

Electric Industry Restructuring in Massachusetts

John W. Wadsworth

Brown, Rudnick, Freed & Gesmer, P.C.

One Financial Center

Boston, Massachusetts 02111

Abstract A law restructuring the electric utility industry in Massachusetts became effective on November 25, 1997. The law will break up the existing utility monopolies into separate generation, distribution and transmission entities, and it will allow non-utility generators access to the retail end user market. The law contains many compromises aimed at protecting consumers, ensuring savings, protecting employees and protecting the environment. While it appears that the legislation recognizes the sanctity of independent power producer contracts with utilities, it attempts to provide both carrots and sticks to the utilities and the IPP generators to encourage renegotiations and buy-down of the contracts. Waste-to-energy contracts are technically exempted from some of the obligations to renegotiate. Waste-to-energy facilities are classified as renewable energy sources which may have positive effects on the value to waste-to-energy derived power.

On November 25, 1997, the law restructuring the electric utility industry in Massachusetts became effective. The law will have two primary effects: (1) break up the existing utility monopolies into separate generation, distribution and transmission entities, and (2) allow non-utility generators access to the retail end-user market.

The legislation represents a series of compromises concerning consumer protections, a guaranty of savings to end users, recovery of stranded costs by utilities, protections for existing contractual relationships with independent power producers, and protections for employees of the utilities. The compromises represent a bold attempt to enter a free market, coupled with a perhaps misguided attempt to ensure that the "free" market will be guaranteed to result in a savings to consumers, no loss of jobs, no losses to utilities or shareholders, and no degradation in service. Whether all of these goals can be realized and still achieve an open and competitive free market remains to be seen.

The reason that all of this has come about, aside from any talk of trends toward deregulation in all other aspects of the economy, is because of two principal factors, one unique to Massachusetts, and the other shared by all states. The first factor driving electric utility restructuring initiatives is the high cost of electricity. Electric rates in Massachusetts are among the highest in the nation, and range up to and over \$.12 or more per kilowatt/hour for residential customers. Large industrial users, began to demand that they be allowed to purchase electricity produced by non-utility generators under FERC's liberalized rules for transmission access. These large concerns argued that they should be allowed to obtain wheeled electricity or become energy self-sufficient. These companies had already successfully used the threat of moving out of state to force special tax treatment by the Legislature, and it appeared possible that these companies could achieve a similar result regarding electricity. Losing these large industrial customers would mean that the costs imbedded in the utility system, particularly relating to the nuclear generation assets of the major utilities, would be borne by fewer rate payers, resulting in even higher rates for those who were forced to remain within the system.

The second force is the tremendous technological advances in gas turbine generation, whereby the efficiencies realized in newer units could theoretically result in greatly reduced electric rates and

pollution. However, because there was little demand for new generation capacity, few highly efficient systems could be constructed. The existing regulatory framework prohibited retail sales by co-generation facilities, and prevented the construction of new facilities absent a showing of need for the power, which given the economic downward experience in the early 1990s was extremely difficult to achieve.

One other factor probably must be considered as being a driving force for the restructuring of the electric utility industry in Massachusetts, and that is advocacy of the New England Electric System ("NEES"). NEES very early in the process concluded that if it could achieve consensus that it should be allowed to recover the costs of its stranded assets, it could structure the resulting legislation in a way so as to control the process. NEES was instrumental in drafting legislation which was enacted several years ago in Rhode Island which will result in the gradual deregulation of the industry, and was in the lead in negotiating the terms of restructuring in Massachusetts. The process initially began with negotiations sponsored pursuant to Department of Public Utility initiatives, in which the Attorney General, environmental groups, consumer advocates, and utility industry representatives negotiated the terms of a breakup of the NEES system and the provision of retail competition. NEES saw an economic advantage in being first out of the block. NEES held an auction of all of its generation assets, including all of its IPP contracts, in the spring and summer of last year, and entered into an agreement to sell all of its generation assets to U.S. Generating Company, a subsidiary of Pacific Gas & Electric. The purchase price appears to be more than \$500 million in excess of the book value of these facilities. Boston Edison is conducting a similar sale, and its proposed sale to Sithe Energies, is approximately \$86 million over book value. In part, the high prices are due to the perception that being first in the market is important. In addition, these companies are planning to either retrofit or add new generating capacity to the existing facilities, the assumption being that it will be infinitely easier to construct additional generation capacity at an existing facility than it would be to construct that same capacity at a new site.

Let me now turn to the specific provisions contained in the legislation, and then discuss briefly how the legislation deals with independent power producer contracts, i.e., above market power contracts, that either become stranded costs or become contracts that will be honored going forward by an entity different from the utility which originally was the contract party.

1) The law requires that the existing non-municipal utilities split up into three separate companies or separate operating units, consisting of the distribution, transmission and generating units. The distribution companies are the wires serving individual end-users. These will continue to be a regulated monopoly, with rates fixed by the Department of Public Utilities (now called the Department of Telecommunications and Energy). The transmission lines are the high voltage lines and access to these facilities will be pursuant to FERC tariffs. The generation facilities will either be sold to third parties, or in some cases may be operated by affiliates of the distribution company. Supposedly there will be protections in place which will prevent the distribution company from giving preference to its affiliated generation company, and particularly the sharing of customer information, in order to ensure free and fair competition.

2) Electric bills will be unbundled. Instead of one charge for electricity, which always included a separate charge for fuel cost adjustment, electric bills will now include separate charges for the distribution company, the transmission company, the cost of generation of electricity, and a so-called access charge. This access charge is primarily the stranded cost charge. The utilities are to sell the generation assets, attempt to renegotiate the above-market power contracts, with the remaining costs which are not recovered through these two processes recovered through the imposition of this access charge. The benchmark for this charge appears to be \$.028 per kilowatt/hour and is imposed on each kilowatt/hour sold. Provision is made if a customer leaves the system (in other words it begins to self-

generate) and this charge in some cases may be imposed in such a case in order to prevent the base paying the stranded cost recovery charge from shrinking. This charge is to reduce over time, and is expected that after ten years, the charge will disappear.

3) The law allows the utilities to securitize this debt. In other words, rather than simply obtaining the revenue from the access charge each year, they will attempt to market this revenue stream as a guaranteed payment stream and receive a lump-sum payment representing the present value of those payments. The securitized bonds backed by this payment stream will then be sold on the market. It is argued that savings can result from this sort of securitization and that there will be net reduction in the cost to all rate payers.

4) Obviously, the amount of stranded cost recovery is very controversial. On the one hand, all of these costs have traditionally already been included in the rate base, and over the next twenty or thirty years, all of these costs would have been paid by rate payers anyway, and therefore it could be argued that utilities are not gaining any economic advantage or consumers hurt from being allowed full recovery of their stranded costs. However, many argue that many of these stranded investments are investments which were imprudent and that the rate payers should not bear all of the cost of these imprudent investments. At this time, the expectation is for full one hundred percent stranded cost recovery, although the legislation gives the Department of Telecommunications & Energy the ability to review these charges, and particular to determine whether the utility has fully mitigated all of the charges.

5) Suppliers who generate electricity must demonstrate that they have the financial and technical capability to deliver power. Once those showings have been made, end-users are free to buy from any registered supplier. The supplier may bill the end-user separately, or the generation charge may be included on the bill from the distribution company. The distribution company will supply the end-user with "default power" in the event that the supplier fails to deliver electricity. Suppliers are obligated to include a certain percentage of renewable energy in their portfolio, in other words, the supplier must be able to demonstrate that certain increasing percentages of the power it supplies is derived from renewable energy sources, which surprisingly in Massachusetts includes waste-to-energy generated electricity.

It is unclear what will drive consumers in this market. Some companies will push price alone, others will advertise that they have green power, although what that means is unclear, others will bundle other services, such as demand side management services, or cable, telecommunications or other services, or may include wholly unrelated freebies. For example, in a New Hampshire pilot program, some companies offered free trees or ski lift tickets to attract customers.

6) The primary impediment to the creation of a free market on March 1, 1998, the date when retail access becomes available, may be the so-called "Standard Offer. The Legislature was very concerned that restructuring result in immediate tangible savings, and therefore a cornerstone of the proposal was always that there would be an immediate rate reduction. Under the legislation, before a company can recover its stranded costs, it must provide a ten percent (10%) rate reduction, which increases to fifteen percent by September 1, 1999. In other words, if last year the rate was \$.10 per kilowatt hour, on March 1, 1998 the rate is \$.09 per kilowatt per hour. The distribution, transmission and access charge are fixed charges, and essentially what remains up to the ten percent reduction cap is the generation portion of the bill. If a company wishes to sell to an end-user and compete on the bases of price, it would have to beat the generation portion of the bill, which in the early years could be very difficult.

This "standard offer" is available to all users. It automatically kicks in on March 1. No one is forced to choose an alternate supplier, and in fact it is probably advantageous for most consumers to continue to receive electricity under the standard offer. However, the standard offer will increase for inflation each year, and as the access charge decreases as the stranded investments are recovered, the amount that is allocated to the generation portion of the electric bill included in the standard offer will increase each year, and it is anticipated that at some point in the near future, it will be cheaper to buy power on the competitive market than to purchase the standard offer, and it is assumed that at that point the retail market will become a truly competitive market. The Legislature did not want to force anyone into a competitive market, and wanted to ensure that if consumers chose to do nothing, they would not be forced into a bad choice. However, it is anticipated that as markets develop and as consumers become more aware, more and more consumers will begin choosing competitive suppliers.

7) The legislation also contains peculiar provisions which were crafted to protect narrow interests. There is an outright prohibition on allowing consideration of alternative metering services, due to the strength of the meter readers' union. Therefore, it appears that everyone will continue to have their century old spinning meter which someone will come around once a month and read. It may be possible to install a second meter after this meter which will allow for such things as variable charges for electricity depending on time of use, and other demand side management metering, but that is not entirely clear.

8) The law also leaves certain issues very much up in the air. For example, it is unclear whether submetering is allowed. In Massachusetts, if a building owner who is the delivery point for the electricity, submetered to each of its tenants, and charged each tenant only the actual cost for electricity used, that building owner would be considered an electric company engaged in the retail sale of electricity, and the arrangement was prohibited. It is unclear whether this practice is now allowed. It is a practice that is occurring every day, but with questionable legal status.

One of the difficulties with deregulation is that since the generation portion of most end-user's electric bill is at best twenty-five percent, a savings of ten percent on the generation portion may not be substantial, except for very large users. Therefore, the savings touted for deregulation may appear illusory to most people. However, if people could begin to use electricity at off-peak hours and pay substantially less, tremendous savings could be realized. Therefore, it is seen as vital that such off-peak pricing be encouraged. It appears that we will have to have two meters -- the old spinning one that some reads each month, and a second meter, which allows for on and off-peak pricing.

9) Sellers with electricity will have to disclose how the electricity is generated, the labor makeup of the plant, the percentage of renewables in its portfolio, and other issues. The law also seems to allow the State Department of Environmental Protection to require certain levels of pollution control on all units of electricity sold in Massachusetts.

Finally, let me say a few words on how the bill deals with IPP contracts, and in particular waste-to-energy facilities.

The law attempts to encourage the renegotiation of above-market power contracts between independent power producers and utilities. The Legislature recognized that it cannot force these contracting parties to renegotiate, however, the legislation seeks to include carrots and sticks which will "encourage" renegotiation. In the first instance, utilities are under an obligation to mitigate to the maximum extent possible stranded costs associated with these contracts, in order to be allowed to receive any stranded cost recovery going forward. This means that some attempt must be made to reach an agreement with an IPP which will result in a savings to rate payers over the life of the contract. For example, due to differences in discount rates and internal rates of calculation between IPPs and utilities,

it may be possible that the present value of the payment stream under the contract for the IPP is different than the anticipated cost over the life of the contract for the utility and that the internal rates of return, along with possible tax savings and savings due to securitization, can allow each party to be made whole with a savings to rate payers.

In addition, for an IPP, there may be a benefit in the ability to receive a large infusion of capital representing the advanced payment for power purchases, which will also result in a savings to rate payers.

Negotiation difficulties can arise where power production from a facility has been erratic and it is difficult to pinpoint the level of future power sales. In addition, under certain of the transactions being contemplated by New England utilities to divest themselves of their generation assets, the contracts anticipate an assignment of the contract, whereby the entity gaining the control of the generation assets, including the IPP contract, pays market rate going forward, and the utility agrees to cover the above-market portion. This above-market portion is then recovered as a stranded cost.

Waste-to-energy contracts are technically exempt from certain of these mandatory provisions. Utilities are obligated to demonstrate that they have made good faith efforts to attempt to renegotiate all IPP contracts, including waste-to-energy contracts, however, it appears that a waste-to-energy facility could decline efforts to renegotiate. This is due to the legislature's concern that for certain facilities a reduction in revenues from the electric contract would simply result in an increase in the tipping fees paid by municipalities. However, given the advantages that may be obtained from a buy-out of the contract, and given the uncertainty of the nature of the entity who would continue to hold and purchase the power, since they may or may not be a regulated utility going forward, it may be advantageous for a waste-to-energy facility to renegotiate.

Utilities may not recover their stranded costs unless they have made good faith efforts to fully mitigate the costs of these contracts. IPPs will not be allowed to register to sell power going forward unless they have made good faith efforts to renegotiate. IPPs are given one additional stick if they fail to reach agreement with a utility: they can notify the Department that they have made an offer to the utility that would result in rate payer savings, which the utility has rejected. If it is determined that the IPP's offer would have resulted in rate payer savings, the utility's ability to recover stranded costs is limited to only those costs which would not have been recovered under the IPP's proposed buy-down.

Finally, the legislation includes waste-to-energy facilities as renewable energy resources. Funds are to be made available to encourage and promote renewable energy sources, although given the regulatory hurdles imposed by the Massachusetts Department of Environmental Protection, I would not count on any new waste-to-energy plants in the near future. However, there is discussion currently ongoing to allow money in the renewable energy fund to be used to retrofit waste-to-energy facilities for compliance with the Clean Air Act.

In addition, sellers of electricity are obligated to include in their portfolio of energy for sale certain percentages of electricity from renewable sources. As such, waste-to-energy generated electricity would appear to become more valuable.

Wholly separate from the restructuring of the electric utility industry in Massachusetts are changes being made to the NEPOOL system. NEPOOL is the power pool which ensures that the lights stay on in New England. In the past, this group has been a fairly loose grouping of the utilities, and plants were turned on based on the amount of electricity needed by the grid at that particular time on a scale ranked according to the cost of running each plant. Under FERC Order 888, NEPOOL has been restructured by the creation of an Independent Service Operator. This ISO will create a market-based

system whereby generators will bid into the grid, and energy will be supplied depending on how much energy is needed at that particular moment. All parties will receive payment for their electricity based upon the highest amount bid for power actually used at that time.

In conclusion, the restructuring legislation focuses primarily upon breaking up the utility monopolies, and opening the generation sector to competition. There are still many unanswered questions, in particular, how the waste-to-energy industry and the IPP industry, will be effected. This is, in part, due to the fact that the legislation essentially deals with the billion dollar questions facing the public utilities. The Department of Telecommunication and Energy has promulgated rules which will deal with the million dollar issues typically facing waste-to-energy facility operators. However, we are finding that in many cases the thousand dollar questions, which come up every day, are still a gray area. Stay tuned.



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Brown, Rudnick, Freed & Gesmer
One Providence Washington Plaza
Providence, RI 02903

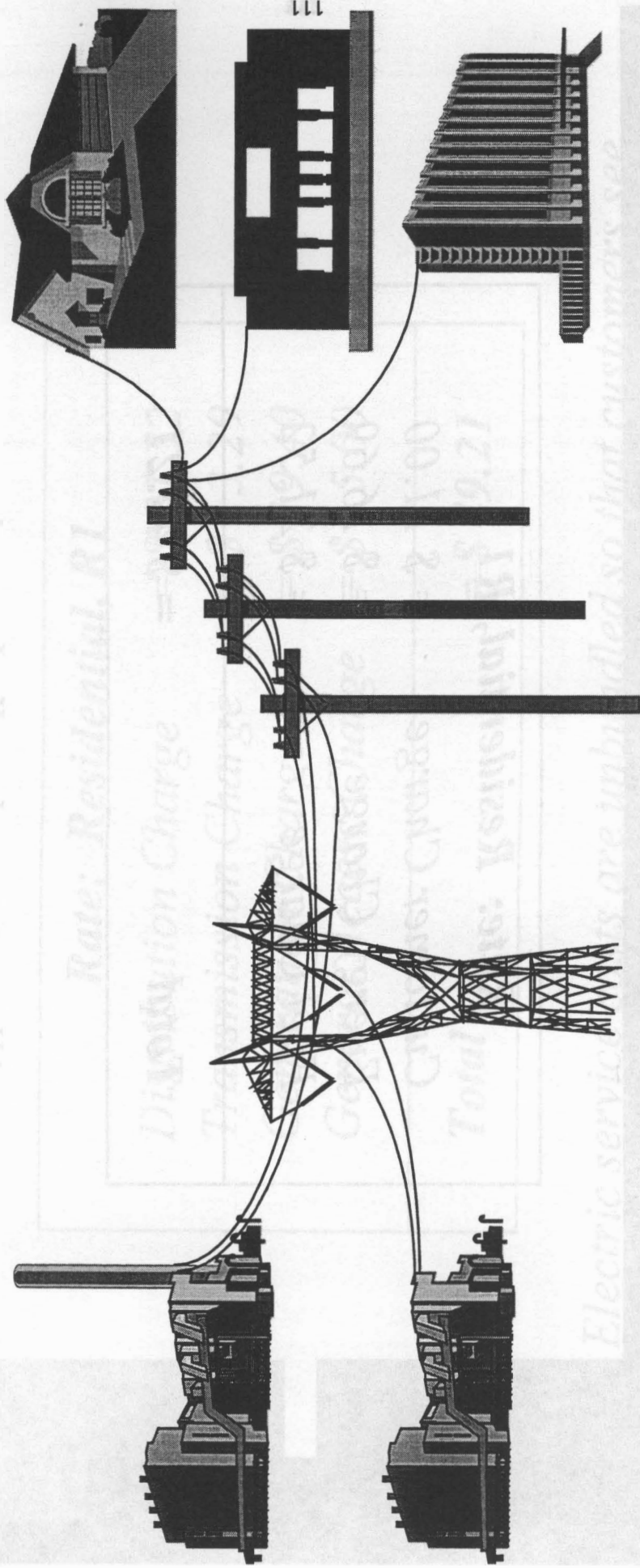
Brown, Rudnick, Freed & Gesmer
One Financial Center
Boston, MA 02111

Brown, Rudnick, Freed & Gesmer
CityPlace I
Hartford, CT 06103

Six Key Terms

- *Generation*
- *Transmission*
- *Distribution*
- *Unbundling*
- *Stranded Costs*
- *Standard Offer*

Generation - Transmission - Distribution



Generation

Transmission

Distribution

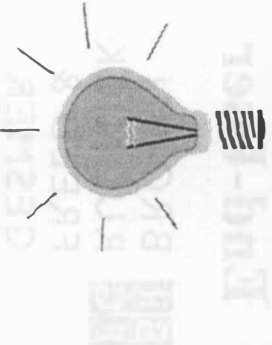
End-User



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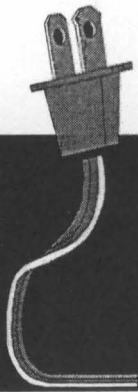
Bundled Residential Bill



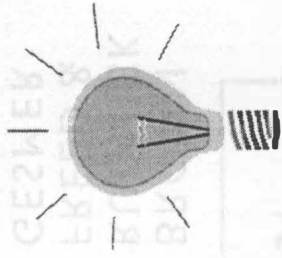
Rate: Residential, R1	
Customer Charge	= \$ 11.00
Energy Charge	= \$ 16.69
Fuel Charge	= \$ 21.52
Total	= \$ 49.21

All costs are bundled together.

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Unbundled Residential Bill



Rate: Residential, R1	
Distribution Charge	= \$ 21.52
Transmission Charge	= \$ 3.29
Generation Charge	= \$ 19.40
General Access Charge	= \$ 5.00
Total	= \$ 49.21

Electric service costs are unbundled so that customers see each item priced separately.

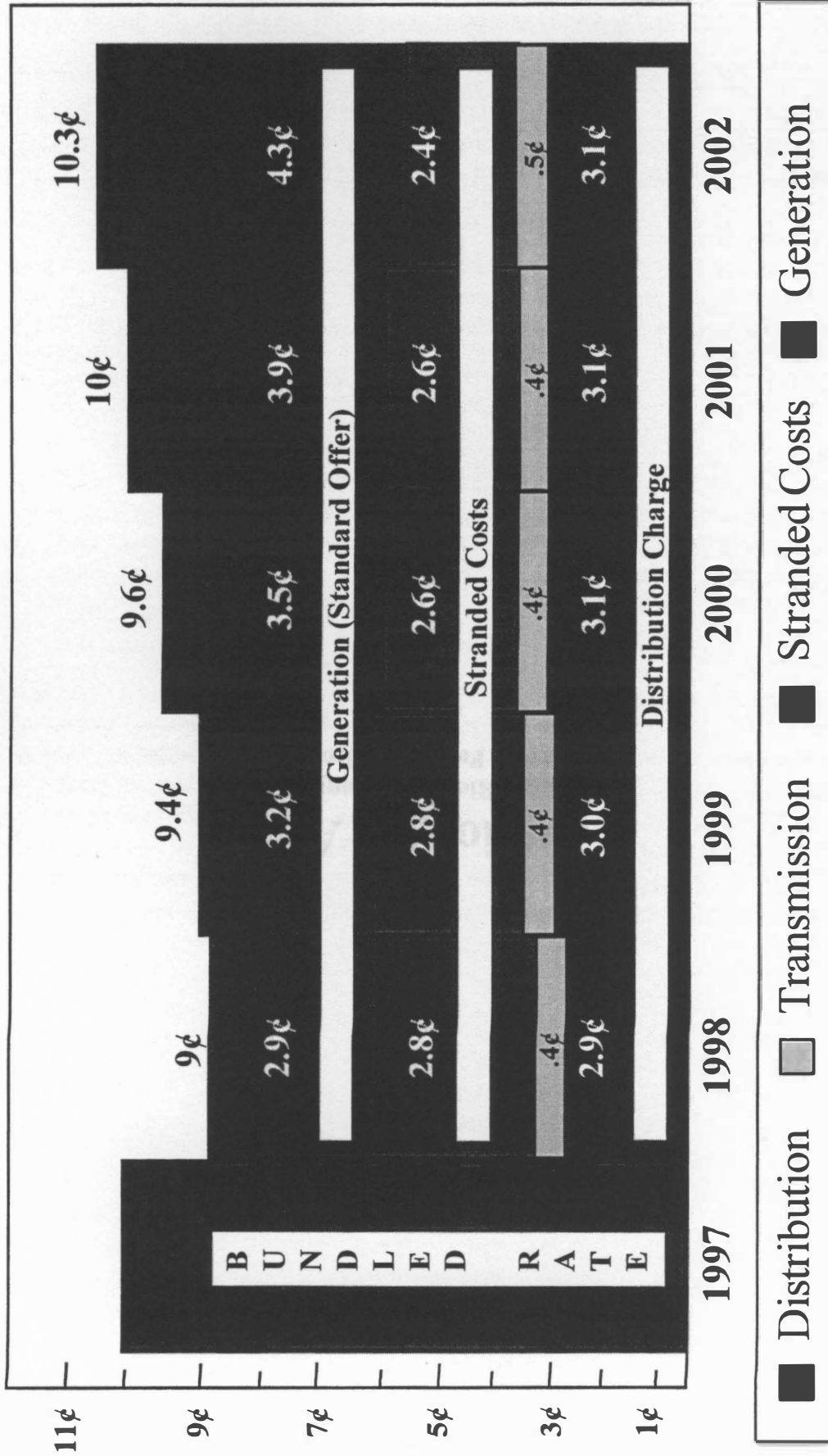


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Stranded Costs

Costs incurred by a utility that would not be recovered in a competitive market

Standard Offer



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Standard Offer

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