilities, is incapable of looking past their "immediate self interests" in order to make important market decisions that affect consumers.
"The whole concept of the (ISO) stakeholder board is a defect," Sen. Peace said. "It's an unhealthy set up. The conversations are dominated by the generators. The board is influenced by a supply side view."
ISO representatives didn't return calls for comment.
The senator's harsh statements come just as the state grid operator is expected to pass a highly controversial measure this afternoon that will likely see the wholesale power price cap reduced to $250 a megawatt hour from $500. The ISO tried to pass a $250 cap last week but was one vote short.
Instead, the ISO voted to reduce the price cap to $500 from $750. But Sen. Peace, state regulators and utilities had called for a $250 price cap because high heat in mid-June was causing daily price spikes in the $750 range.
The senator has since called for a Department of Justice investigation and an Auditor General's investigation into the June 12-16 price spikes, which resulted in a record weekly cost for electricity of $800 million.
At last week's meeting, ISO Chief Executive Terry Winter said California's power supply will be jeopardized this summer if the price cap was lowered. But at a state Electricity Oversight Board meeting a day after the ISO meeting, Winter said the issue of price caps and reliability weren't related. Winter wasn't available to comment.

The senator said Winter's statements at the oversight board and the way the ISO handled the price cap issue is the reason behind retooling its governing board and why California's power market isn't yet workably competitive.
On Thursday, Camden Collins resigned as a member of the ISO governing board over the price cap issue, eluding to the fact that certain members of the board were caving in to market manipulation.
Sen. Peace said he hopes to convince Collins not to leave.
"The ISO should not be playing in the market this much," Sen. Peace said. "The fact that the ISO has to get into the market is evidence of its dysfunction."
The senator has been on a crusade the past few months to restore the power market to what he and his staff first envisioned during the early days of deregulation - a competitive marketplace for buyers and sellers of electricity and cheaper rates for consumers.
But neither concept has been attainable lately because the market is being severely manipulated by buyers and sellers, Sen. Peace said, and unless immediate measures are taken to correct the problem, California will return to re-regulation.
"We need to deal with the market's shortcomings like high electricity rates in San Diego and the lack of power plants in the state," the senator said. "If we don't start to act aggressively, re-regulation is not only a real possibility but a probability."
The senator wrote a letter to Gov. Gray Davis June 12, urging the governor to exercise his "broad discretionary powers to expedite the quick construction of power plants to defeat the serious energy threat to the state's economic well being."
Sen. Peace said customers of Sempra Energy's (SRE) San Diego Gas & Electric unit will see their monthly utility bills increase by 9.2% this week - to $87.92 from $80.51 - because of the price spikes last week caused by high heat and generation unit outages, a figure confirmed by SDG&E.
The senator said state regulators may freeze electric rates in San Diego this week while it investigates if the price spikes were caused by merchant generators withholding supply or underscheduling - a process by which utilities understate their power needs to exploit a market glitch that can make it cheaper to buy power at the last minute.
However. Sen. Peace criticized SDG&E for not "hedging" in the block forward market months ago, which could have saved consumers tens of millions of dollars in high electricity rates.
"I wrote a letter to SDG&E urging them to get into forward market in March, but their traders saw the market differently," the senator said. "They were obviously wrong and now consumers are paying for their mistake. We need to figure out what portion of these costs should be passed on to ratepayers."
A wholesale energy trader at SDG&E, who spoke on the condition of anonymity, said the utility thought prices for forward power at the time were too expensive and the company didn't see a strong financial return for such a long-term investment.
Sen. Peace said in order for the power industry to mature, the California Power Exchange, the spot market where power is bought and sold in the state, needs to start offering more products and a longer forward market to its customers.
In addition, the California Public Utilities Commission hedging restrictions was a "mistake" that state regulators should revisit immediately, Sen. Peace said. Hedging limitations became effective when a $250 price cap was adopted last year.

Sen. Peace said market manipulation by merchant generators and utilities is a problem that the ISO didn't take seriously and has allowed to happen since deregulation became law.

However, generators and utilities will be fined if they are caught gaming by the ISO in the future.

Recently, SDG&E sent a letter to the ISO claiming the state's two other utilities. Edison International's (EIX) Southern California Edison unit and PG&E Corp.'s (PCG) Pacific Gas &
Electric, were underscheduling their load and causing prices to spike. The ISO hasn't decided if it will investigate the allegations.

As far as changes to the ISO governing board, "that's a natural evolutionary thing," the senator said."They're doing the best they can, but it's not their game."

Dow Jones Newswires
Calif ISO Board Member Resigns Over Issue Of Price Caps
By Mark Golden

NEW YORK—Camden Collins has resigned from her post as a member of the governing board of the California Independent System Operator over the issue of price caps.

Last Wednesday, the ISO Board of Governors voted to lower the current cap at which it will buy wholesale electricity to $500 a megawatt-hour from $750. On Friday, an emergency meeting of the board was called for Thursday, July 6, to vote on lowering the cap further, to $250. The $250 price cap was defeated last week by one vote, but one governor who voted against the $250 cap, Marcie Edwards, has changed her mind, and has said that she will vote for the $250 cap.

"I regret that I am compelled by the events of last week to resign, effective tomorrow," reads Collins letter. which was sent to the other board members electronically Monday. Collins voted against both measures last week.

"May each of you find the determination to stand for the principal that the ISO must be independent of manipulation by any market participant," Collins said in the letter. (Dow Jones Newswires received a copy of the letter Wednesday.)

The ISO manages the state's electricity grid and buys any power needed at the last minute by the state's three investor-owned utilities. Of those, only San Diego Gas & Electric Co. can pass on higher electricity costs to customers. Electricity rates are frozen for customers of Southern California Edison and Pacific Gas & Electric Co., which have to bear any unexpectedly high prices in the current wholesale electricity market. (Southern California Edison is the regulated utility unit of Edison International (EIX). Pacific Gas & Electric is a unit PG&E Corp. (PCG). San Diego Gas & Electric is a unit of Sempra Energy (SRE).) Collins, the non-market participant on the board, had been a governor of the ISO for three years.

"Unlike the rest of you, I have no employer interested in my attendance. Thus I cannot be threatened with employment termination, removal from the board, or legislative revenge on my employer. That's true independence. I am saddened that you do not share it." Collins wrote in an appended letter that she requested be read at Thursday's board meeting.

Other members of the board have said that they were told that if they voted against lowering the caps their nominations would be dropped for the new term, which starts August 1. Those nominations must be approved by the Electric Oversight Board. whose members are appointed by the governor. Board members are paid only a stipend to cover their costs as members.

"How can we condone a process that is so corrupted and manipulated with fears of removal and reprisal, exercised upon us by people who are experts at initiating letter campaigns with incomplete information, who flagrantly disrespect the differing opinion of consumer representatives on the board?"

Collins' letter asks.

California Governor Gray Davis worked with the architect of the state's deregulation legislation, state Representative Steve Peace (D-Chula Vista), to get the caps lowered last week"No political representative of a small fraction of the state's consumers – no matter how well intentioned

- has the right to dictate to this board a matter exclusively within FERC's jurisdiction, or question your integrity in voting what you believe to be the ISO and the state's best interest," Collins letter continues, referring to the U.S. Federal Energy Regulatory Commission.

Collins also referred to statements made by Sen. Peace at California's Electric Oversight Board meeting Thursday, where he expressed anger that the ISO hadn't voted to lower the cap to $250.

"The very idea that one person could 'take down' the whole board and the CEO (Terry Winter) with it over a difference of opinion on the appropriate wholesale price cap is truly stunning," Collins wrote.

Debate on the price caps has centered on whether utilities are underscheduling their power in the day-ahead market or whether merchant power generating companies are underbidding supplies into that market. In either case, the result is that the ISO has had to buy great amounts of power just hours or minutes ahead of when it is needed, and the prices for those purchases have risen numerous times this spring and summer to the maximum level.

According to Collins, the problem is utilities underscheduling because the day-ahead cap is $2,500. She recommends that the day-ahead cap should be lower than the real-time cap, and that would eliminate the current incentive to utilities to underschedule load in the day-ahead market.

When the ISO board voted last week to lower the price cap to $250, it also mandated that the state's merchant plant owners must bid in all available capacity on hot days. Collins said that taking such action would be illegal.

Reuters
Calif. power operator to vote on price cap cut
By Nigel Hunt

LOS ANGELES - California's power grid operator will retake a vote on hether to cut California's power price cap to $250 per megawatt hour (MWh) Thursday after one board member declared she had incorrectly cast her vote at a meeting last week, the agency said on Wednesday.

The move led to an angry response from opponents of cutting the price cap, and one board member has resigned citing political interference with the decision.

The California Independent System Operator (ISO), which operates most of the state's electricity grid, decided at a meeting of the board of governors last week to cut the cap, which limits the amount that power generators can charge utties, to $500 per MWh from $750 per MWh. One megawatt hour would power the average U.S. esidence for one month.

An earlier motion to cut the price cap to $250 per megawatt hour failed on a 12-12 vote.

Among those who voted against lowering the cap to $250 was Marcie Edwards, the board member who represents the Los Angeles Department of Water and Power.

A spokesman for the ISO said, however, that Edwards had subsequently indicated she thought she was voting to lower the cap to $250 and so a new vote has been scheduled.

The initial debate was triggered by a letter to the California ISO from state Sen. Steve Peace, one of the architects of the deregulation of the state's power industry after a heatwave triggered record power prices in the state.

"Electricity prices and electricity costs reached grossly unreasonable levels considering that, from a statewide perspective, there were ample supplies." Peace wrote.

Support for cutting to $250 also came from California Public Utilities Commission President Loretta Lynch, a close aide of Gov. Gray Davis, the state of California Electricity Oversight Board and three of five commissioners of the California Energy Commission.

Some opponents suggested Edwards might have been pressured to change her vote. A spokesman for the Los Angeles Department of Water and Power was not immediately available for comment.

In her resignation letter, independent board member Camden Collins said, "Unlike the rest of you, I have no employer interested in my attendance.
Thus I cannot be threatened with employment termination, removal from the Board, or legislative revenge on my employer. That's true independence. I am saddened that you do not share it."

Supporters say the price caps are needed because the market is not yet mature. Last week's resolution to cut the cap to $500 stated that the

California markets were not presently "workably competitive."

California opened up its power markets for competition in March 1998.

"An evolution is taking place. People have to be patient and we have to protect the consumer," said Steve Larson, executive director of the California Energy Commission.

The main proponent of the price cap cut is Rosemead, Calif.-based utility Southern California Edison, a subsidiary of Edison International .

The cut to $250 also has the backing of the state's two other investor owned utilities PG&E Corp.'s Pacific Gas and Electric and Sempra Energy's San Diego Gas and Electric.

Southern California Edison has a powerful incentive to back lower caps as its is unable to pass on high prices to its customers, whose rates are currently frozen. A spokesman for Southern California Edison was not immediately available.

High prices also make it virtually impossible for the utility to recover their stranded costs, which are investments made in a regulated market that might not be recoverable in a competitive market. These include massive investments in nuclear power plants.

These costs must be completely collected by March 31, 2002, and the utility is still far short of that goal.

San Diego Gas and Electric, has already finished collecting its stranded costs, while the state's largest utility, Pacific Gas and Electric, should recoup a substantial chunk of those costs when it auctions off its hydroelectric generating assets.

Opponents of the price cap cut say they believe that Southern California Edison did not schedule adequate power supplies for the summer, and say the utility has been lobbying strongly for the cut to $250 to avoid running up massive debts as its attempts to cover its summer needs.

They also noted that a lower price cap could increase the risk of summer blackouts with generators selling their power in markets where they can get a higher return.

"Blackouts are a lot more expensive to deal with than price spikes." said Mark Palmer, a spokesman for Houston-based industry giant Enron Corp

The San Diego Union Tribune
Pressure builds to lower electricity costs

State panel will retake vote on cutting key rate

By Craig D. Rose

Under intense political and consumer pressure, California's power grid operator will retake a vote today on whether to further lower a key electricity price cap.

The vote should attract intense local interest because San Diegans have been the first in the nation to pay market prices for power—and they're paying a hefty price for the precedent.

Electricity prices here have more than tripled over past two months, pushing average bills up some $40 monthly. The locally based Utility Consumer Action Network warns they could go higher, under the current deregulation scheme.

Today's planned vote would impose a cap of $250 per megawatt hour— down from the $500 cap approved just last week. It comes after Marcie Edwards, a board member of the California Independent System Operator, declared she was confused by the vote last week and asked for reconsideration of the matter. Edwards, who represents the Los Angeles Department of Water and Power, is expected to vote for the lower cap today.

The move to lower the cap is also supported by State Sen. Steve Peace, D-El Cajon, an architect of California's electrical deregulation. As prices skyrocketed, however, Peace declared that the market was not functional and he initiated the call for tighter price controls.

Power generators, who in recent days have sold their electricity at prices as much as 25 times higher than in the spring, are opposing the lower price caps.

One member of the ISO board, meanwhile, has resigned in protest over what she charged was political pressure to retake the vote.

At last week's session, the ISO failed to pass a $250 cap when it deadlocked 12 to 12 over the issue. The board then voted to lower the cap to $500, down from $750 per megawatt for key types of wholesale power sales.

The $250 megawatt price cap would translate to 25 cents per kilowatt hour, compared with prices of under 3 cents that San Diegans paid until just two months ago. The average local residential customer uses 500 kilowatt hours monthly.

Some price cap opponents suggest the revote was sparked by political pressure on the board.

In her resignation letter, Camden Collins, an independent ISO board member, said, "Unlike the rest of you, I have no employer interested in my attendance. Thus I cannot be threatened with employment termination, removal from the board or legislative revenge on my employer. That's true independence. I am saddened that you do not share it." Collins voted against both measures last week.

A spokesman for Enron Corp. said that lower price caps will backfire on consumers by leading to blackouts.

"Blackouts are more expensive than price spikes," said Mark Palmer, vice president of corporate communications for Enron, which is the largest marketer of electricity and natural gas.

Palmer said Enron could protect consumers from electricity price spikes by entering into "hedging" agreements with local utilities, which are contracts that provide guaranteed pricing for certain periods. He said the company had reached such an agreement with the utility servicing Hartford, Conn.

But the pressure for tighter price controls appears strong at this time. In addition to Peace, support for cutting to $250 also comes from California Public Utilities Commission President Loretta Lynch, a close aide of Gov. Gray Davis; the State of California Electricity Oversight Board; and three of five commissioners of the California Energy Commission.

The state's major utility companies—including SDG&E—also are calling for lower caps. SDG&E passes along the cost of power it buys in the open market to consumers and no longer directly profits from the sale, although Sempra Energy, its parent company, does continue to profit from power sales.

The state's other large utilities—Southern California Edison and Pacific Gas and Electric—also support the cap because their customer rates are frozen. High power prices thus leave no revenue for these utilities to recover their stranded costs, which are investments made in a regulated market that might not be recoverable in a competitive market.

Michael Shames, UCAN's executive director, said he believes a better way to control prices for consumers is a rate freeze, a proposal he's readying for presentation to the PUC within a week. But Shames said he's not opposing lower ISO price caps, despite heavy lobbying from generators to do so.

The San Diego Union Tribune

Demand for energy rises, but supply is shrinking

By H. Josef Hebert

WASHINGTON—While San Diegans groan about electricity prices, federal officials and the power industry are worrying about brownouts or worse across broad regions of the country, including California.

The officials are concerned that as the $220 billion electricity industry moves toward more competition, it is running too close to the edge in providing electricity when it is most needed—during peak summer demand.

Spurred on by the growing economy and increased reliance on computers and other electrical devices, electricity demand has been increasing 2 percent to 3 percent a year, while production has lagged. Meanwhile the safety cushion has dropped to below 15 percent of generating capacity, far below the 25 percent of a decade ago.

Signs of problems have shown up in some areas this summer.

For most of last week, California was under a "stage II power watch" in which customers were asked to keep down electricity use and power was withheld from some commercial users because of tight supplies as temperatures in some areas soared in the 100-degree range. Two weeks earlier, rolling blackouts moved through the San Francisco Bay Area after some power generators failed during a record 103 degree heat wave.

Although milder temperatures have eased the strain on the state's electricity system, Patrick Dorinson, a spokesman for the California Independent System Operator, which manages the state's flow of electricity, says the problem isn't over.

"Everything is on a day to day basis," he said. "We expect another heat wave next week."

The Energy Department and an industry-sponsored watchdog group—the North American Electric Reliability Council—say California, the Southwest and much of the Northeast, especially New York and New England—face the greatest electricity reliability concerns this summer.

In New England, a New Hampshire nuclear power plant went down for a few days last month, triggering an appeal throughout the region that users conserve electricity. The plant quickly resumed operation and cooler weather arrived, ending the threat.

Jim Sinclair, a spokesman for the agency that manages New England's electricity grid, said, "There will be days this summer when we need to dip into the reserve tanks" for electricity, but reserve supplies are expected to be adequate to avoid power outages.

Others are not as certain either in New England or elsewhere.

The power problems that already surfaced in New England and California "could be an ominous sign," said Energy Secretary Bill Richardson, who has held a series of regional meetings on electric reliability issues. In those meetings, he said, "the view was unanimous" that the electricity system is operating on the edge and if problems are not addressed, "we'll all end up sitting in the dark."

Next week, the House Commerce Committee is expected to consider legislation aimed at dealing with reliability concerns. The Senate last week passed a bill that would create a self-regulating industry organization charged with monitoring and assuring the reliability of the power grids. The Federal Energy Regulatory Agency would oversee this "self regulation."

"The existing scheme of voluntary compliance with voluntary industry reliability rules is simply no longer adequate," said Sen. Frank Murkowski, R-Alaska, chairman of the Energy and Natural Resources Committee.

But Richardson wants a broader bill—as do some key House Republicans— that would address other aspects of electricity deregulation. Without moving forward on the restructuring of the electricity industry, many reliability problems cannot be fixed, he contends.

Electricity industry experts maintain that power outages will remain a part of every summer as long as demand continues to grow faster than new power plants and transmission lines can keep up.

"We're running a 1930s distribution system (that) . . . needs to be upgraded," Roger Gale, president of industry consulting firm PHB Hagler Bailly, recently told a congressional panel.

Meanwhile almost half of the states have moved toward adopting—or are planning to adopt—a more competitive electricity market, putting additional strains on the system, many industry experts believe.

"A lot of electricity is being bought and sold. . . . The system is stressed," says Bill Brier, vice president for communications at the Edison Electric Institute, the trade group for investor-owned utilities.

New power plants, mostly small, natural gas-fired units, have been built since last summer in the Southeast, Midwest and Texas, easing supply concerns for this summer. But few plants have been built in the West and Southwest. In New England, most of the new generation is still in the planning stage.

"Companies have been very gun-shy to make investments (in new plants and power lines) because the rules aren't clear," Brier says. While 24 states have taken some action on deregulating the power industry, Congress has been embroiled in disputes over how much say the federal government should have in moving toward a more competition.

The Los Angeles Times

Demand for Electricity Tests Power-Grid Operator Deregulation: Acting as a traffic cop on the electron freeway, young agency faces tough task amid shortages.

By NANCY VOGEL

FOLSOM,

Calif.—Electricity first flowed from a water-driven powerhouse in this city in 1895, running 22 miles down a single wire to move streetcars and light the Capitol in downtown Sacramento. Today the electrical cord for California's trillion-dollar economy runs through here, though it's tougher to find than a wire strung across oak-studded foothills. In an unremarkable office building in this city are the banks of computers and 408 employees who controlCalifornia's electron freeway. They call themselves the California Independent System Operator, or Cal-ISO.

Every four seconds this nonprofit, 2-year-old creation of the Legislature balances California's consumption of electricity against the energy poured into three-quar of California from power plants here and across the West. This summer, for reasons far more profound than hot weather, that's a nerve-jangling job, and the system operator has shot out of obscurity lately with news of rolling brownouts, a barge-based power plant on San Francisco Bay,oaring electric bills in San Diego and price caps in what is supposed to be an unfettered market for electricity.

"The management and staff at the ISO have been put under incredible stress over the last several weeks,trying to keep the lights on," said Jan Smutny-Jones, head of the board governing the system operator. Rarely has California's wiring been more volatile or valuable.

It is two yearssince deregulation of the state's $28-billion electrical industry was launched and a decade since the construction of significant new sources of energy.Electricity consumptionis rising at the pace of about two major power plants per year and a computer-based economy is more dependent than ever, not just on electricity but on electricity that flows without surge or sag. Suddenly it seems the seventh-largest economy in the world cannot take power for granted.

"The system is severely, severely stressed," said Daniel Nix, a deputy director of the California Energy Commission. "We're in a transition period."

"Valley of despair" is what S. David Freeman, general manager of the Los Angeles Department of Water and Power, calls it. Before he took over the DWP Freeman helped establish Cal-ISO, and he credits its staff with doing an excellent job.

"They've got a new system that hasn't got its britches on and the old system has been abandoned," said Freeman. "They're relying on a marketplace that's about as volatile as a Mexican jumping bean.As gatekeeper of the power grid, the system operator is supposed to act like an air traffic controller.

Its job is to regulate the flow of electricity on the high-voltage transmission lines built and once controlled by Southern California Edison, Pacific Gas & Electric Co. and other private utilities.When lawmakers voted in 1996 to open California's electrical market to competition, they figured those utilities would enrich themselves and stifle competition if they controlled the power lines. Better to have a nonprofit guardian, lawmakers figured. But air trafficcontrollers aren't supposed to set the price of airplane seats, and that's the unenviable position of Cal-ISO lately, said Smutny-Jones. Imposing Price Cap When a heat wave hits and private utilities have failed to order enough electricity a day ahead to satisfy their customers' air conditioners and computers, it's up to Cal-ISO to find the electricity to fill the gap and keep the transmission lines humming.

"We've had several days in the last several weeks where the ISO has had to go out and find, say, 12,000 megawatts of power in a few hours, and when you do that you pay through the nose," said Smutny-Jones. After the system operator was forced to pay the record price of $9,999 per megawatt July 13, 1998, its board of governors imposed a price cap that now stands at $500 per megawatt. (For comparison, the city of Los Angeles was consuming 4,248 megawatts of electricity at 3:26 p.m. Friday, according to DWP.) Among those pushing to lower the price cap to $250 per megawatt—to be considered by the 26-member board of governors today—is state Sen. Steve Peace (D-El Cajon), a chief architect of the 1996 deregulation law. Unlike most Californians, his constituents are not buffered from soaring electricity costs. That's because San Diego Gas & Electric is the first utility under the 1996 restructuring law to finish selling off its assets and thus free itself from a Legislature-imposed freeze on rates.

In the last 45 days the electricity portion of homeowners' monthly bills in San Diego has increased by $47, or 240%, on the average.

"This is just the beginning," said Michael Shames, executive director of Utility Consumers' Action Network in San Diego. "This is obscene."

For the rest of California, said Shames, San Diego consumers are "the ghost of summer future."

In this new electricity world, what hurts San Diego consumers has helped Los Angeles, whose citizen-owned utility is in the "either smart or lucky" position of having enough electricity from its hydropower, gas and coal-fired plants to sell to Cal-ISO, Freeman said.

"We're making a terrific profit," he said, selling for 75 cents a kilowatt-hour electricity that costs 7or 8 cents to generate at most. The profit—as much as $5 million on the hottest days—is being used to shrink the department's debt.
Still, Freeman said he would support a lower price cap.
"They shouldn't have started the era of competition until there were enough power plants and transmission lines to be sure you had an adequate supply," he said.
Energy experts say there would be more power to sell in California if rapidly growing cities such as Phoenix and Las Vegas weren't sucking up what had been surplus power on the electrical grid that covers the West, from British Columbia to Baja California.
A hiatus of roughly a decade in the construction of major power plants in California doesn't help, either. Nervousness about deregulation dissuaded private energy producers from investing in California until recently. The state has approved construction of five new plants since 1996, with 14 more in the works, said Nix, but it will be several years before those new generators pump electrons into the grid.
Even that won't be enough to guarantee reliability. Places such as San Francisco,the Silicon Valley and San Diego suffer from inadequate transmission capacity, experts say, so even if power plants are generating enough electricity to meet demand, it can't reach customers. On June 14, that's what happened in the San Francisco Bay Area, when Cal-ISO ordered the Pacific Gas & Electric Co. to cut off power to 97,000 customers for as long as 90 minutes.

On June 30, Cal-ISO staff proposed installing a floating power plant on a barge in San Francisco Bay to help meet demand in that region, which shot up 10% between June 1999 and June 2000.

Such a plant probably couldn't obtain permits and start operating until next summer, if at all, sayCal-ISO board members. In the meantime, some businesses are taking care of themselves.

Bob Hepple, president of c*Power, a four-month-old company that builds small, on-site power generators for data centers, telecommunication companies and other firms, said business is "explosive."

"We have rolling brownouts . . . in the high-tech capital of the world," he said. "They'll pay millions to make sure their power doesn't ever go out. They're starting to realize the fragile nature of the grid."

* *

Power Up

California's electrical system is most stressed on hot summer days when peak demand—the total draw on the electrical grid at any instant—soars. The chart below shows how that peak demand has increased since 1990. It is expected to grow at an average annual rate of 1.7% over the next decade.

* *

POWER FACTS

* California's electrical grid offers 99.9% reliability, meaning that a customer can expect about eight hours of power interruption each year. High-tech industry officials say they need "six 9reliability"—reliability of 99.9999%, or possible interruptions of eight seconds each year.

* *

* On average,California imports from other states 25% of the electricity it consumes.

* *

* So far this summer, the California Independent System Operator, which controls the electrical grid spanning three-quarters of California, has declared four Stage 2 alerts in which power reserves are so low that large commercial customers are asked to voluntarily cut back power consumption. Four such emergencies were declared in 1998, and one was declared last summer.

* *

* Air-conditioning accounts for 28% of California's peak demand for electricity, with half of that demand in homes and half in commercial and industrial buildings.

* *

Sources: California Independent System Operator, Silicon Valley Manufacturing Group, California Energy Commission, electric power guide at About.com

Megawatt Daily
Cal-ISO to revote price cap motion
The California Independent System Operator (Cal-ISO) board of governors will meet in special session today to reconsider last week