RESEARCH

Securitizing Stranded Costs

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Electric utilities historically have enjoyed protected monopolistic status, in return for an obligation to provide service to the customer base whenever requested. In return, utilities have made significant long-term investments and entered into long-term power purchase contracts with the expectation that these would be recoverable through customer rates. In 1992, the enactment of the National Energy Policy Act introduced wholesale electric competition into the industry. Since then, almost half the states have taken steps toward a competitive retail market by legislating or ordering frameworks for "retail access," through which all customers will be able to choose their own electric generation supplier. With a competitive market taking shape, many utilities have found themselves saddled with significant unrecoverable contractual and sunk costs, generically known as stranded costs. These stranded costs are not new, but rather have already been approved by regulators and are incorporated in existing utility rates as part of traditional cost-plus regulation. If utilities are to compete in a deregulated market, however, they cannot pass these stranded costs along to customers. In many cases, the inability of a utility to recover a significant portion of these costs would result in significant financial deterioration, and in the worst cases, insolvency.

As noted, many legislatures and state regulatory commissions have established the means by which utilities can avert financial deterioration while also providing customers with lower rates. Asset-backed securitization is one such alternative. In several states, such as California, Pennsylvania, Massachusetts, Texas, New Jersey, Michigan, New Hampshire, Connecticut and Illinois, legislatures have enacted laws that enable utilities to finance the recover-y of at least a portion of their stranded costs by issuing bonds backed by a statutory right to recover stranded costs.

In December 1997, the three California investor-owned utilities: Pacific Gas & Electric Co., Southern California Edison Co., and San Diego Gas & Electric Co., securitized more than $6 billion of their approximately $28 billion of total stranded investment. During 1998, Illinois Power Co. securitized $864 million followed by Commonwealth Edison Co.'s $34 billion securitization transaction. In 1999, one Massachusetts utility and three Pennsylvania utilities completed securitization transactions. Boston Edison Company issued $725 million of rate reduction certificates. PECO Energy Co. issued $4 billion, PP & L Inc. issued $2.42 billion and West Penn Power Company issued $600 million of transaction bonds. In 2000, PECO issued an additional $1 billion and in 2001, utilities in New Jersey, Connecticut, Michigan, and Texas may come to market with rate reduction bonds.

Utilities in states that have not yet addressed industry restructuring through legislative action or regulatory order, such as Indiana, Kentucky, Florida, and North Carolina, are generally low-cost producers with limited, if any, stranded assets. These states are much less motivated, therefore, to pursue industry restructuring, let alone securitization, at the present time. Whether or not these states ultimately pass relevant legislation, however, the relative competitive standing of their utilities will inevitably be diluted as high-cost utilities in other states shed a substantial portion of their high-cost assets through securitization.

Standard & Poor's believes that securitization of stranded costs is at least neutral, and generally positive for utility credit quality. The utility acquires cash up front, instead of receiving an increasingly at-risk revenue stream over time. Proceeds of the securitization are expected to be used principally to shrink a utility's total capitalization structure, including retiring debt that carries a higher coupon than that borne by the highly rated securitized bonds. In most cases, these interest savings are passed along directly to customers in the form of lower rates. Generally, the amount of rate reduction bonds that the utilities issued was designed specifically to generate a legislatively mandated rate reduction for customers.

Business and Legal Overview

What Are Stranded Costs?

Stranded costs are broadly defined to include any costs that were incorporated in the traditional regulatory cost-plus scheme that cannot be passed on to customers in a competitive marketplace. The most significant of these stranded costs are investments in high-cost nuclear and fossil plants. They also include deferred and capitalized operating costs, conservation and economic development expenditures, nuclear decommissioning costs, and long-term contractual obligations with high cost nonutility generators.

In the past, utilities constructed large, centrally located plants to gain economies of scale in producing electricity. Extremely long construction lead times and overly aggressive demand forecasts caused management to err on the side of oversupply to meet customer demand. Furthermore, the monopoly environment meant utilities lacked a strong incentive to contain costs. Indeed, the larger a utility's rate base was, the more investment on which the utility could earn a return. In addition, costs were exacerbated by circumstances. The last round of base-load construction occurred in the late 1970s and early 1980s, which was an era of high inflation and high interest rates. Finally, the nuclear incident at Three Mile Island in 1979 resulted in heightened Nuclear Regulatory Commission supervision, extending the timetable for plant completions and elevating capital costs significantly.

Since that time, new technologies have greatly reduced the cost of building generating facilities. Even more importantly, the economics of building smaller plants have continued to advance. The lead time for construction has been drastically reduced, from as much as 10 years to as little as 18 months. This reduction is in part due to the construction of much smaller-scale highly efficient plants. As a result, the cost of incremental generation today is significantly lower than the embedded cost of plant of most utilities. The differential is most evident in nuclear plants. For instance, the 1,143 megawatt (MW) Nine Mile Point 2 nuclear plant, operated by Niagara Mohawk Power, was completed in 1988 at a cost of about $5,000 per kilowatt (kW), after a construction period of more than 10 years. This compares with a 500 MW gas-fired combined-cycle plant today that can be built in about 18 months at a cost of $450 to $550 per kW. While prudency hearings did lead to significant write-offs during the rate base proceedings of Nine Mile Point 2, the bulk of these costs were simply included in rates and are now being recovered from customers over a lengthy period of time.

Developments in Industry Environment

The enactment of the National Energy Policy Act of 1992 (NEPA) marks the beginning of the end of the last major government-protected monopoly. NEPA authorized the Federal Energy Regulatory Commission (FERC) to mandate that utilities become open-access common carriers for wholesale electric sales, known as wholesale wheeling. Wholesale sales are bulk power sales between utilities or between a utility and a third-party producer. If two utilities are not interconnected, they would need access to a third party's transmission network to complete such a transaction.

The ability of a utility to sell power to an end user that is not within its franchise service territory, or the sale of power from an independent power producer to an end user, is called "retail wheeling." Currently, utilities are not permitted to engage in retail wheeling. However, retail customers, aware that there may be cheaper power sources than their current supplier, are pressuring state regulators to permit them to buy power from alternative suppliers. While most regulators agree that competition will lower the price of power, some assert that the objective is not merely to lower rates, but to provide customers with the option to choose their power provider. The vast majority of utilities and regulators concur that retail wheeling is inevitable, so states have had to grapple with how to make the transition from a regulated to a competitive environment. As mentioned earlier, many states have passed laws to phase in direct access to all customers and most of these legislative initiatives include securitization of stranded costs as a means of reducing utilities' financial exposure to a competitive retail environment.

Recovery of Stranded Costs

Vertically integrated electric utilities provide customers with three basic functions: generation, transmission, and distribution. Because of legal, regulatory, and technological advances, generation no longer displays monopoly characteristics. Transmission and distribution, or the "wires" function, on the other hand, will likely remain natural monopolies for the foreseeable future since it would be prohibitively expensive, and environmentally difficult, to construct redundant wires. Transmission consists of the high-voltage system that moves power in bulk from generating plants to an electric distribution system or a load center. Distribution receives stepped-down power, which is then transported at lower voltages to individual end users.

As part of various state legislative initiatives, utilities are being required to functionally, if not legally, disaggregate the vertically integrated components of their business. The costs of each function will be determined and itemized, or "unbundled," on customers' bills. While customers may purchase the actual electrons from a source other than their local utility, they must continue to transport this power over the distribution wires owned by their local utility. The local utility will use its wires system to charge customers

for the services it provides, which will include transmission of power bought from other suppliers. Other services, such as billing and metering, could be maintained by the utility or could be opened to competition as well. Any stranded cost that is identified, isolated, and by mandate recoverable in utility rates, will also be recovered as a "wires charge;" it cannot be recovered as part of a generation charge, since customers may purchase generation from an alternative source.

Stranded costs, which have been realized as such only with the prospect of a competitive market, are included in current utility rates, but they are being amortized over as long a period as 30 to 40 years. Utilities need to accelerate the recovery of these above-market costs as quickly as possible if they are to lower their rates in preparation for a competitive environment.

Statutory Securitization of Stranded Costs

Until now, securitization of stranded assets has been made possible by state statute. In general, such statutes provide that the stranded assets themselves, plus interest on any bonds backed by stranded assets, the costs of servicing the bonds, and the costs of bond issuance all be collected through imposition of a tariff that is collectible from the utility's customers. While differing in particulars, the legislation in Pennsylvania, California, Illinois, Massachusetts, Texas, Connecticut, New Jersey, and elsewhere shares certain characteristics that are significant from a rating perspective.

The statutes specifically provide for securitization of the stranded costs through their sale to a financing subsidiary, and ultimately, to a trust that issues the bonds. The statutes award true sale status to the transfer of the stranded assets to a finance subsidiary. This should help support the legal conclusion that the transfer constitutes a true sale for bankruptcy purposes.

The statutes also provide that any proposal for a securitization of stranded assets be approved on an irrevocable basis by the relevant utility regulatory commission. The commission must set a tariff schedule. A tariff would be included in the ordinary bills sent to customers, and would amortize the stranded assets over the life of the proposed securitization. The tariff would be a separate itemized charge on the customer's bill, and could be either a fixed charge or tied to electricity usage, in either case included in the utility's wires charge. In scheduling the tariff needed to amortize the assets fully, the commission will take into account the utility's forecast regarding the projected size and demographics of its customer base. Where the tariff is tied to electricity usage, predicted customer usage will be important.

The tariffs that are actually collected from customers may fall short of what was originally anticipated. In addition to defaults in bill payments, the customer base might decline due to economic and/or technological factors, or usage might vary from what was originally predicted. This might happen, for instance, if the winter is unusually warm or the summer particularly cool. These are credit risks that could impact the ability of the tariff to amortize the assets fully. To address these risks, the legislatures have created a statutory form of credit support, known as the "true-up" mechanism. The statutes provide that the utility periodically apply to the commission for a readjustment of the tariffs. The commission must then readjust the tariffs charged to customers, so that the bond amortization schedule is met. This minimizes credit risk, except in the tail end of the transaction after the final true-up has occurred. Liquidity risk will, of course, exist during the periods between true-ups, to the extent that collection shortfalls occur.

The true-up mechanism also may effectively minimize prepayment risk. While there may be a tariff collection shortfall, it is also conceivable that excess collections may be received. This might occur, for example, if the customer base grows at a greater rate than originally anticipated when the tariffs were established. If collections exceed expectations for a particular period, the true-up mechanism could potentially reduce the remaining tariffs accordingly, so that the remaining transaction amortizes as scheduled.

When the utility applies for a true-up, the commission may not grant it immediately. The commission's delay will add to liquidity risk, because the shortfalls in collections to be remedied by the true-up will last for a longer period, until the commission finally grants the true-up. A delay by the commission will not create credit risk during the transaction, because once the true-up is in place, the adjusted tariff will take into account any collection shortfalls caused by its delay. But a delay in the true-up could result in a credit loss at the tail end of the transaction. The commission might take so long to grant the true-up that the final true-up never occurs. The statutes prevent this potential credit loss, as well as limit liquidity risk caused by a delay, by setting a deadline for implementation of the true-up. For example, California requires that the commission implement a true-up within 90 days of each anniversary date of the transaction. Other statutes simply require that the true-up filing with the commission becomes effective as early as the subsequent month.

The duration of these transactions and the ability to impose true-up periods and tariff collections

indefinitely depend initially on whether the statutes impose a limit on how long the tariff may be collected from the utility's customers. Even where no limit is set as a statutory matter, the final true-up period, and the deadline for tariff collection, will depend on the legal final maturity date set for the bonds.

A utility might change hands for some reason, or file under Chapter 11 of the U.S. Bankruptcy Code. Such an event could strike at the heart of a potential securitization. Stranded assets will not be recovered unless the utility continues to provide electricity, bill its customers, transfer the tariff to the securitization trust, and apply for true-ups when necessary. The statutes address this problem by requiring that any successors to the utility, whether through bankruptcy, merger, or sale, must perform all of the utility's obligations in connection with the securitization.

The statutes provide another feature, by providing that, contrary to what would usually occur under the Uniform Commercial Code (UCC), there is a continued security interest in collections that have been commingled with other funds of the utility. This eliminates the usual credit risk associated with commingled funds in the event of a bankruptcy of the utility, although it fails to alleviate the liquidity risk and potential credit risk caused by the automatic stay (see Protection Against Credit Risk Caused By Commingling).

Finally, the statutes purport to create new property interests that must be perfected in a manner different from a UCC security interest. However, there is the possibility that stranded assets might still be considered subject to the prior lien of existing mortgage bonds. As a result, proceeds of the securitization might need to be applied to pay down the debt secured by the prior lien. This would, in any event, be positive from a credit perspective, because the bonds being retired (typically general obligation bonds bearing the rating of the utility) would have a higher interest rate than the 'AAA' rated securitized bonds used to retire the obligations.

Significance of Statutory Securitization
To date, stranded cost securitizations rated by Standard & Poor's have been based on legislation promulgated specifically for that purpose. Nevertheless, Standard & Poor's understands that, as a regulatory matter, state public utility commissions have, de facto, historically permitted recovery of stranded costs through rate adjustment.

While public utility commission regulatory action may well be sufficient to accomplish a securitized recovery of stranded costs, Standard & Poor's believes that there may be certain advantages to a legislation-backed securitization. Statutes have the benefit of having undergone the political process. Affected interests are given the opportunity to introduce, and argue for, their respective views. Hearings, drafting and amendments, floor debate, and overall legislative, and press and public scrutiny is the process by which political compromise is achieved and consensus built. The political process is viewed as investing the resulting legislation with a considerable degree of stability and support.

Viewed from the perspective of legal capacity, legislation has other advantages. At the heart of stranded cost securitization is the creation of a property right in the transition charges that serve as the basis for debt service. While it is clear that state legislatures are empowered by due process of law to create property rights, and to define and record how these rights are to be enjoyed, the ability of a state public utility commission to achieve the same end by regulatory compact may not be as certain.

Statutory status provides both constitutional and political protection against the risk that the creation and pledge of securitization property might be impaired by subsequent amendment. Historical precedent indicates that a legislature is unlikely to reverse itself once it has enacted a statute. Even if a political reversal were to occur, the Pennsylvania, Massachusetts and California statutes recognize that the bondholders possess certain constitutionally protected rights. Both statutes provide that if the right to recover stranded assets is compromised in any way, the bondholders are entitled to adequate compensation.

Nevertheless, in jurisdictions where public utility commissions may reasonably be viewed to have the capacity and authorization to order a recovery of stranded costs through a securitization-type procedure, and in which the commission has a stable history of consistent regulatory action, and in which the courts have paid regular deference to commission order, Standard & Poor's will consider regulatory-based recovery procedures case by case. However, any such consideration will necessarily involve a comparison by Standard & Poor's of the proposed regulating action and its enactment in contrast to rated, statute-based recovery plans.

Overview of Stranded Cost Securitization

Differences From Traditional Asset-Backed Transactions

Several key aspects differentiate the securitization of stranded costs from the securitization of more conventional asset types.

Cash Flow Receivables

In a typical securitization, the originator of the assets transfers a pool of receivables to a trust and receives payment based on an agreed-upon value for those receivables. The key in this case is that the receivables have already been created. In contrast, stranded assets are not traditional receivables. Although the statutes create a present property right to future collection there is no initial cash flow backing the debt. Stranded assets represent the present right to the cash flow from receivables that will be created in the future when performance, in this case power generation and delivery, has been provided. But until this performance by the utility company takes place, the customer is not obligated to make any payments. Power generation is thus critical to assure full and timely payment to securityholders. As a result, there is a greater dependence on the utility as seller/servicer to do more than just collect payments on existing receivables and liquidate collateral to the extent needed.

Dependence on Servicer

Servicer bankruptcy filings generally cause a change in servicer in most asset-backed transactions to prevent any disruptions in the required servicing and collections on the portfolio. Therefore, a substitute servicer must be ready and willing to take over all servicing responsibilities, if necessary. But unlike in typical securitizations, the transaction cannot fully rely on a substitute servicer. A utility does not just collect payments; it must continue to provide power. Because provision of electricity is fundamentally a necessary service, however, Chapter 7 liquidations are unlikely. In contrast, utilities will continue to operate in Chapter 11 reorganization, and thus, provide power and enforce collection from customers. Security is provided by the statutory mandate that collection obligations must be assumed by any successor corporation, including successors pursuant to reorganization, or otherwise. Due to the regulated nature of the industry a state-by-state review of successor servicing arrangements will be performed by Standard & Poor's.

True-up as Credit Support

Credit support is entirely structured within the finances of the typical securitization. In contrast, in these transactions credit support has been provided by the statutory true-up mechanism. The parties must initially come up with a proposed amortization schedule. This schedule determines the tariff to be charged to recover the stranded costs, as well as the costs of the securitization itself. In setting this tariff schedule, the utility makes certain assumptions about charge-offs and sales over the following year or even decade. These assumptions will necessarily be inaccurate, especially as the date of forecast becomes increasingly remote. As a result, the stranded costs collected from customers could be less than those needed to repay the bonds. The true-up addresses this risk. The statutes provide that the utility periodically apply to the commission for a readjustment of the tariffs. The commission must then readjust the tariffs charged to customers. This effectively eliminates credit risk, except in the tail end of the transaction after the final true-up has occurred.

It should be understood that the true-up is not quite the same thing as an unlimited cash collateral account. Because the true-up will only be as good as collections in the following year, the amount of a current year's shortfall will not be fully recovered in the next year, due to charge-offs and forecast error occurring in that year. The amount will decrease over time, however, as successive true-ups are implemented. Where statutes do not place a limit on the tenor of the bonds and permit indefinite true-ups, the legal final maturity can simply be extended as a structural matter to gain the benefit of additional true-ups. This allows for as many true-ups as necessary to reduce the shortfalls that cannot be collected because they occur in what may have been originally contemplated as the final year of the transaction.

The true-up can make the amortization schedule for the bonds more predictable, unless dramatic consumption changes occur. This is because the true-up may adjust the amount payable to the trust by the customer base to the extent that there has been a shortfall or surplus in the prior period.

Perfection Mechanisms

As stated above, the statutes provide for their own methods and location for filing and perfecting stranded assets. This may or may not result in the conclusion that stranded assets are new property interests not subject to UCC filing and priority rules, and thus are not subject to prior liens under the UCC.

Overcollateralization as Additional Credit Enhancement

As mentioned earlier, the true-up mechanism will play an integral role in the transaction structure. The frequency of the true-up, for example, will influence the need for additional credit enhancement. Overcollateralization is the most likely form of credit support. Overcollateralization would cover the risks in the stub period following the final true-up, as well as make up for past shortfalls in collections that were never fully trued-up in the past.

Sale Accounting and FAS 125

Stranded cost securitizations do not possess sale status as an accounting matter under FAS 125. The Security Exchange Commission's Office of Chief Accountant has indicated that while the utilities may be able to sell the right to recover stranded costs as a legal matter, they will not be able to remove the assets (and associated debt) from their balance sheets under FAS 125. Nevertheless, as long as the transaction is structured as a true sale for legal purposes, Standard & Poor's will "back out" for analytical purposes nonrecourse debt and associated carrying costs from the utility's consolidated financial statements. While off-balance-sheet treatment would have enabled a more clear-cut analysis, Standard & Poor's will attempt to recognize the economic (as opposed to the accounting) reality.

Debt for Tax Treatment

Any utility intending to securitize stranded costs will likely seek a private letter ruling from the IRS that states that the sale of the assets constitutes a "debt for tax transaction." In other words, the sale would not result in the immediate recognition of income. If the sale were deemed to provide immediate income, the utility would incur an immediate tax liability as well. This would destroy the economics of a securitization.

The Rating Approach

Specific credit and legal risks that arise in securitizing stranded costs are addressed below. Standard & Poor's pursues a general rating methodology that attempts to stress in cash flows the ability of the true-up mechanism to ensure timely payment of interest and repayment of principal. In addition, it attempts to determine the number of true ups needed to meet these payments, that is, the structure's ability to meet its legal final maturity.

Credit Risks

Inaccuracy in Forecasting

As mentioned earlier, the funds necessary to pay the stranded assets of the issuer are dependent on the tariff set by the commission and collected from the utility's customers. Tariff schedules are compiled for each customer class so that, taken together, the tariffs charged will amortize the stranded assets over the life of the securitization, while making timely interest payments. The tariff amounts themselves are based on estimates of cash flows to be collected from the customer base. The tariff amounts are thus determined based on such factors as the utility's forecast of population growth or decline, and seasonality in expected usage.

A shortfall in tariff collections can be caused by lower than expected usage due to:

- Unanticipated customer migration (anticipated migration is included in the forecasting). Residential and small business customers are considered low risk in terms of customer migration. Large industrial customers, on the other hand, are considered a significant risk that requires additional stress to the cash flows (see Cash Flows). Additionally, as the term of transition bond issued exceeds the 6-8 years historically seen, technology driven customer migration increases significantly and begins to impact usage from commercial and small business customers.
- Unanticipated weather conditions. Seasonal weather fluctuations are studied, and typically accounted for in setting the tariff charge.

Forecast error negatively impacts liquidity on the bonds and may "push out" the maturity of the bonds by requiring additional true-ups before the bonds can be paid out. To capture this risk, historical forecasting error is stressed at a certain multiple depending on the rating sought.

Where the tariff is recoverable from large industrial and commercial customers, Standard & Poor's will require data stratifying these customers by revenues generated. The cash flows will be additionally stressed to account for a potential loss in revenues caused by relocation of those customers with a high concentration risk in revenue generation for the utility.

Certain states have legislated rate caps on either the transaction charge for specific customer classes or on the total customer charge (i.e. through mandated rate reductions). Standard & Poor's will review the cash flow models to confirm that these rate caps are respected in stress scenarios.

Higher-Than-Expected Charge-Off Experience

Like other forecasting variables, anticipated charge-offs are included in forecasting for purposes of setting the tariffs. Charge-offs may be higher than expected based on historical experience due to a variety of factors, including economic changes and unforeseen disasters. To account for this risk, charge-off history is stressed by the multiple relevant to the rating sought.

Commingling by Aggregators

The recent mandated unbundling of generation, transmission, and distribution charges has paved the way for alternative generation suppliers. The consumer may choose to purchase its generation services from an alternative supplier, while continuing to pay transmission and distribution (wires charge) to the utility. As discussed earlier, the tariff would be included in the wires charge, so that collection of the tariff itself would not be endangered by the existence of competition for generation services. However, commingling risk could exist as a result of potential billing arrangements for the utility's transmission and distribution services on the one hand, and the alternative energy provider's generation services on the other.

Generally, alternative energy service providers (retail electric providers; third-party servicers) may provide a consolidated bill for their generation services and the tariff owed to the utility. Where this is the case, the energy services provider is liable to pay the tariff regardless of whether it has received collections from the ultimate users. As a result, the securitization is exposed to commingling risk, and the resulting loss of commingled tariffs, in the event of the bankruptcy of an energy services provider.

This risk can be mitigated by certain restrictions on the length of time that an energy services provider may commingle funds before consolidated billing and service is terminated. If the energy services provider becomes delinquent, direct and consolidated billing may cease and service and separate billing to the end-user customer would be made up for the tariff. This means that the aggregator could commingle funds for a number of days before consolidated billing were terminated. To address this risk, Standard & Poor's stressed cash flow runs eliminate one month of collections per year at the utility's peak billing cycle.

This or other risks involving alternative energy providers may exist in other stranded cost securitizations. Standard & Poor's will assess these risks and the resulting necessary cash flow stresses on a case-by-case basis.

Estimate of Tariff Based on Collections Curve

Generally, utilities are unable to allocate amounts received to various charges on the bill, so they were unable to calculate what percentage of collections constituted tariff collections. To address this problem, the utilities prepared forecasts of the percentages of amounts expected to be received during each of the following six months. These forecasts were based on collections curves developed periodically based on accounting studies and collections studies performed by the companies. For each monthly billing period, collections were estimated over six months based on the collections curve.

When the actual tariff remittances by customers are calculated (on the seventh month following each monthly billing period), either too much or too little may have been paid for that billing period. If the amount remitted has been less than the actual tariffs collected during that six-month period, the shortfall will be made up the following month out of the servicer's (the utility's) own funds. Thus, if the servicer is bankrupt (Standard & Poor's assumption), there is a risk the bondholders will lose that portion of the tariff. If the actual tariff amount has been less than the estimated tariff collections remitted to the trust, the servicer would be entitled to withhold the excess amount paid from the next month's remittances.

It is not clear whether this risk will be present in other securitizations. To date, the risk of lower-than-actual remittances has not been separately stressed in the cash flow runs. The one month of lost collections (see

Commingling by Aggregators) has been sufficient to cover this risk. Standard & Poor's also has relied on data provided by the company showing relative lack of volatility in the collections curve.

Higher Tariff

An increase in tariff resulting from higher true-ups might become burdensome to consumers. This risk might have a spiraling effect, because greater charge-offs or customer migration or decreased usage might result, which in turn would result in the need for increased true-ups. Standard & Poor's will assess this risk by examining the highest per kWh tariff charge reached under the relevant stress scenarios. This risk increases as the term of the transaction increases to 10-15 years given greater technological/migration risk.

Cash Flows

Two cash flow runs are generally required in rating stranded costs: a compounding forecast error run and an oscillating forecast error run, implementing the stress scenarios described below. These runs are created to test liquidity as well as the transaction's ability to meet the final maturity of each class of bonds in the transaction. They do so by creating scenarios where the true-up in the tariff amount (the reset of the tariff to reflect prior experience with actual collections and recover prior shortfalls in collections) continuously fails to reflect actual collections.

Compounding Forecast Error Run

The compounding forecast error run assumes a compounding stressed error in forecasting resulting in a continual decline in actual tariff collections over what was forecast for that year. Assume, for example, that during year one, sales are 90% of the original sales forecast, that is, forecast error reflecting a multiple of the average forecast error for the customer class, where actual collections are less than expected collections.

At the end of year one, the tariff charge is recalculated assuming that year two customer sales will be what was experienced in year one, that is, 90% of the original expected forecast. Instead, year two sales are only 81% (90% of 90%) of the original sales forecast.

The sales decline is generally based on a multiple of the absolute value of the largest historical non-weather-normalized forecast variance by customer class. This compounding is assumed to continue from year to year over the life of the transaction.

Oscillating Forecast Error Run

The oscillating forecast error run assumes a scenario where in one-year tariff collections exceed expectations, so that in the following year, the tariff is reset based on the prior year, only to experience a shortfall in actual collections. Assume for example that the appropriate stressed forecast error is 10%. During year one, sales are 90% (10% below) the original sales forecast. At the end of year one, the tariff is recalculated assuming that year two sales are also 90% of the original forecast. Instead, year two sales are 99% (110% of 90% level) of the original forecast. The tariff for the following year is reset assuming 99% of original forecast collections, only to receive 90% of originally forecast collections. This oscillation between 90% and 99% of original forecast is assumed to continue over the life of the transaction.

Legal Final Maturity

The legal final maturity dates on stranded cost transactions are often set at up to two years beyond expected maturities. This additional period acknowledges the long-term nature of the liabilities being rated, and the corresponding possibility that fundamental changes in technology might take place that further stress the transaction in an unforeseen manner. One currently known possibility is that over time customers may increasingly switch to self-generation, which would enable them to cease paying the wires charge and thus, the tariff. Certain transactions have reduced this period by requiring more frequent (e.g. monthly) true-ups during the final year or two of the transaction.

Legal Risks

Reliance on Commission to Implement True-Up, and Potential Delay in Approving the True-Up

Standard & Poor's believes that so long as the statute clearly specifies the maximum period before which

the commission is compelled to implement the true-up, any shortfall in collections resulting from the delay can be sized and factored into the cash flow projections. Certain structures may permit the application of principal collections as liquidity for any interest payments due to noteholders during any true-up delay. In the absence of such features, adequate provision for liquidity and additional credit support should be demonstrated to Standard & Poor's.

Adequate Provision

Law permits alteration or limitation of right to transition property and right to collect tariffs if "adequate provision" is made to the bondholders. Although there has been no conclusive demonstration as to what constitutes "adequate protection," and how such alteration or limitation would affect timely interest and principal payments on the bonds, Standard & Poor's, in rated transactions, has received legal assurances that any such alteration would be constitutionally prohibited were it substantially to impair the security for the bonds. While such assurances do not really define adequate provision, Standard & Poor's believes, in practice, that adequate provision should prove to be the functional equivalent of the pledged transition property.

Stranded Assets to Aid Industry Restructuring

Securitization of stranded assets provides an efficient method electric utilities can use to quickly free themselves from the high cost of stranded assets that prevents them from becoming players in the emerging competitive retail generation market. At the same time, the statutory true-up mechanism provides strong credit support that has withstood 'AAA' stress criteria applied by Standard & Poor's.

FEDERAL RESERVE statistical release

H.15 (519) SELECTED INTEREST RATES

Yields in percent per annum

For use at 2:30 p.m. Eastern Time

February 2, 2009

Instruments	2009 Jan 26	2009 Jan 27	2009 Jan 28	2009 Jan 29	2009 Jan 30	Week Ending Jan 30	Week Ending Jan 23	2009 Jan
Federal funds (effective)[1 2 3]	0.19	0.18	0.19	0.23	0.23	0.19	0.20	0.15
Commercial Paper[3 4 5 6]								
Nonfinancial								
1-month	0.21	0.19	0.16	0.24	0.19	0.20	0.20	0.15
2-month	0.24	0.29	0.31	0.27	0.26	0.27	0.26	0.24
3-month	n.a.	0.42	0.42	0.35	0.36	0.39	0.31	0.31
Financial								
1-month	0.47	0.29	0.31	0.40	0.37	0.37	0.42	0.34
2-month	1.00	0.90	0.94	0.89	0.94	0.93	0.65	0.63
3-month	2.15	2.04	2.14	2.21	2.24	2.16	0.83	1.10
3-month nonfinancial or financial posted by CPFF[7]								
Without surcharge	1.24	1.24	1.22	1.22	1.23	1.23	1.20	1.20
With surcharge	2.24	2.24	2.22	2.22	2.23	2.23	2.20	2.20
CDs (secondary market)[3 8]								
1-month	0.43	0.42	0.43	0.43	0.44	0.43	0.40	0.37
3-month	1.00	1.08	1.05	1.07	1.10	1.06	1.05	1.02
6-month	1.50	1.57	1.57	1.58	1.60	1.56	1.57	1.53
Eurodollar deposits (London)[3 9]								
1-month	0.75	0.75	0.75	0.75	0.75	0.75	1.00	0.89
3-month	1.75	1.75	1.50	1.50	1.50	1.60	1.78	1.73
6-month	2.30	2.30	2.40	2.40	2.50	2.38	2.33	2.41
Bank prime loan[2 3 10]	3.25	3.25	3.25	3.25	3.25	3.25	3.25	3.25
Discount window primary credit[2 11]	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
U.S. government securities								
Treasury bills (secondary market)[3 4]								
4-week	0.01	0.05	0.08	0.14	0.14	0.08	0.03	0.05
3-month	0.15	0.13	0.19	0.23	0.24	0.19	0.11	0.13
6-month	0.34	0.32	0.33	0.35	0.35	0.34	0.30	0.30
1-year	0.45	0.45	0.46	0.48	0.48	0.46	0.42	0.42
Treasury constant maturities								
Nominal[12]								
1-month	0.02	0.05	0.08	0.14	0.15	0.09	0.03	0.05
3-month	0.14	0.13	0.19	0.23	0.24	0.19	0.11	0.13
6-month	0.34	0.32	0.33	0.35	0.36	0.34	0.30	0.30
1-year	0.47	0.47	0.48	0.51	0.51	0.49	0.43	0.44
2-year	0.85	0.87	0.89	0.95	0.94	0.90	0.77	0.81
3-year	1.21	1.15	1.22	1.34	1.32	1.25	1.11	1.13
5-year	1.67	1.59	1.70	1.87	1.85	1.74	1.58	1.60
7-year	2.09	1.99	2.10	2.28	2.27	2.15	1.98	1.98
10-year	2.70	2.59	2.71	2.87	2.87	2.75	2.56	2.52
20-year	3.71	3.57	3.73	3.85	3.86	3.74	3.52	3.46
30-year	3.39	3.26	3.44	3.57	3.58	3.45	3.17	3.13
Inflation indexed[13]								
5-year	1.57	1.44	1.45	1.57	1.47	1.50	1.52	1.59
7-year	1.70	1.57	1.59	1.67	1.54	1.61	1.68	1.72
10-year	1.92	1.77	1.81	1.83	1.73	1.81	1.93	1.91
20-year	2.47	2.33	2.46	2.48	2.43	2.43	2.54	2.46
Inflation-indexed long-term average[14]	2.56	2.42	2.53	2.55	2.50	2.51	2.58	2.51
Interest rate swaps[15]								
1-year	1.24	1.21	1.15	1.16	1.25	1.20	1.14	1.15
2-year	1.51	1.51	1.45	1.48	1.55	1.50	1.41	1.42
3-year	1.86	1.86	1.79	1.84	1.94	1.86	1.74	1.75
4-year	2.12	2.13	2.05	2.14	2.21	2.13	1.98	1.99
5-year	2.31	2.32	2.24	2.33	2.42	2.32	2.15	2.16
7-year	2.59	2.59	2.50	2.62	2.70	2.60	2.40	2.42
10-year	2.85	2.84	2.75	2.89	2.98	2.86	2.65	2.66
30-year	3.21	3.19	3.08	3.25	3.32	3.21	2.96	2.96
Corporate bonds								
Moody's seasoned								
Aaa[16]	5.24	5.05	5.20	5.32	5.32	5.23	5.10	5.05
Baa	8.30	8.06	8.20	8.28	8.25	8.22	8.15	8.14
State & local bonds[17]				5.16		5.16	5.13	5.07
Conventional mortgages[18]				5.10		5.10	5.12	5.06

See overleaf for footnotes.

n.a. Not available.

Footnotes

1. The daily effective federal funds rate is a weighted average of rates on brokered trades.
2. Weekly figures are averages of 7 calendar days ending on Wednesday of the current week; monthly figures include each calendar day in the month.
3. Annualized using a 360-day year or bank interest.
4. On a discount basis.
5. Interest rates interpolated from data on certain commercial paper trades settled by The Depository Trust Company. The trades represent sales of commercial paper by dealers or direct issuers to investors (that is, the offer side). The 1-, 2-, and 3-month rates are equivalent to the 30-, 60-, and 90-day dates reported on the Board's Commercial Paper Web page (www.federalreserve.gov/releases/cp/).
6. Financial paper that is insured by the FDIC's Temporary Liquidity Guarantee Program is not excluded from relevant indexes, nor is any financial or nonfinancial commercial paper that may be directly or indirectly affected by one or more of the Federal Reserve's liquidity facilities. Thus the rates published after September 19, 2008, likely reflect the direct or indirect effects of the new temporary programs and, accordingly, likely are not comparable for some purposes to rates published prior to that period.
7. CPFF refers to the Federal Reserve's Commercial Paper Funding Facility. The rates are identical under the CPFF for financial and nonfinancial commercial paper. An issuer of commercial paper into the CPFF may avoid the surcharge by providing a collateral arrangement or indorsement that is acceptable to the Federal Reserve Bank of New York. Source: Federal Reserve Bank of New York.
8. An average of dealer bid rates on nationally traded certificates of deposit.
9. Bid rates for Eurodollar deposits collected around 9:30 a.m. Eastern time.
10. Rate posted by a majority of top 25 (by assets in domestic offices) insured U.S.-chartered commercial banks. Prime is one of several base rates used by banks to price short-term business loans.
11. The rate charged for discounts made and advances extended under the Federal Reserve's primary credit discount window program, which became effective January 9, 2003. This rate replaces that for adjustment credit, which was discontinued after January 8, 2003. For further information, see www.federalreserve.gov/boarddocs/press/bcreg/2002/200210312/default.htm. The rate reported is that for the Federal Reserve Bank of New York. Historical series for the rate on adjustment credit as well as the rate on primary credit are available at www.federalreserve.gov/releases/h15/data.htm.
12. Yields on actively traded non-inflation-indexed issues adjusted to constant maturities. The 30-year Treasury constant maturity series was discontinued on February 18, 2002, and reintroduced on February 9, 2006. From February 18, 2002, to February 9, 2006, the U.S. Treasury published a factor for adjusting the daily nominal 20-year constant maturity in order to estimate a 30-year nominal rate. The historical adjustment factor can be found at www.treas.gov/offices/domestic-finance/debt-management/interest-rate/ltcompositeindex_historical.shtml. Source: U.S. Treasury.
13. Yields on Treasury inflation protected securities (TIPS) adjusted to constant maturities. Source: U.S. Treasury. Additional information on both nominal and inflation-indexed yields may be found at www.treas.gov/offices/domestic-finance/debt-management/interest-rate/index.html.
14. Based on the unweighted average bid yields for all TIPS with remaining terms to maturity of more than 10 years.
15. International Swaps and Derivatives Association (ISDA®) mid-market par swap rates. Rates are for a Fixed Rate Payer in return for receiving three month LIBOR, and are based on rates collected at 11:00 a.m. Eastern time by Garban Intercapital plc and published on Reuters Page ISDAFIX®1. ISDAFIX is a registered service mark of ISDA. Source: Reuters Limited.
16. Moody's Aaa rates through December 6, 2001, are averages of Aaa utility and Aaa industrial bond rates. As of December 7, 2001, these rates are averages of Aaa industrial bonds only.
17. Bond Buyer Index, general obligation, 20 years to maturity, mixed quality; Thursday quotations.
18. Contract interest rates on commitments for fixed-rate first mortgages. Source: Primary Mortgage Market Survey® data provided by Freddie Mac.

Note: Weekly and monthly figures on this release, as well as annual figures available on the Board's historical H.15 web site (see below), are averages of business days unless otherwise noted.

Current and historical H.15 data are available on the Federal Reserve Board's web site (www.federalreserve.gov/). For information about individual copies or subscriptions, contact Publications Services at the Federal Reserve Board (phone 202-452-3244, fax 202-728-5886). For paid electronic access to current and historical data, call STAT-USA at 1-800-782-8872 or 202-482-1986.

Description of the Treasury Nominal and Inflation-Indexed Constant Maturity Series

Yields on Treasury nominal securities at "constant maturity" are interpolated by the U.S. Treasury from the daily yield curve for non-inflation-indexed Treasury securities. This curve, which relates the yield on a security to its time to maturity, is based on the closing market bid yields on actively traded Treasury securities in the over-the-counter market. These market yields are calculated from composites of quotations obtained by the Federal Reserve Bank of New York. The constant maturity yield values are read from the yield curve at fixed maturities, currently 1, 3, and 6 months and 1, 2, 3, 5, 7, 10, 20, and 30 years. This method provides a yield for a 10-year maturity, for example, even if no outstanding security has exactly 10 years remaining to maturity. Similarly, yields on inflation-indexed securities at "constant maturity" are interpolated from the daily yield curve for Treasury inflation protected securities in the over-the-counter market. The inflation-indexed constant maturity yields are read from this yield curve at fixed maturities, currently 5, 7, 10, and 20 years.

Reuters Corporate Spreads for Utilities

Spreads compiled using : Reuters Evaluators | Refresh | Download spread file

Rating	1 yr	2 yr	3 yr	5 yr	7 yr	10 yr	30 yr
Aaa/AAA	195	170	190	220	230	240	255
Aa1/AA+	205	220	255	255	310	340	370
Aa2/AA	230	245	265	280	320	350	380
Aa3/AA-	255	265	280	295	330	360	395
A1/A+	275	280	295	320	345	365	405
A2/A	330	290	310	330	350	400	415
A3/A-	380	315	320	330	360	410	425
Baa1/BBB+	480	325	330	350	370	420	450
Baa2/BBB	530	335	340	360	380	430	460
Baa3/BBB-	580	345	350	370	395	440	470
Ba1/BB+	1000	500	500	550	600	640	700
Ba2/BB	1100	550	550	650	800	850	900
Ba3/BB-	1200	650	650	750	900	950	1000
B1/B+	1300	800	800	850	1000	1050	1100
B2/B	1400	900	900	950	1100	1200	1300
B3/B-	1500	1000	1000	1100	1200	1300	1400
Caa/CCC	1600	1150	1150	1200	1300	1400	1500

Note: Reuters Evaluator spreads for bullet bonds.

Other Corporate Bond Spreads

Banks
Financials
Industrials
Transportation