CTC: The Ultimate Shock Absorber

*By Fereidon P. Sioshansi**

During the long and acrimonious restructuring debate in California, the state legislature decided–correctly–that the only practical way to deal with the sticky issue of utility stranded costs was to face up to it. And they did. California Assembly Bill 1890 (AB 1890), which formally restructured the electric power sector in the Golden State and introduced full retail competition in one gigantic step, provided rather generous–some critics would say, too generous–provisions for recovery of stranded costs. The three investor-owned utilities (IOUs) in the state were given an opportunity to recover these costs over a 4-year transition period through a non-bypassable competition transition charge, or CTC. This won the support of the IOUs and their shareholders–a major political force in the state.

From the start, everyone knew that large customers would do well under competition. But what about the small consumers? There were genuine concerns that all the good deals would be taken up by the large customers, leaving the little guys with little or no benefits from restructuring. To placate this important constituency, the politicians decided on an automatic and immediate 10% bill reduction for residential and small commercial consumers–no ifs and buts about it. But, who would pay for this 10% discount? The politicians, never at a loss for innovative financing schemes, found the perfect solution: securitization. By issuing low-interest bonds to recover a portion of their stranded costs, the IOUs could finance the 10% bill reduction.

The resulting compromise has been showing up on IOU customer bills in California every month since January 1998 (see the accompanying sample bill). Together, the CTC and the trust transfer amount, or TTA, allow the IOUs to recover both their stranded costs and fund the 10% legislatively mandated bill reduction for residential and small commercial customers. Few take notice, and fewer understand what it means or how it works.

The TTA, in particular, has been the source of much confusion and negative publicity. On the surface, it appears that the average consumer is paying more for the TTA than the 10% discount received. Many consumers interpret this as a negative bargain. It is confusing. But, in principle, it is straightforward. Consumers are paying a premium over a 10-year period–the maturity of the securitized bonds–to receive the immediate 10% bill reduction. It is similar to refinancing one's home mortgage to reduce monthly payments. Despite all the complexities and the confusion, there actually is a real, automatic, and immediate 10% bill reduction. Small consumers are paying 10% less than what they would have paid had there been no AB 1890. And, consumers do not have to do anything to take advantage of this. By sticking with their current utility distribution company, or UDC, they automatically get the 10% discount. Politicians are not as dumb as they sound!

The scheme gets even more complicated because there is an overall rate freeze in effect during the 4-year transition period in California. Since the monthly weighted average price of energy–set by the Power Exchange (PX) –varies from month to month, the CTC has to act as a shock absorber to compensate. Consequently, the CTC tends to be high–i.e., allowing for rapid recovery of stranded costs–when the average PX price for the month is low. The reverse happens during months when the PX price soars–such as during the hot summer months in California. As the Table below illustrates, when the PX price gets too high, the CTC becomes negative to maintain the overall rate freeze. During these months, the IOUs do not recover any stranded costs. The TTA is not affected by variations in the PX price.

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The Benefits And Complexities Of Restructuring

Sample bill for residential utility distribution company (UDC) customer receiving the legislatively mandated 10% bill reduction

Item		Amount
Total Charges		$78.19
Legislated 10% Reduction		7.82 -
Net Charges		$70.37
The net charges shown above include the following component(s). Please see definitions on Page 2 of the bill.		
Electric Energy Charge	$0.04446/Kwh*	$38.59
Transmission		2.90
Distribution		22.13
Public Purpose Programs		2.78
Nuclear Decommissioning		0.35
Competition Transmission Charge (CTC)		10.40 -
Trust Transfer Amount (TTA)		14.02

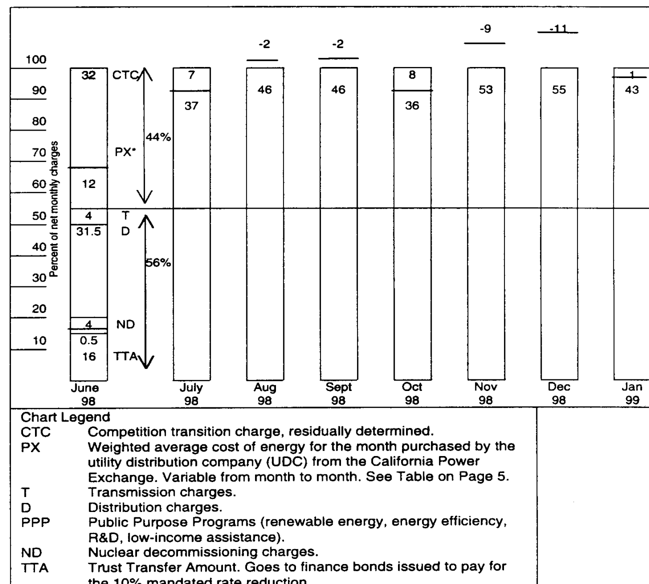
*This rate is based on the weighted average costs for purchases through the Power Exchange. This service is subject to competition. You may purchase electricity from another supplier. (Call 1-800-743-0040 for a supplier list.)

SOURCE: Pacific Gas & Electric Co.

CTC: The Ultimate Shock Absorber*

The competition transition charge, or CTC, is residually determined every month, which means it fluctuates to compensate for variations in the PX price.

*The percentages shown are rounded and apply to PG&E



It's Anybody's Guess

The weighted average cost of energy as determined by the California Power Exchange for selected months of 1998-99

Month*	¢/kWh
June 98	1.258
July	3.746
August	4.732[1]
Septebmer	4.456[1]
October	3.481
November	4.371[1]
December	4.4448[1]
January 99	3.451

Source: PG&E residential bills, 1998-99
*The actual billing cycle does not generally coincide exactly with the calendar months.
[1] High PX price resulting in negative CTC. See chart on previous page.

Because of the variability of the PX price, it's anybody's guess how long it would take the three big IOUs to recover their stranded costs. The regulators, aware of this, have required the IOUs to keep detailed records on their recovered stranded costs. (There was one such day of reckoning in March; see article below.) AB 1890 stipulated that the utilities would cease collecting any CTC–except for a few specific items–beyond the 4-year transition period, regardless of any shortfall. However, they would stop collecting the CTC earlier if they have recovered their full stranded costs.

SDG&E: Stranded Costs? What Stranded Costs?

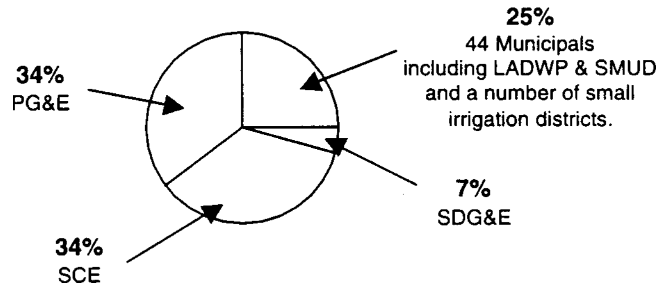
The three large investor-owned utilities (IOUs) in California had a day of reckoning in March with the California Public Utilities Commission (CPUC). The CPUC periodically checks their books to see how the recovery of stranded costs through the competition transition charge (CTC) is progressing. The IOUs, of course, would like to collect as much and as fast as allowed under AB 1890. The CPUC, on the other hand, would like to make sure that the IOUs stop collecting the CTC as soon as they have recovered their allowed stranded costs. It is the usual regulator versus the monopoly cat-and-mouse game.

San Diego Gas & Electric Company, now a unit of Sempra Energy, had a bit of good news. It told the CPUC that it has already recovered most of its stranded costs. As if that weren't enough, the company has petitioned the CPUC to unilaterally reduce its rates by an additional 10% beyond the 10% already mandated by AB 1890. The CPUC couldn't be happier. Here is solid proof that restructuring is working, rates are dropping, customers have choices, and everybody is happy in the Golden State.

Is this cause for celebration, and what's behind SDG&E's early recovery of its stranded costs? Yes, a celebration–albeit a small one–may be appropriate, but let's not get too excited yet. SDG&E has always been a marginal player in California. It serves a relatively small number of electric customers in the San Diego metropolitan area, accounting for approximately 7% of the kWh sold in the Golden State–compared to roughly 34% each for Southern California Edison (SCE) and Pacific Gas & Electric Company (PG&E), the other two big IOUs (see Chart). The remaining 25% of the kWhs sold in the state come from 44 municipal entities and small irrigation districts that are not subject to CPUC regulations.

Who's Who In The Golden State

Approximate market share (by kWh) before restructuring



Aside from being a marginal player, SDG&E has been fortunate in the sense that it had very little in stranded costs to begin with. Its major liability was a 20% share in the San Onofre Nuclear Generating Station (SONGS), otherwise owned by SCE. Moreover, SDG&E has been able to eliminate much of its stranded costs through the sale of a few power plants at well above market value. Now, the company can boast that it will stop collecting the CTC two-and-a-half years ahead of schedule–and ahead of the others. It claims that its customers will reap $400 million in benefits as a result of the proposed 10% reduction in rates–this, in addition to the 10% already mandated by AB 1890. It must be sweet revenge for the ugly duckling that once had the most expensive electricity prices in California.

The news from the other two players was not as good. At the same CPUC hearing, SCE and PG&E claimed that they may need the full allowed duration of the transition period–through March 2002–to recover their stranded costs. Neither could say with any degree of confidence just when, given the considerable uncertainties about the PX prices over the next couple of years. The best they could do was produce multiple scenarios. The lower the average PX prices, the sooner they would be able to stop collecting the CTC.

PG&E, for example, in its official submission to the CPUC (18 February 1999), presented three scenarios based on average PX prices of $15, $25, and $35/MWh–all plausible numbers. It states that "because of the uncertainties surrounding … [the] assumptions, as well as the uncertainty associated with the PX price, it is not possible to develop any 'best' estimate of the end of the rate freeze period" (emphasis added). What other uncertainties–other than the PX price–is PG&E referring to?

- The market value of its vast and literally priceless hydroelectric facilities;
- The cost of reliability must-run (RMR) services;
- The cost of ancillary services which–along with the PX price–is highly uncertain;
- The volume and make-up of sales to retail customers (i.e., the UDC market share over the next two-and-a-half years;
- The outcome of regulatory proceedings with both the CPUC and FERC–there are many other items in dispute that would affect PG&E's stranded costs;
- The qualifying facilities (QFs) variable energy costs; and,
- The cost of purchased power, since PG&E must now buy all of the energy its UDC customers consume from the PX.

(continued on page 26)

Stranded Costs *(continued from page 25)*

So what's the answer? The best PG&E—and the story's much the same at SCE—can do is shown on the accompanying Table: you tell me the PX price—and a few other critical variables—and I'll tell you when I will stop collecting the CTC.

When Will It Ever End?

The end of CTC collection will depend, to a large extent, on the average PX price.†

Assumed Average PX Price*	CTC Collection Will Cease …
$15 per MWh	December 2001
$25 per MWh	March 2002
$35 per MWh	March 2002

SOURCE: PG&E filing to CPUC, February 1999

*The weighted average PX energy price for SCE for all of 1998 was 3.25¢/kWh or $32.50/MWh. The figures for PG&E are in the same ballpark.

†There are a number of other significant variables, the most important being the market value of hydro assets.

It's the usual answer: everything depends on everything else.

BIEE Announces Seminar Series

The British Institute of Energy Economics (BIEE) is planning a series of seminars to encourage debate amongst its membership on key energy policy issues in the run up to its September 20/21 Conference at St John's College Oxford. Mike Parker will be discussing "Developments in UK Energy Policy" at the DTI London on 12 May.

The seminars then move outside London, first of all to Scotland, where on 6th May the first Scottish parliament will be elected for almost 300 years, with a wide range of policies devolved to the new parliament. These powers include ability to vary income tax up or down by 3p in the pound, control of, for example, health, education, planning and building control, inward investment but excluding matters such as the constitution, foreign affairs, defence, and taxes. A seminar is thus scheduled for June 2nd, 5pm at the Centre for Energy, Petroleum and Mineral Law and Policy at Dundee University to discuss the "Impact of Scottish Devolution on the Energy Sector and North Sea Petroleum". Professor Thomas Waelde will address the border delineation issue and John Swinney, the SNP spokesperson on finance and a speaker from Wood Mackenzie have been invited. Professor Paul Stevens is hosting the event. The seminars then move to St Anthony's College Oxford when on June 24, 2pm the BIEE will be discussing "The Changing Role of OPEC in World Oil Markets". Dr Paul Horsnell of the Oxford Institute of Energy Studies is organising the seminar. The normal programme of BIEE presentations is continuing with Anna Walker of the DTI reviewing recent UK policy developments and Jonathan Stern looking at Russian gas and energy market developments. Callum McCarthy, Director General of the Regulatory Office for Gas and Electricity (Offer and Ofgas) will be addressing the BIEE AGM on November 1st.

Andrew Barton, Chairman BIEE

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