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**Approaches to Electric Utility Energy
Efficiency For Low Income Customers In
a Changing Regulatory Environment**

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June 1998

MANAGED AND OPERATED BY
LOCKHEED MARTIN ENERGY RESEARCH CORPORATION
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**Approaches to Electric Utility Energy Efficiency
For Low Income Customers
In a Changing Regulatory Environment**

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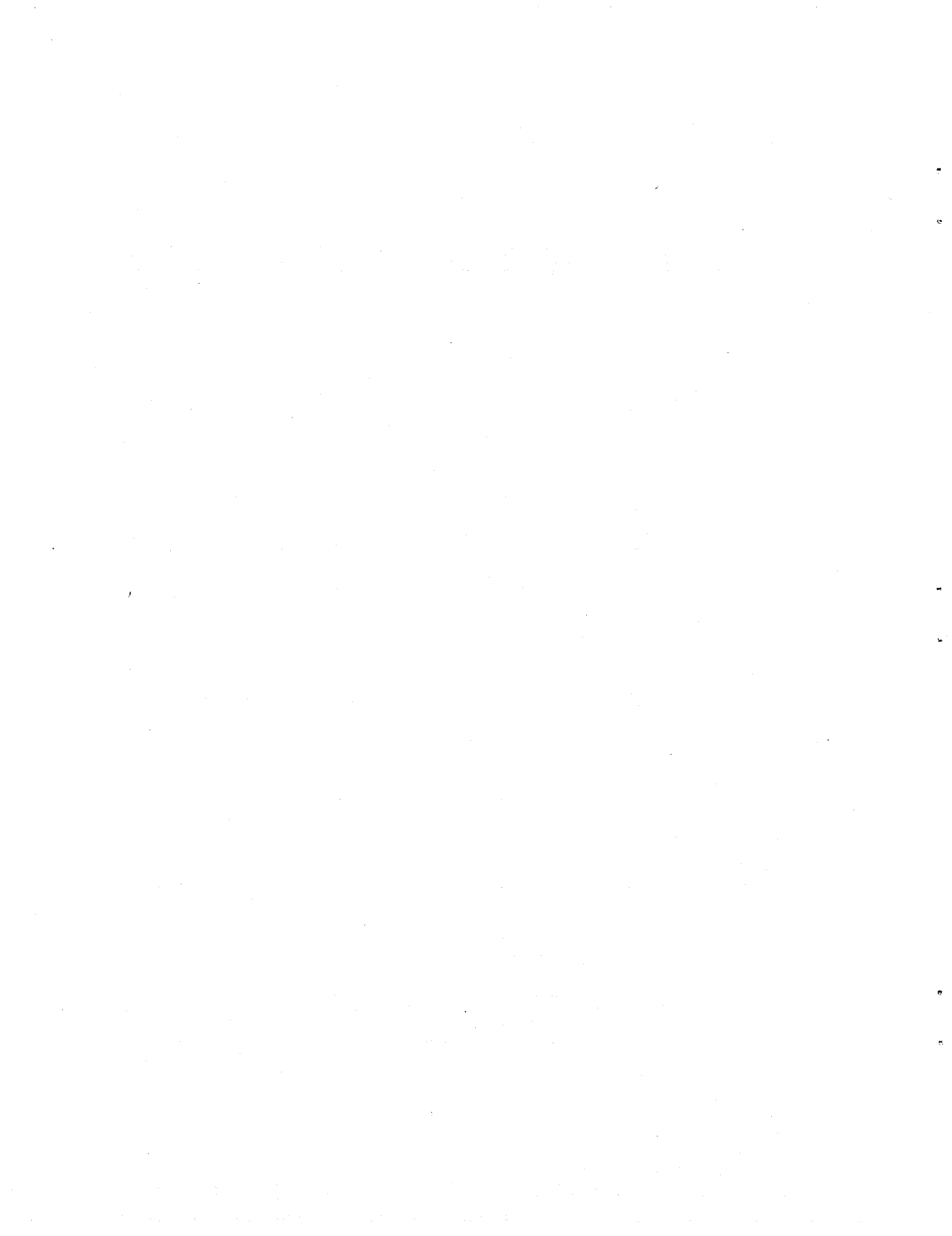
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EXECUTIVE SUMMARY

As the electric industry goes through a transformation to a more market-driven model, traditional grounds for utility energy efficiency have come under fire, undermining the existing mechanisms to fund and deliver such services. At the same time, the restructuring process has provided an opportunity to rethink and reestablish the foundation for utility industry energy efficiency investments.

This report is concerned with energy efficiency services for low-income citizens, and aims to understand why the electric industry should sustain investments in helping low-income Americans use electricity efficiently in a restructured market, how such investments should be made, and how these policies can become part of the new electric industry structure.

Since restructuring is currently being introduced at the state-level, the analysis in this report is also very much state-based. In assessing different states' positions on retail competition, the assumption is that all states are considering retail competition, and that the overall policy movement is towards retail competition. Indeed, most observers of the electric industry now agree that retail competition will inevitably spread. The major disagreements concern the pace at which such competition will roll out across the states. As such, this report is structured to assist members of the Weatherization Assistance Program Network to identify where their state is positioned in the move towards restructuring, understand the issues on the table in their state, and structure the best possible package of low-income energy efficiency services. Thus the objectives of the report are:

- To define a policy basis for low-income energy efficiency in a restructured electric industry;
- To define a basis for determining funding levels and identify funding options;
- To identify ways of administering and implementing low-income electric efficiency programs under restructuring, and determine the scope and types of programs that will make sense for low-income customers;
- To be able to determine the stage of restructuring for a given state and understand the implications for the scope of policy decisions to be made in that state.

The Evolving Policy Basis for Low-Income Energy Efficiency

If low-income energy efficiency investment programs are to endure over the long-term, it is not enough to win a particular restructuring case or get a specific agreement to run a program for a few years. It is equally important to determine and articulate the reasons why the electricity industry should support low-income conservation, and based on those principles set out the standards for deciding the amount and type of efficiency investments that should be made, and who should pay for them. It must be a policy basis that will last beyond the time of the program itself and the initial agreement on budgets.

Energy efficiency commitments by utility companies have historically been made for a variety of reasons, ranging from the requirement to lower system resource costs through least

cost resource acquisition, to having to show regulators that they are treating low-income customers even-handedly. Typically, utilities offer low-income energy efficiency services when they need to lower their credit and collections costs, or they need to show that they are helping low-income customers afford to retain their electric service, or they need regulatory approval for various company activities (such as a rate hike, for example), or they need to respond to a public relations crisis affecting their low-income customers.

From society's point of view, these investments were made to achieve social-equity objectives, to further the overall goal of fostering energy efficiency among *all* its constituents, and to reduce credit and collection costs to energy suppliers. Energy efficiency programs also improve the homes, and the quality of life, of low-income citizens, reducing the societal costs associated with homelessness, forced mobility, poor school performance, neighborhood deterioration, and risks to health and safety.

While the core of these rationales are equally valid in a restructured electric industry, it is important to understand that a competitive electric market can make it more difficult for low-income customers to obtain, and afford to retain, electric services. One reason is that the traditional utility's "obligation to serve" will be replaced with the customer's freedom to choose his/her supplier of energy, also giving the utility a choice of potential customers. The risk that low-income customers will be unable to access as many suppliers, or be unable to do so at competitive prices and services, may be significant. Studies of other deregulated industries have shown that prices tend to increase for those least able to pay. Also traditional utility regulation contains numerous consumer protection clauses such as bill formats and disclosure requirements, disconnection procedures and forms of notification, particularly regarding winter shut-off, that, in the future, may not be available to protect low-income consumers from disconnections and other unreasonable practices by companies.

A package of low-income energy efficiency, integrated with other "affordability" measures, achieves energy savings for society while at the same time addressing issues of equity. Such programs will:

- help low-income customers manage and afford their bills,
- help low-income customers afford essential electric service,
- lower system resource costs,
- mitigate the potentially adverse impacts of competition,
- address long-term affordability problems, and
- promote sustainable universal electric service.

Many of the states that have already passed legislation mandating retail competition have acknowledged these principles and made provisions to ensure energy efficiency for low-income consumers.

Funding Low-Income Programs Under Restructuring

Under traditional regulation, electric company efficiency investments have been made directly by utilities and funded by their ratepayers. Sometimes utilities recover these investments through their base rates, and sometimes by dedicated surcharges on the bills. States and utilities vary in whether industrial customers or non-residential customers contribute towards the cost of low-income energy efficiency programs.

Restructuring provides the opportunity to establish a consistent basis for determining funding levels, as well as the opportunity to establish stable, long term funding sources.

Wires Charge: Thus far, the regulatory world has favored a surcharge on the distribution utility's revenues, payable by all customers, as the means to fund energy efficiency after restructuring. Commonly referred to as a "wires charge," it has been popular because it generally collects the funds from the same group of ratepayers who are now paying for public purpose efforts and prevents any group of customers from bypassing this contribution and leaving the burden to the remaining ratepayers. The wires charge also avoids having to set up a separate fund and force suppliers to collect a charge for efficiency investments. It can also be applied to any entity that uses the monopoly facilities whether they are suppliers who need the facilities to transmit or distribute power/gas or customers who rely on the facilities to receive their energy. Its disadvantages are not many, the main ones being that it looks like a tax, is vulnerable to the ups and downs of support, and places the responsibility to support energy efficiency on customers, not industry.

Questions regarding the *form* of the wires charge are mainly about whether it should be based on the volume of usage, or be a flat fee regardless of usage. A volumetric charge, which generally means a per-kilowatthour charge for electricity, is generally considered to be more favorable for small consumers.

Also at issue is who should pay for the programs, whether it should be the residential customers, the utility, the competitive suppliers or the program participant. An argument for having all customer classes support low-income energy efficiency is justified on the grounds that (a) the programs provide system-wide benefits in credit and collections savings to the distribution utility that are shared by all customers, (b) the societal benefits of the program are shared by all members of society, and (c) the largest customers are expected to reap the largest cost reductions from competition, and it is fair to ask them to contribute to programs that blunt adverse effects that may face low-income customers as a result of competition and price discrimination.

Bases for Funding Level Determination: While the wires charge addresses how funding for low-income energy efficiency is collected, and who pays for it, it does not deal with the fundamental issue of *how* the initial funding level is determined. There are four main methods that can be used in identifying the proper level of targeted funding for low-income energy efficiency. They are quite varied in scope, producing a broad range of estimates of funding requirements.

- a. **Needs-Based Approach**—Derived from quantifying the unmet need for low-income energy efficiency services, the needs-based approach deals most comprehensively with the problem of low-income energy affordability. This can either be done by estimating the “technical potential” for energy savings (by calculating kilowatt-hours of electricity savings potential), or by estimating the number of low-income households where electric energy efficiency has not been achieved.
- b. **Integrated Services Approach**—Integrated efficiency services as part of an overall low-income affordability program are an alternative approach to budget and needs assessment. Here, the potential for usage reduction is linked to the potential for affordability improvements, arrearage reduction, payment pattern improvements, disconnection reduction and similar related benefits from lowering bills by conservation of resources.
- c. **Historical Funding Approach**—This approach estimates the funding need for low-income energy efficiency based on the historical commitment of the state to such programs. In states where this type of funding has been substantial in the past, this type of resource commitment is easily justifiable. In states where funding has been inadequate, this may not be the best approach.
- d. **Network Capacity Approach**—A fourth approach to estimating the funding may be the capacity of the low-income weatherization network to effectively implement the program. An important point here is that the current capacity of the network may not reflect the actual need for service, the capacity of the network being curtailed by funding uncertainties.

It is important not to confuse the purpose of estimating a general program goal with establishing a program resource requirement. The essential issue of what the exact level of commitment to low-income programs is going to be must be resolved at the outset.

Administration of Programs Under Restructuring

In a restructured electric industry, low-income energy efficiency programs can be administered by the surviving local distribution utilities, or by a statewide administrator of energy services, which can be a new independent administering agency and/or DOE's weatherization agency. The organization that administers the funds and programs can then turn to the existing low-income weatherization network and/or competitive market procurement in order to actually implement the efficiency programs.

Once again, the restructuring debate provides an opportunity to bring up issues of program administration that are harder to raise in the arena of traditional utility demand-side management. Issues to be resolved include the scope of programs, whether they will be limited to electricity savings alone, who will deliver these services, how program evaluation will be done, and what enforcement mechanisms might be.

Administration of Programs: Where utilities have traditionally administered the programs, they may oppose efforts to remove the administration of the programs from them. Where there has been no utility activity for efficiency (or low-income targeted efficiency) the path is clearer for establishing such a centralized administration and oversight of efficiency programs created as part of restructuring. In general, there is a strong argument to be made for flexibility in light of local conditions. In many states, the demonstrated performance of the Weatherization Assistance Program argues strongly for its use in program administration.

Scope of Programs: The issue of whether a utility efficiency program should deliver efficiency measures designed to save only the form of energy sold by that utility has new import in a restructuring debate. Because the basis of a low-income program in restructuring will often explicitly be expanded beyond least cost acquisition of the energy resource of the utility in question, there is room to consider expanding the reach of the program. Some clear possibilities have emerged, as described below.

- a. **Electric System Fuel Blind Programs**—Electricity vendors contribute to “fuel-blind” programs that addresses all energy savings. Under such a system, the funds raised by the distribution utility would be channeled to all-fuel savings programs on a “whole-house” basis.
- b. **Multifuel-Funded Comprehensive Programs**—All affected energy vendors, gas, electric, and bulk fuels, contribute to a program that will seek out all energy savings. Programs of this type, with contributions from unregulated vendors, have not been run in the past and as such may be less viable in practice.
- c. **Local Agency Coordination of Resources**—A local agency that administers the DOE weatherization program and other energy efficiency resources can coordinate funds from multiple sources, encouraging the use of funds for all-fuels savings programs. Local weatherization agencies in many parts of the country have been leveraging their resources for many years by using utility resources (primarily to reduce electricity expenses), but finding other sources of funds to create integrated programs.
- d. **Traditional Utility Programs**—Utilities can still continue to run low-income electricity savings programs as they have in the past.

Service Delivery: Low-income energy efficiency specialists in the Weatherization Assistance Provider network have long argued that joint delivery of utility low-income DSM with weatherization services is the most efficient approach to quality service delivery in the low-income community. Independent energy service companies (ESCOs) object on the basis that it is anti-competitive to “hard-wire” the low-income demand-side management market to a given set of vendors, and urge a bid process to find the least-cost vendors. Nevertheless, there are inherent efficiencies in piggybacking utility energy efficiency programs on to existing, federally-funded weatherization programs, and the weatherization agency program delivery will often offer superior community involvement.

Program Evaluation: Restructuring provides a unique opportunity to establish different performance measures for low-income energy efficiency programs. Since the traditional least cost resource acquisition tests used to measure cost effectiveness are no longer relevant to low-income programs, new and improved evaluation methods currently being employed by states can be more widely applied. Methodologies used by the National Weatherization Evaluation, the DES log system used in Minnesota, and other quasi-scientific methods to assess whether the benefits to low-income consumers through reduced bills have exceeded the cost of installing energy efficiency measures are examples. Another form of evaluation currently in use assesses a comprehensive societal cost/benefit ratio.

Experience in Selected States

Twelve states have passed electric industry restructuring legislation and many of these have attempted to deal with low-income issues, including energy efficiency, to varying degrees. Furthermore, a number of state regulatory commissions have initiated restructuring programs without state legislation while other states have reached an advanced stage of negotiations regarding the format of future legislation or regulation. The low-income provisions in six of these states is briefly described here, in the hope that it will assist readers in their work at the state level.

Pennsylvania: Restructuring legislation in Pennsylvania states there will be a non-bypassable charge to fund low-income customer assistance programs. The Governor's Universal Service Task Force, which included low-income advocates, came up with general principles that agreed that (a) there was a *need* for low-income programming, (b) there is an obligation to meet that need, especially if it can be done in a cost-effective way.

In the Final Order on Universal Service and Energy Efficiency Programs, the Commission decided to defer the question of funding levels to each individual company and requested that each company submit a proposal as part of its restructuring plan. Generally, companies have come in with proposals to expand existing low-income programs. What the amounts will end up being still remains to be seen.

California: The California legislature passed a comprehensive restructuring statute, A.B. 1890, in August of 1996. The statute provides for a systems benefits charge, with funds for low-income programs to be raised according to need.

In a subsequent decision in January 1997, the California Public Utilities Commission moved low-income energy efficiency and the California Alternate Rates for Energy (CARE) program away from the utilities' administration for 2 reasons: (a) under restructuring, the Commission found, "utilities are more motivated than ever to increase sales and customers, rather than encourage reductions in energy use," and (b) the Commission saw no reason why customers of a non-utility provider should be required to go to a utility to be certified eligible. Thus the CPUC decided upon a statewide Low-Income Governing Board with 7 members composed of one Commission representative, one representative of the Commission's Division of Ratepayer

Advocates, and members of the public. Finally, the CPUC set 1998 spending levels at 1996 funding levels (for both low-income assistance and energy efficiency programs).

Wisconsin: On October 30, 1997, the Public Service Commission of Wisconsin announced that retail competition cannot occur until all of the prerequisite safeguards identified in its original 32-step plan (which became a consolidated 7-step Workplan) are put in place to protect consumers. The recommendations made by the Low-Income Issues group have been adopted by the Commission with almost no change. No action is being taken by the Commission or legislature on restructuring as of this writing.

The Low-Income Issues group proposal is for a minimum level of funding of \$106 million per year for low-income energy efficiency and customer assistance. The funding mechanism is a flat charge (not based on usage) on all electricity customers' bills. A needs assessment would be conducted every 2 years, and would take into account the number of low-income households, the size of energy bills, and the cost of energy, to arrive at the "energy burden" on the low-income population. The \$106 million proposed funding level represents 33% of the total energy burden on the low-income community in Wisconsin today. The remaining 66% would be paid by the low-income customers themselves.

Vermont: The Vermont Public Service Board issued its final order on restructuring on December 30, 1996, after a process of deliberation with representatives of the major affected interests in the state. The VPSB position is that customer choice opens up the need and the opportunity to implement new mechanisms to help Vermont's "most vulnerable citizens." The VPSB calls for a program administrator who is independent of utilities or energy providers, and for a program structured to encourage the efficient use of energy. The order also addresses protection and disconnection policies for consumers. The Board suggests using an "appropriately structured, non-discriminatory, non-bypassable [wires] charge" collected by the distribution utilities. The Systems Benefits Charge would be reviewed and possibly revised on an ongoing basis.

The Vermont State Senate passed a retail competition bill consistent with the VPSB Order, S.62, in 1997, but the measure stalled in the House in early 1998. Meanwhile, a separate proceeding to establish the statewide efficiency programs and fund them through a wires charge without restructuring has moved ahead, and was endorsed by the VPSB in mid-1998.

Arizona: The Arizona Corporation Commission issued a restructuring order on December 27, 1996, which included a Systems Benefits Charge that would fund the utilities' "present Commission approved low-income, demand side management... programs." The ACC's order did not specify the amount of the charge or the amount of funding for each purpose listed.

Rhode Island: The restructuring statute indicates a continuation of current levels of low-income energy efficiency. Low-income energy efficiency is included within the general category of "environmental...programs" such as demand-side management and renewables, and is to be funded from the moneys raised by the kilowatthour charge of 2.3 tenths of a cent. While the

Commission may increase this during the five years of the program, the authority to impose such a charge and raise moneys for such efforts appears to end after five years.

Decision Making Forums

In states with serious restructuring activity, three decision makers in a position to have a direct effect on the low-income aspects of restructuring policies are of interest: the regulatory commission, the legislature, and the governor. There are also a variety of informal routes for advocacy.

States at Three Stages of Restructuring

In a few short years, the idea of retail electricity and gas competition has taken hold among utility policy makers. However, not every state is moving ahead at the same pace. Certain states have emerged as the leaders in developing the ideas of a new energy industry structure. Some states have expressly rejected retail competition, at least for the time being¹. Others are moving towards retail competition, but with greater deliberation.

The issues that determine the extent of electric industry investment in energy efficiency in the homes of low-income customers will vary from state to state, as the policy underpinnings of the industry are in flux. It may be useful to determine which of three loosely-defined categories most closely characterizes the stage of restructuring in any given state:

- Full-Speed-Ahead
- Go-But-Slower, and
- Wait-and-See.

Using these categories, members of the Weatherization Network can decide how fast restructuring is moving in the state in question, and what types of issues remain to be decided. This in turn will help determine the types of rationales for utility low-income energy efficiency fit the state's current circumstances. It will also help focus advocates on the extent to which opportunities remain to encourage further low-income energy efficiency investments.

Full-Speed-Ahead: The ten Full-Speed-Ahead states are those that have already made the decision to implement retail competition in the electricity industry. As of this writing, California, Connecticut, Illinois, Maine, Massachusetts, Montana, Nevada, New Hampshire, Oklahoma, Pennsylvania, Rhode Island and Virginia² have passed legislation to introduce retail competition.

In a Full-Speed-Ahead state, the decision has been made to introduce retail competition, and at least the general outlines of the new industry structure have been established. The next step for

¹Idaho is one such state. See Appendix I.

²The Virginia law is not as strong as the other states, however.

the Network is to make sure the implementation of the new policies maximizes the energy efficiency opportunities open to low-income households.

Go-But-Slower: These states are the most fruitful ground for leveraging opportunities, because leadership of the state has indicated that change is coming, but the ground rules of that change remain fluid and subject to debate. Go-But-Slower states are in the earlier stages of moving towards competition. All of the issues around how a competitive world will be structured are on the table, and provides an opportunity to get involved early in the informal or formal roundtables, Task Forces, and other issue-identification and consensus-building activities around restructuring.

Go-But-Slower states include some that were earlier thought of as front-runners in the movement towards retail electric competition. The Wisconsin legislature, for example, was widely expected to introduce retail electric competition in 1996, and its Public Service Commission had announced that it intended to move the state in the direction of retail competition. However, no legislation was passed, and the Commission later backed off its ambitious schedule. Meanwhile, the policy framework for guiding electric utility energy efficiency investments remains largely intact in Wisconsin.

Wait-and-See: Most states can be referred to as Wait-and-See states. Although states are at different stages with respect to regulation of electric utilities even within this group, they can broadly be categorized as Wait-and-See states. Thirty-seven states have opened proceedings of some kind to look at more energy utility competition. A couple of states have indicated that they do not want to move to retail competition. Idaho, for instance, has low costs and arguably little to gain from competition.

As far as leveraging energy efficiency investments in a Wait-and-See state, before it moves to a more directed pursuit of competition, the situation is quite variable. To some extent the opportunities to pursue energy efficiency depend on the path the state was on before talk of retail competition began across the country. More likely, in Wait-and-See states the chief avenue to promote low-income energy efficiency will be to find points of leverage that interest utilities in voluntary development of energy efficiency programs for low-income consumers. These include the rate case proceedings, mergers, alternative regulation cases, flexible rate approvals, and the like. A hopeful development in recent years has been the slow and steady progress in some of the "Wait and See" states (e.g., Texas, Kentucky, Colorado, Florida) to expand energy efficiency opportunities for low-income customers. In these states, groups of low-income customers, often represented by Legal Services and/or Community Action advocates, have successfully promoted new low-income energy efficiency programs in the last two years.

In general, the report's characterization of states by their relative movement towards retail competition is a moving target. It is important to check with a state's regulatory commission and legislature to see what the latest developments are in any given state. Since the debate has unfolded, states have moved back and forth between these categories. For example, while Wisconsin forged ahead and then fell back, New York has been pushing steadily ahead, and negotiations with key stakeholders may have already produced concrete restructuring plans by the

time this report is published. Vermont also falls into this category because its Public Service Board issued a Final Order outlining a plan to introduce retail competition, but the regulators' report contains many issues that still need to be addressed, and it is likely that retail competition will not be implemented soon.

Summary

Without adequate protection, electric industry restructuring poses numerous threats to society's most vulnerable citizens. A multi-faceted approach that ensures access to electric energy on reasonable terms, and facilitates the ability of low-income citizens to afford that service, must be the basis of legislative provisions for low-income customers. An integrated package of low-income energy efficiency assists low-income citizens to afford electricity, and achieves energy savings for society.

States that have passed legislation to move to retail competition have acknowledged the underlying principle that low-income citizens must be given extra protection in a deregulated environment, and that energy efficiency services are an essential component of that. Many states have provided a steady, reasonable funding source for low-income citizens to ensure reasonable access, affordability and continued energy savings. The momentum afforded by these pioneer states can be a powerful tool in negotiating for low-income efficiency services in slower states. Advocates must get involved early in their state proceedings, even as more and more states move rapidly toward some form of retail competition.

1. INTRODUCTION

As the electric industry goes through a transformation to a more market-driven model, traditional grounds for utility energy efficiency have come under fire, undermining the existing mechanisms to fund and deliver such services. The challenge, then, is to understand why the electric industry should sustain investments in helping low-income Americans use electricity efficiently, how such investments should be made, and how these policies can become part of the new electric industry structure.

This report analyzes the opportunities and barriers to leveraging electric utility energy efficiency assistance to low-income customers during the transition of the electric industry to greater competition.

1.1 The Advent of Competition

Recently, policymakers have been considering major changes in how electric utility businesses are structured. Where today most Americans have no choice of electricity suppliers, under retail competition we should be able to shop for electricity from a variety of suppliers. Over 40 states are debating whether to introduce competition into the retail sale of electricity. Twelve states have passed statutes mandating the elimination of the existing vertically integrated monopoly in the electricity industry. In the last year, a number of bills have been filed in Congress dealing with the proposed restructuring of the electric utility industry. The transition to retail electricity competition for all customers has already commenced in California, Massachusetts, and Pennsylvania with other states set to follow.

Competition has the potential to undermine the traditional basis on which electric (and gas) utilities have offered energy efficiency services. At the same time, restructuring has provided an opportunity to rethink and reestablish the foundation for utility industry energy efficiency investments including those for low income households. It also provides the opportunity to consider the role of energy efficiency as part of the larger issue of universal and affordable access of low-income consumers to the emerging electric supply system. The future of utility low-income energy efficiency investments depends on how the changes in the energy utilities play out at the state and federal levels.

Meanwhile, the traditional bases for utility investments in targeted energy efficiency may still be viable, even as the ground rules of the new industry are being negotiated among the stakeholders. Those states moving slowly towards competition continue to have the traditional kinds of rate cases, siting approvals, and other routine regulatory proceedings that have provided the procedural framework for low-income energy conservation investments under traditional regulation. While these mechanisms may phase out, so long as they remain in operation there is an opportunity to voice low-income issues and to encourage orders or settlements that reflect the importance of utility investments in low-income energy efficiency.

1.2 Objectives of This Report

Those concerned with utility energy efficiency investments for low-income customers must find their way through a changing landscape. This report will provide essential background information on issues that members of the Department of Energy's (DOE's) Weatherization Assistance Program network may encounter as they work with utilities, regulators, competitive suppliers and policy makers to develop programs for low-income customers. The objectives of the report are:

- To define a policy basis for low-income energy efficiency in a restructured electric industry;
- To define a basis for determining funding levels and identify funding options;
- To identify ways of administering and implementing low-income energy efficiency programs under restructuring, and determine the scope and types of programs that will make sense for low-income customers;
- To identify the forums in which restructuring policies are being determined so that low-income advocates can play an effective role in advocating for energy efficiency programs in their states;
- To be able to determine the stage of restructuring for a given state and understand the implications for the scope of policy decisions to be made in that state.

1.3 Report Outline

Section 2 explores the rationales used under traditional utility regulation and develops a policy basis for low-income energy efficiency programs in a restructured electric industry. Issues related to how low-income programs may be funded and how funding levels may be determined in a competitive electric market are dealt with in Section 3. This section considers the "wires charge" as a principal option for funding energy efficiency programs, and discusses what form it might take, who might pay for it and what it might fund. Section 4 addresses the administration and implementation of low-income energy efficiency programs, including the scope of possible programs, means of service delivery and program evaluation. What some states have done for low-income programs under restructuring is described in Section 5, and the forums which advocates may use to influence the restructuring process in their states is discussed in Section 6. In Section 7, the different stages of restructuring for states are categorized into three distinct types to facilitate advocacy at the state level. The three stages into which states have been categorized are: Full Speed Ahead, Go But Slower, and Wait And See. A brief summary and conclusion is offered in Section 8.

2. THE EVOLVING POLICY BASIS FOR LOW-INCOME ENERGY EFFICIENCY

2.1 Importance of A Sound Policy Basis

If low-income energy efficiency investments are to be sustainable, it is not enough to win a given restructuring case or get a specific agreement to run a program for a few years. It is equally important to determine the reasons why the electricity industry should support low-income conservation, and based on those principles set out the standards for deciding how much of what type of efficiency investments should be made, and by whom. These standards could then be used, year after year, to gauge whether enough funds were being devoted to energy efficiency and whether expenditures were properly managed. Without such standards, efficiency investments might only be made when a company needs to respond to some other type of pressure, and that pressure is not predictable. Indeed, to the extent restructuring frees a utility from regulatory oversight concerning the prices it charges for the electricity sales part of its business, the opportunity to seek a regulatory requirement for greater efficiency investments will be eroded once competition is in place.

Whatever short term gains might be made in negotiating a specific restructuring package, they can quickly be lost if there is no underlying policy commitment to the delivery of energy efficiency services to low-income households. There must be a solid policy basis for the type of program that is negotiated, if the program is not to be a one-time event. It must be a policy basis that will last beyond the time of the program itself, or the initial agreement on budgets.

2.2 Traditional Bases For Utility Low-Income Efficiency Investments

2.2.1 Overview

Support for instituting a program of energy efficiency for low-income customers can come from a wide range of sources. At one extreme, a utility and its regulators may be under a statutory mandate to make such investments. In such a case, someone has laid the groundwork for this requirement by promoting the concept when the legislation was drafted.¹ More typically, there is no specific statute mandating that utilities help low-income customers make their homes more energy efficient. In these cases, programs derive either from orders of utility regulatory commissions, or by direct agreement of the utilities themselves.

Energy efficiency commitments by utility companies have historically been made for a variety of reasons:

- to **satisfy** the requests of an important constituency;
- to **lower resource costs**, especially where there is an explicit regulatory requirement for least cost resource procurement (e.g., to avoid or delay building expensive new generating capacity);

- to get **agreement** from the key participants in a regulatory proceeding where the utility is asking for a some kind of required approval (e.g. a rate hike, a merger, permission to build a new transmission line, etc.);
- to **respond to a public relations crisis** affecting their low-income customers, such as a particularly hot summer or harsh winter, where numbers of low-income families suffered because they could not afford the utility's service;
- to **lower their credit and collections costs**, by bringing bills for their low-income customers down to manageable levels;
- to show regulators that they are being **evenhanded** with all their customers, especially where they put significant funds into energy efficiency assistance for non-low-income customers; and
- to show regulators that they are helping low-income consumers **afford to keep their utility service**, where the regulators consider universal service an important responsibility of the utilities.

These reasons are not mutually exclusive. For example, the demand-management measures that help keep a low-income family's bill affordable also lower the utility's credit and collection costs, since the family can now better afford to make timely payments, and also lower the utility's costs of obtaining power supplies. They also show the utility in its best light, as a responsible member of the community assisting vulnerable customers keep their lights.

2.2.2 Equity and Affordability

According to a recent report (Brown, et al, 1994²), the most common primary goal of low-income energy-efficiency programs operating in 1992 was "to make energy services more affordable to low-income customers." For only 44 percent of the programs surveyed, securing a cost-effective energy resource was the primary goal although it was a secondary goal for many utility energy efficiency programs. Thus, equity was the dominant rationale for such programs.

Low-income energy efficiency helps to make bills affordable by reducing the usage on which the bill is computed. Most electricity customers pay a small customer charge each month, plus a usage charge. The usage charge is typically computed as the kilowatt-hours consumed during the month times the price per kilowatt-hour for that usage. Regardless of the way the rates are designed,³ the customer's total bill is higher if their usage is higher. So if the customer can replace energy usage with energy efficiency, and still maintain the same level of lighting, hot water, refrigeration, and heat, as the case may be, the bill goes down and becomes that much more affordable.

2.2.3 Lower Utility Credit and Collection Costs

Lowering bills to the point they are more affordable has the additional benefit of improving a low-income customer's payment pattern. To the extent a customer can make more consistent payments, make more complete payments, and make more timely payments, the utility does not need to expend as much on collection efforts and other credit-related costs. In Pennsylvania,

more so than other states, this observation has been a key underpinning of regulatory mandates for low-income usage reduction programs (LIURP).⁴

Some of the avoidable costs of credit and collection are listed below in Table 1.

Table 1. Avoidable credit and collection costs

Sending late payment advisories, warning notices, shut-off notices, and other bill collection correspondence.
Making attempts to give personal notice of impending shut-offs.
Sending a crew to a home to disconnect or reconnect the meter.
Negotiating payment arrangements.
Renegotiating payment arrangements.
Maintaining a bill payment tracking and credit action tickler system.
Determining the need for a deposit, collecting and booking a deposit, maintaining a secure account for deposits, reporting interest on deposits, tracking conditions entitling customers to the return of deposits.
Responding to high-bill complaints caused by inability to pay.
Handling informal appeals to the regulatory agency regarding unpaid bills or unreasonable payment arrangements.
Overheads and joint costs of administration attributable to low-income customer credit and collection activities (e.g., the allocated share of the cost of a new computer system, software, executive salaries, offices, etc.).

2.2.4 Least-Cost Planning/Integrated Resource Planning (IRP) & Equity Between Low-Income Customers and Other Customers

Least-cost resource acquisition has been a key driving force behind utility investments in energy efficiency programs. This is especially the case in energy efficiency programs targeted to non-low-income customers, although low-income customers have also benefitted.

Least-cost resource acquisition originated because monopoly utilities were obligated to plan their systems to meet the forecast load. Thus they are required to plan in such a way that they achieve the least-cost mix of resources to meet that load. This mix of resources should also lower demand by substituting energy efficiency measures, not just build more generating resources. Looking at *all* the resources available to the system and finding the least-cost mix is referred to as integrated resource planning.

As recently as 1992, the Congress mandated that each state look at integrated resource planning and decide whether to implement it.⁵ IRP has been a tool for promoting further demand-side management that makes economic sense.

Targeted programs aimed at low-income customers were ordered so that all customers have an equitable opportunity to enjoy the utility's offerings of demand-side management. Although low-income customers pay for the programs along with all the other customers, the traditional cost-effectiveness tests used to screen energy efficiency programs and direct energy efficiency investments by utilities tended to emphasize the large savings available from customers with large energy requirements. Thus, utility energy efficiency programs run under least-cost planning principles tended to favor measures and programs targeting high-use residential customers and commercial or industrial customers. In some states it was considered necessary to mandate energy efficiency programs for low-income customers so that they could also benefit from them. That equity is the objective, and not least cost planning, is evident in the fact these programs are not screened under the standard cost-effectiveness tests (Brown, et al., 1994⁶).

In a market with full retail competition, however, IRP may no longer be viable. When utilities provide electric service as vertically integrated monopolies, it makes sense to look to them for comprehensive and integrated planning of resource procurement. IRP is a centralized planning function that allows all the "stakeholders," from utilities to their customers, to have a say in developing a least cost plan. Under retail competition, the responsibility to acquire generation resources will be split off from the regulated distribution utility. No one firm will have the responsibility or the opportunity to plan for the generation needs of an area. Proponents of retail electricity competition point to the need for utilities to lower their own prices to be competitive, and say that any program that raises rates⁷ must be curtailed. They argue that energy efficiency unfairly benefits some customers at the expense of others. As states and the federal government sort out how to organize a restructured utility system, policymakers are thus debating whether the policy of integrated resource procurement continues to be viable.

If IRP is not viable in a retail competitive market, it is still possible to continue IRP in a wholesale competitive market as long as full retail competition is not in place. In the market for wholesale power, where all resources go up for bid, there is an opportunity to procure the least cost option. The costs will be spread out among all consumers equally, and least cost resource acquisition at the wholesale level can be used to offer demand side management and low-income energy efficiency programs.

2.2.5 Avoiding the Costs of Societal Externalities

Economists distinguish between costs that are internal to a system under discussion, and those that are external. The cost of coal, the cost of building a power plant, the cost of locating a distribution wire, the cost of collecting overdue bills, the working capital cost of overdue bills, are all examples of costs internal to the electric industry. There are external costs of unaffordable electric service as well. As with the system costs, these externalities can be avoided by investments in electric energy efficiency in the homes of low-income customers. Homelessness, forced mobility, poor school performance, neighborhood deterioration, health and safety risks,

and other adverse societal consequences of unaffordable electricity can be averted in part with the help of programs to make electricity usage more manageable and affordable.

2.2.6 Removing Some of the Barriers to Low-Income Energy Efficiency

A related rationale for targeted energy efficiency assistance is to overcome the barriers low-income customers face in going out into the market and getting their own energy efficiency measures. Again, the issue is equity, where low-income consumers have little or no real access to energy efficiency. Even though it would be cost-effective for low-income households to invest in energy efficiency many hurdles stand in the way of low-income households installing wall and attic insulation, caulking and weatherstripping their homes, replacing incandescent light bulbs with compact fluorescent bulbs, replacing old inefficient refrigerators, wrapping their hot water heaters and installing low-flow showerheads. Removing these impediments results in better resource planning, lower system costs, greater affordability and equity benefits.

Some of the barriers to low-income households' installing energy efficiency measures on their own are summarized below:

- High required "return on investment" (the so-called "hurdle rate"). Demands on disposable income are so acute for a low-income family, that any expenditure must essentially bring an immediate benefit - such households do not have the luxury of investing today for a hoped-for return in the future;
- Lack of up-front cash and access to credit. This acts as a disincentive for purchasing energy efficiency measures. Also, when available funds are limited the savings to be gained appear small in comparison to the relatively high cost of installing such measures.
- Split incentive between landlord and tenant. Low-income households are disproportionately renters, and often with relatively short tenure in any given house or apartment. The landlord has no incentive to make the place more efficient if the tenant pays the utilities. The tenant's incentive is minimized by the fact that the investment has to pay for itself in an unrealistically short time in order to make sense, given the short time the tenant might be able to enjoy them.
- Lack of education and awareness about energy usage. In surveys of low-income customers, there is often a great deal of misunderstanding about what appliances and practices use the most energy. Low-income families also often lack the education to evaluate highly technical efficiency cost-benefit analyses, to determine if an efficiency expenditure is a good deal for them.⁸

2.2.7 Leveraging Federal Energy Assistance Dollars

The formula for allocating federal dollars to states from the Low Income Home Energy Assistance Program (LIHEAP) includes a leveraging set-aside.⁹ States draw down these dollars to the extent they obtain non-federal energy assistance dollars at the state level. Thus, a state that continues to encourage its electricity providers to fund energy efficiency for low-income customers will secure a greater share of federal energy assistance dollars through LIHEAP's

leveraging set-aside. Today, utility energy efficiency programs, both electric and gas, are the single largest source of weatherization leveraging funding.¹⁰

2.2.8 Mitigating Adverse Effects of Other Policies

Targeted efficiency services may be mandated by a commission when a utility settles a rate case,¹¹ or gets permission to merge with another company, or gets some other approval it requires from the regulatory commission. The mandated program may be a form of mitigation of harms that the proposed utility activity would otherwise create for low-income customers. In some cases, the program may constitute a quid pro quo requested by advocates of low-income energy efficiency or rate affordability, in return for which they agree not to oppose regulatory approval of certain aspects of the requested rate increase, merger or other regulatory authorization. In such cases, the commission does not necessarily adopt a particular rationale for the program. Stipulated rate increases are an obvious instance of such a settlement arrangement.

2.3 Policy Basis for Low-Income Efficiency Under Restructuring

2.3.1 Multiple Reasons Still Apply

The basis for low-income targeted energy efficiency investments by utilities and other participants in a restructured utility world will be multifaceted. With the possible exception of IRP resource acquisition all of the traditional reasons for low-income energy efficiency noted in Section 2.2 above apply in a restructured environment. Furthermore there is one important addition. To the extent that restructuring places greater pressure on the ability of low-income households to obtain electricity services, then additional mitigation measures (such as targeted efficiency assistance) are warranted.

2.3.2 Restructuring May Pose Risks

Fears that low-income customers could face more difficulty in obtaining and retaining electricity service are based on a few different factors. One is that the traditional utility's "obligation to serve" will be replaced with the customer's freedom to choose his/her supplier of energy, which also gives the supplier a choice of potential customers. The likelihood that low-income customers will be unable to access suppliers, or be unable to do so at competitive prices for comparable services may be significant. The fact that competitive markets tend to increase prices for those least able to pay has been documented in other deregulated industries.¹² Another is that traditional utility regulation contains numerous consumer protection clauses that, in the future, may not be available to protect low-income consumers from disconnections and other unreasonable practices by companies. Many of the consumer protections particular to the electric industry cannot easily be enforced under other relevant state laws either. As noted by Barbara Alexander in a study of consumer protection laws:

Bill formats and disclosure requirements, disconnection procedures and forms of notification, health and safety requirements, particularly concerning winter

disconnection, regulation of late payment fees, credit determinations and deposit criteria: none of these important standards exist or could be created based on the Unfair Trade Practices Acts alone without considerable difficulty and application of resources.¹³

2.3.3 Energy Efficiency Is A Response To Competitive Risks

As noted above, there is a real possibility that low-income households will be at higher risk in a restructured electricity market. An appropriate response to such a scenario would be a multi-faceted series of actions that ensures access to electricity on reasonable terms. A package of low-income energy efficiency integrated with other parts of a comprehensive assistance plan achieves energy and dollar savings for society, while at the same time addressing issues of equity. As will be seen later in this report, many of the states that have already passed legislation mandating retail competition have acknowledged this and made provisions to ensure access for low-income consumers.

First, efficiency is a key tool in helping low-income families manage their bills. To the extent their bills are lowered because efficiency enables them to reduce their usage, their bills are more affordable. The demonstrated cost-effectiveness of Weatherization means that a dollar invested in low-income energy efficiency gives considerably more than a dollar's worth of benefit in reducing household energy expenditures.¹⁴

Second, to the extent bills are more affordable, low-income consumers will be better able to pay them. This in turn leads to improved payment patterns from the energy vendors' point of view and would make low-income customers more attractive as customers to potential marketers. Improved payment patterns are therefore likely to lead to more competition to serve the low-income end of the retail market. This is likely to produce better prices and services for consumers.

Third, energy efficiency can lower the costs of public benefits programs for energy affordability to other consumers. In many states that have passed restructuring rules or legislation there have been programs to help low-income households afford their energy through rate discounts, payment assistance, and regulatory protection. To the extent that weatherization can reduce energy consumption it can reduce the cost to the systems of those other payments.

Table 2. Rationales for utility low-income efficiency programs in traditional and restructuring environments

Justification	Traditional	Restructuring
Help low-income customers manage use and	✓	✓
Help low-income customers afford essential electric service bills.	✓	✓
Lower system resource costs	✓	
Lower credit and collection costs.	✓	✓
Mitigate potential adverse impacts of competition.		✓
Address long-term affordability problems.	✓	✓
Promote sustainable access	✓	✓
Prevent homelessness and similar societal externalities.	✓	✓
Promote positive market competition for low-income consumers		✓
Lower System Benefit Expense	✓	✓
Leverage federal energy assistance dollars.	✓	✓

Policy developed to date has implicitly recognized the special role of energy efficiency targeted to low-income electricity users in a restructured electricity industry. In the restructuring programs instituted so far, low-income efficiency and related programs have usually fared better than some other public benefits with respect to an acknowledged place in a restructured world. For example, in California and in the Massachusetts settlements,¹⁵ funds for non-low-income energy efficiency either are discontinued after a short period of years, or are constrained by standards that make clear they will be smaller and more narrowly applied after a transition period, unlike the more long-term and stable funding option for low-income energy efficiency programs.

In other words, it is assumed that market transformation may eventually dissolve the remaining policy reasons to continue mandating utility investments in energy efficiency generally, but that the barriers low-income consumers face will persist, and that the various policy bases of low-income energy efficiency will continue to be valid, if not be strengthened, by the introduction of competition.¹⁶

2.3.4 Market Transformation: A Policy Basis for Energy Efficiency

Policymakers have been rethinking the role of regulation in resource planning under restructuring. Since it has become apparent that least cost resource acquisition may not be viable in an electricity market with retail competition,¹⁷ the regulatory community's focus has shifted to "market transformation."¹⁸

Essentially market transformation focuses utility efficiency investments in areas where the utility's spending can prime the pump of the market, and assist a fledgling market to develop. The idea is that once the market has been spurred by the utility investment, it will no longer need to be supported by utility investments, and ratepayer spending on energy efficiency (at least in that sector) can be withdrawn.

However, market transformation efforts are not likely to reach low-income customers. Low-income customers are typically unable to participate in markets for energy efficiency products and services even when those markets have become mature. For example, even if new refrigerators on the market are made more efficient generally through market transformation, low-income customers will tend to be buying refrigerators on the used-appliance market. Thus, at best, the efficiency of their appliances will lag behind those buying from the transformed market. Similarly, low-income consumers disproportionately do not buy homes, and typically buy used homes, rather than new, energy-efficient homes.

The barriers to low-income customers' participation in energy conservation are not temporary, and do not erode with time as the market for efficient new homes and appliances is transformed. These constraints are as durable as the condition of poverty. As long as there are households with insufficient income, and families without the means to secure energy efficient dwellings and appliances and keep up with technological developments in energy usage, these barriers will prevail.

3. FUNDING LOW-INCOME PROGRAMS UNDER RESTRUCTURING

3.1 Traditional Utility Investments in Low-Income Energy Efficiency

When a state opens the debate on how to implement retail electricity competition, it opens the way to a broad discussion of how energy efficiency investments should be supported. It is possible in this context to reexamine the traditional way of funding and mounting such programs, and explore options that may not have been possible under traditional ratemaking principles.

Under traditional regulation, electric company efficiency investments have been made directly by utilities and funded by their ratepayers. Sometimes the utilities recover these investments through their base rates, and sometimes by dedicated surcharges on the bills. Typically the charges to customers to support energy efficiency programming have been based on usage. That is, they are rolled into the per-kilowatt-hour energy charge a customer pays for electricity, or the surcharge is usage-based. States and utilities vary in whether industrial customers or non-residential customers contribute towards the cost of low-income energy efficiency programs.

Under certain circumstances utility funding for low-income energy efficiency has been funded through settlement of utility rate dispute, merger docket or other regulatory proceeding. For example, when two utilities propose to merge they generally argue that the merger will have some positive benefits for consumers as well as the companies themselves. Regulators sometimes will allocate a portion of those benefits to low-income energy efficiency. In these cases the investment in low-income energy efficiency can arguably be said to be stockholder financed rather than derived from customer charges.

Funding for low-income energy efficiency has tended to be industry-specific. That is, electric companies have funded electricity savings programs, gas companies have funded gas energy savings, and water utilities have funded programs to save water. With rare exceptions, one type of utility has generally not funded programs aimed at energy savings of another utility's fuel.¹⁹ States also typically put little state tax money into low-income energy efficiency today.²⁰

3.2 Need for a New Way to Collect Funds

When the distribution function of a utility is split off from the generation function under retail competition, it will be necessary to rethink how funding for efficiency services will be generated. The trend has been to isolate distribution services such as maintaining the poles and wires that connect our homes to the power grid and the generating plants in one company, and keep that business separate from the supply of electricity. Today, customers typically pay one bill to one company, and that company supplies all the services, from metering, to distribution services, to transmission, to generation. In the future, customers may pay two or three or even more suppliers, each providing a discrete part of the package of services we now know as electricity service.

In such a world, it will be necessary to decide which entities should provide the funding for low-income energy efficiency programs, and which should administer and deliver energy efficiency services. The answer to the funding question will be explored in the remainder of this section. Issues of program implementation and administration will be dealt with in Section 4.

The question has risen as to whether suppliers, as well as the distribution utility, should collect the funds for investments in low-income energy efficiency. There are two reasons why splitting responsibility among the service vendors makes sense. First, it would be possible to allocate costs so that the distribution utility and its customers would pay for the part of the program that provides distribution-related benefits, and the competitive vendors and its customers would pay for the part of the program that produces savings in energy-related costs.²¹ Examples of such benefits for the distribution company might include reduced collection expense and bad debt write-offs. Examples of benefits to the supplier and its customers might include lower peak load requirements and therefore lower costs of supply as well as reduced expenses for receivables and bad debt.

Second, it would establish the principle that societal benefits such as low-income energy efficiency are part and parcel of the entire electric energy industry and not the surviving distribution monopoly alone. The reason that some parts of the electricity supply system will be competitive while others will remain regulated has to do with their underlying and emerging technological and economic characteristics. This does not mean that the competitive elements and its customers have lower societal responsibilities than do the companies and customers of the regulated elements.

Though this approach has a neat theoretical basis it has some practical drawbacks that would make it difficult to implement. For one thing it would require the development of a new entity to collect and administer the funds. This is because the contribution of distribution utilities and competitive vendors would have to be merged back together for sensible program delivery. Otherwise there would be a tremendous waste of funds and many opportunities for savings would be missed.

Of greater significance is the problem of attempting to allocate benefits, and therefore cost responsibility, among electricity suppliers and distribution utilities. The major beneficiaries of low-income energy efficiency investments are the low-income households that receive the efficiency investments. Other benefits, while real, can be difficult to quantify. It would be extremely difficult to develop accurate estimates of the proportional secondary benefits of low-income energy efficiency to various parts of the new electricity system.

Finally, in the states that have been early initiators of retail competition, policymakers have not promoted the idea of contributions from the electricity suppliers. This may merely be because of the added layer of administration that more than one source of funding requires. It may also be as a result of opposition by suppliers, who do not want to bear any more costs and societal responsibilities than necessary, and who make the argument that they should be set free from regulatory burdens to have a chance to survive in a competitive industry.

The focus has instead remained on funding through the distribution utility. In fact, attention has been concentrated on distribution company collection of ratepayer funding via a so-called "wires charge."²² The following section discusses the wires charge, its form, who would pay for it, what it would pay for and how costs might be recovered.

3.3 The Wires Charge

For a number of reasons, the regulatory world has generally favored a surcharge on the distribution utility's revenues, payable by all customers, as the means to fund energy efficiency after restructuring.

From the beginning of the debate, there has been a broad consensus that any charge on customers to collect funds for programs with public benefit must be "non-bypassable." This term refers to the risk that certain customers will be able to secure their supplies from non-utility sources, and if so have the opportunity to "bypass" charges that are levied on the use of energy. Distribution of electricity will remain a monopoly. There is no economic way to duplicate the provision of poles and wires for the distribution of electricity. Anyone taking electricity off the interconnected transmission and distribution network will necessarily incur a charge for the use of the network. Only by eliminating the use of electricity, or generating one's own electricity and not using the grid for back-up supplies, can one bypass the distribution network.

Electricity is an essential and growing component of modern energy needs, so not using it at all is a virtual impossibility. Self-generation is indeed possible, but numerous technical and financial constraints make it unlikely that any customer, large or small, will be able to completely remove themselves from the interconnected power grid.

These facts have led to the proposal, now widely adopted in principle, to use a "wires charge"²³ to collect the funds necessary to support public purpose programs, such as targeted low-income efficiency. In effect, a wires charge is a charge paid by all users of the monopoly wires. The wires charge has the following benefits:

- It collects the funds from the same group of ratepayers who may now be paying for public purpose efforts via their bundled utility payments where such programs have existed.
- It prevents any group of customers from bypassing this contribution, and leaving the burden to the remaining ratepayers.
- It avoids the necessity to enforce requirements for suppliers to collect a charge for efficiency investments, which may be perceived as interfering with the efficiency of the competitive part of the market.
- It can be applied to any entity that uses the monopoly facilities, whether suppliers who need the facilities to transmit or distribute power/gas, or customers who rely on the facilities to receive their energy.

Some advocates of low-income interests are concerned that a wires charge is too much like a tax, and will attract disproportionate political opposition. A wires charge would stand out on the ratepayers bill and would therefore be more vulnerable to attack. They would also prefer that distribution companies and/or suppliers be given responsibilities to achieve energy efficiency or other desired outcomes, and collect the costs of such efforts in their rates or prices along with their other ordinary expenses of business.²⁴

Despite these drawbacks, the concept of a wires charge has gained widespread support and is the easiest form of non-bypassable funding to conceptualize and administer in a restructured world. In some states that have not settled on a funding mechanism, it may be possible to advance other concepts for funding. However, the public debate over funding energy efficiency and similar investments has focussed almost exclusively on the use of wires charges in the form of surcharges assessed on individual customers.

3.3.1 Volumetric Charges vs. Other Forms of Wires Charges

The question that then arises is about the basis on which the wires charge will be levied. Charges for the use of the monopoly wires can take two major forms. One option is to assess each customer a flat charge every month, regardless of usage. This would be called by ratemaking experts a **customer charge**. Another option would be to impose a surcharge on every kilowatt-hour used during the billing period, or a so-called "energy" charge. This is a type of **volumetric charge**.²⁵

If costs are spread to customers by usage, based on the number of kilowatt-hours consumed, in practice the large consumers of electricity will bear a large share of the costs. Typically, the small set of industrial and large commercial customers together use as much electricity between them as the large set of residential consumers, even though each residential customer uses only a fraction of the energy of each of the large customers. For this reason, an energy allocator, or a fixed-cost-per-kWh factor to recover energy efficiency costs will result in the class of large commercial and industrial customers paying in aggregate about the same as the class of small residential customers.

Conversely, if the costs are allocated based on the number of customers (or if a fixed per-customer-per-month charge is used), residential customers, being very numerous relative to customers in other classes, will bear the lion's share of the costs. With a customer allocator such as this, large commercial and industrial customers will likely end up paying a negligible share of the costs. In both cases, customers in the small commercial sector will find their allocation to be somewhere between that of the residential class and the large commercial/industrial class.

The form of the wires charge is not settled, although the emerging consensus leans heavily towards volumetric charges. Environmentalists have an interest in encouraging non-wasteful use of energy, so they tend to support a wires charge that increases with the amount of energy consumed. There is no strong trend in the position of utilities on this issue. In some states, large industrial customers object to wires charges.²⁶

The California restructuring legislation spells out that public purpose charges are to be usage based.²⁷ The Rhode Island legislation establishes a specific per-kilowatt-hour charge (2.5 tenths of a cent per kWh) to raise funds for efficiency and renewables (so-called "environmental" programs).²⁸ The Massachusetts law establishes a mandatory charge per kWh to fund energy efficiency activities, starting at 3.3 mills per kWh in 1998 and diminishing to 2.5 mills in 2002.²⁹

3.3.2 Cost Allocation Among Customer Classes: Who Pays for the Programs?

The decision to place some or all of the responsibility on customers (end-users) does not in itself determine which customers will shoulder this responsibility. Different types of customers (e.g. residential, commercial, industrial) can be given more or less of the burden of paying for the share of costs that is to be borne directly by customers. This allocation of cost responsibility can be made in a number of ways. Costs can be divided up between the various classes on some allocation basis, and then rates for members of the class can be set in a way that further distributes the burden of a class' share of costs within that class. Various, costs can be spread to all customers on a particular basis (e.g. per kilowatt-hour usage, per customer per month, etc.), and these different cost recovery rate designs will result in a de facto allocation of costs to the different classes and subclasses of customers.

As can readily be appreciated, the cost allocation or cost recovery mechanism chosen for these programs can have a dramatic effect on which group of customers carries the customer share of cost responsibility. If a state already has utility conservation programs, the path of least resistance for policymakers will be to continue under restructuring the current approach to recovering the costs of efficiency from ratepayers. Thus, if all customer classes now support energy efficiency, it should not be hard to argue for a continuation of that policy under restructuring.

Where a state has historically limited cost responsibility to the residential class (or used a per customer allocator, to a similar effect), it is somewhat more difficult to achieve a broadening of the base of funding from residential customers to all customers.³⁰ The policy of having all customer classes support low-income energy efficiency is justified, however, on a number of grounds:

- the programs provide system-wide benefits in credit and collections savings to the distribution utility, that are shared by all customers,³¹
- the societal benefits of the program are shared by all members of society; and
- the largest customers are expected to reap the largest cost reductions from competition, and it is fair to ask them to contribute to programs that blunt adverse effects that may face low-income customers as a result of competition and price discrimination.

The main reasons for resistance to broad allocations of costs are reasons of principle and precedent. While large customers in fact might hardly notice the effect of a per-kWh allocation of low-income bill assistance and energy efficiency programs, they might fear that the policy that led to such a broad allocation of costs in the case of universal service programs might be used to justify the allocation of more burdensome costs to all customers on a usage basis. Happily, the

cost of such programs when allocated to all classes is typically small in relation to the benefit to low-income customers.³²

3.3.3 Same Charge For More Than One Public Purpose

The question also arises in crafting the “wires charge” as to whether all public goods programs should be funded with a single charge, or whether there should be separate charges for different public goods.³³ A typical breakdown is between low-income programs (including rate assistance and other forms of affordability support) and other programs with an environmental purpose, such as efficiency investments for all customers, renewables, and research and development. States have considered wires charges broken down along the following categories:

- all low-income programs (combined customer assistance and low-income energy efficiency);
- a statewide low-income energy efficiency program;
- all statewide energy efficiency programs, whether targeted to low-income households or otherwise;
- energy efficiency on a utility-by-utility basis (for utility-by-utility implementation); and
- energy efficiency, renewables and low-income and/or “public purposes” programs.

Different constituencies support different types of public goods programs, and different delivery systems provide the services funded by the various public goods programs.

With this in mind, some of the reasons for developing a targeted low-income fund include:

- if the total dollars raised by separate charges for low-income and non-low-income programs will be closer to the identified need than the funds raised by a single charge for multiple purposes,
- if it is more straightforward to determine the appropriate level of charges for the programs separately, given the differences in how they are justified and their budgets developed,
- if it unnecessarily complicates fund accounting and program administration to centralize the funds and administration of disparate programs,
- if a combined fund will lead to competition between the various public purposes for the limited funds, and an unnecessary conflict between interests that ordinarily should be sharing a common perspective on many restructuring and implementation issues, and
- if support for low-income programs would be eroded if they were packaged with other types of programs.

There are reasons, however, to pursue a combined fund. Some reasons to include low-income programs in a fund that supports other public purposes as well follow:

- if the separation of the funds would lead inevitably to isolating both charges on the bill,³⁴

- if separation of the funds erodes the combined support of the various public purpose constituencies for the development of any fund at all, and
- if a combined fund is less costly to administer.

As with other issues, the calculus of which approach is most likely to make it possible to achieve the goals of low-income energy efficiency will have to be made in each state based on the circumstances of the state.

3.4 Bases For Funding Level Determination

There are several alternative methods to identify the proper level of targeted funding for low-income energy efficiency. They are quite varied in scope, producing a broad range of estimates of funding requirements. On one end of the range are needs-based estimates derived from the potential of energy efficiency to provide positive benefits to low-income households in the existing housing stock. These estimates tend to produce high funding requirements. At the other end of the range are estimates of funding requirements based on the short term capacity of the energy efficiency network of service providers to install efficiency measures given current management and personnel capabilities. Between these two alternatives are funding levels based on historical levels of investment in each state as well as the funding level needed for efficiency investments as part of an integrated package of low-income affordability services and assurances.

3.4.1 Needs-Based Approach

A needs-based approach derived from the quantification of the unmet need for low-income energy efficiency services is the resource estimate that deals most comprehensively with the problem of low-income energy affordability. A recent metaevaluation of state Weatherization programs indicated that the installation of energy efficiency measures in the low-income housing stock has been able to reduce residential gas bills by 23 percent for recipient households. This translates into a reduction in residential energy expenses of \$193 per year per weatherized household, based on an estimated FY 1996 expense of \$1,702 (Berry, L., ORNL, 1997). Unlike a one-time payment of energy assistance to a low-income household to help it to pay its energy bills, the benefits of energy efficiency persist year after year.

A needs-based assessment of funding requirements can be done in a number of ways. One measure of the need is the extent of energy efficiency measures that have not been installed in the homes of low-income customers. This is in effect an estimate of the "technical potential" for conservation in the usage of low-income customers.³⁵ That is, it is a means to estimate the amount of electricity that can be saved by efficiency measures in the homes of low-income customers. For example, preliminary estimates of savings potential performed by Oak Ridge National Laboratory for the DOE Office of State and Community Programs indicates the potential to save 365 kWh per annum per household with a lighting upgrade, 317 kWh with a refrigerator change out and 767 kWh with a more efficient room air conditioner.³⁶ A budget estimate can then be derived by developing a cost estimate to agreed measures and defining the scope of target population.

A second approach to needs-based budgeting, is to estimate the number of households where comprehensive or electric energy efficiency has not been achieved, or only partially achieved.³⁷ These households will be candidates for efficiency investments.³⁸ For example, on a national basis it is estimated that as many as 5 million households have already benefited from full scale weatherization but that an additional 24 million households may be federally eligible for DOE Weatherization services at any given point in time.³⁹ A budget estimate can be derived by combining data on a state or utility's eligible unserved population with cost estimates for comprehensive cost-effective weatherization.

Needs-based assessments have the advantage of stating the full cost of providing the maximum benefit to the low-income population. Their disadvantage is that they tend to be expensive relative to the historical commitments that have been made to low-income energy efficiency, particularly in those states where there have been no substantial budgets for these purposes in the past. The capital intensive nature of these expenditures, with their resulting high total cost, may make it difficult to gain political or regulatory acceptance for a comprehensive approach based on need, even when this has demonstrated cost-effectiveness.

3.4.2 Integrated Services Approach

Integrated efficiency services as part of an overall low-income affordability program are an alternative approach to budget and needs assessment. The potential for usage reduction is linked to the potential for affordability improvements, arrearage reductions, payment pattern improvements, disconnection reduction, and similar related benefits from lowering bills by conservation of resources. For example, an evaluation of the DOE Weatherization Assistance Program in the state of Ohio found that Weatherization had profound public benefit in reducing the cost to ratepayers of the state's comprehensive payment assistance program, known as PIPP. Weatherization reduced the level of payment assistance needed to maintain affordable access for recipient households by reducing overall energy bills for those households.⁴⁰

An integrated approach to affordability can lower the overall cost of energy efficiency, relative to that of a comprehensive needs-based approach, by targeting benefits to those households with the highest energy expenditures, lowest incomes, and greatest health and safety risks, i.e., those most likely to impose the highest costs on the system. This could reduce the number of target households substantially. For example, in an effort to understand how best to target and allocate limited weatherization resources, the Economic Opportunity Research Institute examined national data on the energy expenditures and burdens of Weatherization-eligible households as part of the National Weatherization Evaluation.⁴¹ The study found that within the estimated federally eligible population of 27.9 million households in 1990 that there were an approximately 2.1 million households with very high energy bills and very low incomes, even when measured against the rest of the low-income population. A program targeted at an important but limited subset of the overall eligible pool such as this could have positive disproportionate results for improved electric energy affordability at a fraction of the cost of a comprehensive needs-based program.

The obvious disadvantage of the type of integrated approach described above is that it is predicated on a policy decision to provide comprehensive assistance to low-income households through a combination of regulatory protections, payment assistance, and energy efficiency. Clearly the secondary benefits of reduced costs to ratepayers through reduced payment assistance, reduced costs of shut-off protection, and reduced customer services can occur only when such costs are being incurred by the system. Targeting benefits to those most in need makes sense whenever the need exceeds the resources but the multiplier effect of secondary benefits described above occurs only in a system which is more extensive than low-income energy efficiency alone. This requires a significant policy commitment to low-income affordable access by state regulators or legislators as part of the electric industry restructuring process, one that may not occur in every jurisdiction.

3.4.3 Historical Funding Approach

A third approach to estimating the funding need for low-income energy efficiency is to base the funding on the historical commitment of the state to such programs. In states where this type of funding has been substantial in the past, California, Wisconsin, and Pennsylvania for example, this type of resource commitment can be easily justified and accepted by decision makers as part of the historical operation of the system that should be preserved in a restructured world. Typically, funding for low-income energy efficiency in these states has been based on some percentage of the existing utilities' gross operating revenues required to be committed each year to low-income energy efficiency programs.

One of the advantages of this approach is clearly more ready acceptance from other participants in the restructuring negotiating and design process compared to the need to justify a new or higher level of funding. One of the disadvantages of this type of approach can be that the historical funding level may become a ceiling on funding that becomes divorced from the need for the services. A further disadvantage to this type of approach is its limited applicability because there are only a few states where resource commitments to low-income energy efficiency have been substantial in the past.

3.4.4 Network Capacity Approach

Finally, a fourth approach to estimating the funding may be the capacity of the low-income weatherization network to effectively implement the program. Substantial cuts in the scale of the DOE Weatherization Assistance Program, combined with the depletion of resources for Weatherization from other sources such as Oil Overcharge funds, has reduced the capacity of the traditional network of weatherization providers to provide service. This means that, at least in the short run, it may be necessary to limit dollar commitments to low-income efficiency to that which can efficiently be implemented by the network in the field. It is assumed that this type of limitation is a short run phenomenon and that, given a reasonable amount of time to ramp up activity, the low-income energy efficiency network could expand its grasp to match its reach. However, in the time frame of one to two years these capacity limitations may make other methods of making needs estimates moot.

Some of these standards described above define a floor (e.g. percent of gross operating revenues), and some denote a ceiling (e.g. institutional capacity, cost savings). It is valuable to have a floor, and administrative or political realities may require that a ceiling be identified. It must also be noted that using the current institutional capacity of vendors as a basis for the funding level fails to acknowledge the fact that capacity today most often does not reflect the need for services, and that capacity can be greatly increased in the long run if the funding is stable from year to year.

It is important not to confuse the purpose of estimating a general program goal with establishing a program resource requirement. Merely providing for a goal or a target avoids grappling with the essential issue of what the level of commitment to these system and low-income benefits will be. It also creates the need to identify who will get to make the decision about how far to push towards the goal in any given year or period. To the extent the decision maker is an energy vendor (e.g. the utility) that is ill-informed about the benefits of low-income energy efficiency for vendors, and instead perceives its own self-interest as directly linked to promoting the maximum volume of sales, the budget targets will likely be understated under such a system.⁴²

One historically useful standard for floor funding, a percentage of gross operating revenue for the vertically integrated utility, may no longer be applicable in a restructured industry environment. As the industry is reconfigured this benchmark will shift and require constant recalibration. The intention of the introduction of competition is to take away part of the business of utilities (i.e., at least *some* of their revenues from the sale of energy). So even if energy utilities continue to sell electricity, their energy sales will decline. Their poles-&-wires or pipes costs may hold steady or increase, but their total revenues will go down. For this reason, it is valuable to translate minimum percentages of gross operating revenues into minimum percentages of a more stable sort. Utility distribution revenues would be a suitable substitute.

3.5 Transition Issues: Impact of Rate Caps

Note that the utilities have argued in California that the need-based determination of such budgets is overridden by the rate cap imposed in other sections of the law. This tension between appropriate budgets and rate caps also exists in the Pennsylvania legislation. However, the mere presence of a rate cap does not mean that the low-income program should be capped - while the result of exceeding the rate cap will be to further (however modestly) increase costs above those anticipated by the utility, it does not necessarily reduce utility profits, as claimed.

First, and most importantly, these programs have been shown to be net revenue boosters. That is, spending money on efficiency (or bill assistance) to make a bill more affordable results in better payment patterns from low-income customers, and associated reductions in credit and collections costs.⁴³ To the extent that the program participants are taking service from the utility under a transition rate or in the utility's function as provider of last resort, these savings will offset costs of collecting the energy portion of the bill, as well as the monopoly distribution portion. Thus, arguing that the rate cap does not permit utilities to raise rates enough to offset the

costs of a program with a budget increased to meet defined needs ignores the savings the utilities will achieve from running the program. The rate cap need not be impinged by a well-run set of programs.

Also, the legislation to date has not contained an explicit revenue floor, cost cap, or earnings guarantee (at least not one that would be invoked by the modest expenditures of a low-income program). For example, in Pennsylvania, the low-income rate assistance and energy efficiency pilots could easily be ramped up to full strength without pushing against the rate cap if the Commission grants consumer advocates a tiny fraction of the disallowances they request in utility stranded cost recovery. Thus, even if states copied the language of the Pennsylvania statute, this would not preordain that the rate cap limited low-income efficiency budgets.⁴⁴

Also, utilities can make other economies that would result in lower costs, making room for the costs of these programs. In sum, if a utility points out that legislation contains a rate cap and this limits spending to current levels or less, this argument does not settle the question. Even when a rate cap is raised, good arguments can be made for fully funding a budget sufficient to meet the underlying intent of providing universal service, including an energy efficiency component.

4. ADMINISTRATION OF PROGRAMS UNDER RESTRUCTURING

With the administration of efficiency programs, as with the other issues around targeted efficiency, the restructuring debate provides an opportunity to bring up some issues that are harder to raise under the traditional debate over utility demand-side management. A primary example of this are the questions:

- Who will administer the programs and funding?
- What will be the scope of the programs? Will they be limited to electricity savings?
- Who will deliver the services?
- What test of cost-effectiveness, if any, will the programs have to meet?
- What accountability and/or enforcement mechanisms will be in place?

4.1 Administration of the Programs

In a restructured electric industry, low-income energy efficiency programs can be administered by the surviving local distribution utilities, or by a statewide administrator of energy services, which can be a new independent administering agency and/or DOE's weatherization agency. The organization that administers the funds and programs can then turn to the existing low-income weatherization network and/or competitive market procurement in order to actually implement the efficiency programs.

Whether a state leans toward a statewide administrator or utilities depends to a great extent on each state's past experience. Pennsylvania, for instance, is staying with the utilities for now because the utilities had good programs and worked very well with the local weatherization groups.⁴⁵ In California and a few other states where some utility performance in administering and implementing energy efficiency has been less well received, advocates have vigorously called for a statewide program so that consumers throughout the state would have the same opportunities for efficiency (or the low-income rate program, CARE) benefits.

4.1.1 Utility Administration

Where utilities have traditionally administered the programs, they are likely to oppose efforts to remove the administration of the programs from them. Conversely, the opportunity to continue to administer the program may encourage support from the utilities for funding of low-income energy efficiency programs. While the arguments for utility administration are often couched in terms of fostering flexibility, innovation, and local accountability, it must be observed that few companies enjoy being collection agents for a fund that others will control. Certainly the staff of a utility who have been administering any existing programs will fear that their own positions are at risk if their firm agrees to a centralized statewide administration and implementation of efficiency programs across the state.

A substantive reason why these programs should remain under administration by the local distribution utility is that low-income programs foster company-specific benefits such as lower credit and collection costs or reduced bad debt. Indeed, utility administration of the program can foster targeting of efficiency services to those households most likely to impose higher costs on the system. As such, these programs should be seen as serving a business related purpose as well as providing a low-income benefit. That is to say, the access or other non-bypassable charge to fund energy efficiency is not a ratepayer tax, but a charge for services rendered by the utility as part of its continued obligation to provide the public with efficient affordable access to electricity service. Seen in this light, it makes sense for the industry to manage the programs and the funds their rates raise.

Another justification for utility program administration is the ability of the state regulatory agency to maintain careful oversight of the sources and uses of the funds raised under regulation. Regulatory commission standards, performance measures and accountability will be easier to maintain if the surviving utilities are responsible for program management and administration.

4.1.2 Central State Administration

If, on the other hand, there has been no utility low-income energy efficiency activity, or utility administration of these programs has not been considered a success, the path is clearer for establishing a centralized administration and oversight of efficiency programs created as part of restructuring. The entire state will be moving to restructuring at the behest of state-level government decision-makers, and these same decision-makers will be deciding that energy efficiency is a part of a comprehensive restructuring proposal. In such a climate, it may make sense to seek a standard set of efficiency offerings for all low-income consumers, and to achieve administrative efficiencies and the opportunity for low-income input into oversight by the creation of a central fund and governing agency.

From an administrative perspective statewide program management creates the opportunity to achieve comprehensive and coordinated weatherization more easily than would be the case with multiple utility programs and structures. Statewide program management fosters the opportunity to integrate the entire energy assistance system to insure cost-effective client identification, benefit delivery, and integration of resources from multiple private and public sector resources. It also creates the opportunity to establish reasonable standards for program service delivery and benefits that will not be an accidental function of the utility service territory in which a particular family happens to live.

Another advantage of the statewide administration of low-income efficiency programs is that it removes the burden from the utilities of administering programs that will reduce their sales and, therefore, their profits. Many utilities have been cutting back on staff support for consumer services in order to reduce their costs in the emerging competitive environment. An independent statewide administration can insure that funding is properly allocated for effective program management and oversight.

If statewide administration is chosen there is the alternative of creating a new independent administering agency or of handing program administration to the existing state Weatherization agency. The former has the advantage of creating a new vehicle for stakeholder and community representation in the management process. It also creates a means to develop a new program tailored to the special needs of low-income electricity consumers and the new electricity market place. On the other hand the existing state Weatherization agency already has mechanisms in place state-wide to deliver energy efficiency services. These mechanisms include the full range of program management requirements from client selection and housing audit to job performance and verification to crew technical training. In fact, these two approaches are not mutually exclusive and a new independent administering agency for low-income programs can agree to use some or all of the existing weatherization infrastructure in order to manage the energy-efficiency part of its portfolio.

In general, there is a strong argument to be made for flexibility in light of local conditions. Some utilities have an excellent track record in delivering low-income services, and in working closely with their local weatherization providers and low-income advocates, whereas others do not. Hence it may make sense to retain utilities as program administrators where they have proven to be effective, while looking to other options where utilities have failed as effective providers of low-income energy efficiency services. It could be a statewide administrator, or some form of joint administration between the local weatherization network and either the utilities or a statewide administrator. All of these arguments must be evaluated in light of conditions in each state.

The benefits of the two main alternative approaches, program administration by the distribution utility and the central statewide administrator, are categorized in Table 3.

4.2 Scope of Low-Income Efficiency Programs in a Restructured Environment

The issue of whether a utility efficiency program should deliver efficiency measures designed to save only the form of energy sold by that utility has new import in a restructuring debate. Because the basis of a low-income program in restructuring will often explicitly be expanded beyond least cost acquisition of the energy resource of the utility in question, there is room to ask if other considerations do not warrant expanding the reach of the program.

In particular, it makes sense to deliver low-income efficiency on a so-called "whole house" basis.⁴⁶ That is, once a technician or a team is at a house to evaluate the savings possibilities or to install the efficiency measures, it is more efficient for them to look for *all* the savings opportunities and to install in one visit *all* the efficiency measures. Otherwise, a gas efficiency auditor would find gas savings, an electricity efficiency auditor would find electricity savings, and a Weatherization oil or propane efficiency auditor would identify oil or propane savings. Then three different teams would return to do the work and yet another three auditors

Table 3. Benefits of two main approaches to program administration

Administration Approach	Benefits
Distribution Utility	<ul style="list-style-type: none"> • Most like today's program administration - continuity. • Garners support from key stakeholders. • Avoids need to establish entirely new institution, with attendant confusion, disputes, and delay. • Where utility has done superior job, can support quality program administration. • Recognizes that energy efficiency is a utility industry function, not a tax-based requirement. • Provides basis for ongoing oversight via plan review or other regulatory proceedings, with public input. • Takes advantage of good will a utility may have developed with institutions in its service area.
Central State Administration	<ul style="list-style-type: none"> • Introduces explicit stakeholder participation into decision making. • Avoids conflict between utility's business need to expand sales and the program's objective of reducing sales. • Provides opportunity to obtain independent and professional administration, especially where utility does not currently possess adequate staffing for these functions. • Supports administration of unified, statewide program approach, where benefit and quality of delivery of program to low-income customer are not a function of the happenstance of where a family lives.

would come to inspect the jobs. That's a total of nine visits to the home! Not only is it expensive, it is a burden on the customer.

As research has demonstrated, it is much more cost-effective to combine these various efforts, and approach the job on a comprehensive basis.⁴⁷ Restructuring provides an opportunity to argue for this form of program design. Where separate programs have been run in the past, restructuring provides an opportunity for revisiting this decision, and "rationalizing" the entire system of delivery and administration at the same time that the other aspects of that industry are being rationalized.

One way to create a seamless whole house program design is to create a common fund, as in the California model, with a centralized administrator, and establish the whole house model as the statewide approach. This does not automatically take care of the issue of gas/electric/fossil fuel divisions in funding and program delivery, however. There are in principle four approaches that can be taken in defining the scope of low-income programs.

4.2.1 Electric System Fuel Blind Programs

First, it is possible to negotiate programs where electricity vendors contribute to all energy savings—to "fuel-blind" programs. Under such a system, the funds raised by the distribution

utility would be channeled to all-fuel savings programs on a "whole-house" basis. Programs would install efficiency measures in the homes of all low-income electricity consumers, regardless of the fuel used for space heating and water heating. Thus, building shell and water heating measures would be installed even in the homes of gas or oil heat customers.⁴⁸ Against the argument that electricity users should not support gas or oil/propane savings, there are a number of important points to make. First, all consumers use electricity, even though many do not use gas or oil/propane. Thus, both the participants and the group from whom the funds are raised are universal. Second, the affordability of other home energy costs by low-income customers makes their electricity bill that much more affordable. Third, the purpose of low-income efficiency has a societal component to it, not limited to the benefits and costs to the electric industry.

4.2.2 Multifuel-Funded Comprehensive Programs

A second option is for all energy vendors, gas, electric, and bulk fuels, to contribute to a program that will seek out all energy savings.⁴⁹ Some combination gas and electric companies have run joint gas/electric programs, but this has been rare, even when both aspects of the business are under common management. One notable example of this type of program is the "E-Team Partners" program operated by Public Service Electric and Gas in New Jersey. This combined DSM and affordable payment program is targeted to payment-troubled low-income households and is supported at over \$7 million per year based on a combination of electric DSM, gas DSM and bill payment benefits.⁵⁰

However, no programs of this type have been run with contributions from unregulated fuel-vendors. This avenue is thus unlikely to produce positive results without extraordinary luck and vigorous advocacy.

A variation of this option is for the state to establish an all-fuels tax that would fund energy efficiency, regardless of fuel source. This fund can then be coordinated by a local agency and utilities and local weatherization agencies can provide the services. Vermont has such a fund.⁵¹ Gross receipts of all non-transportation energy vendors are taxed at 0.05 percent. The fund is administered by the state weatherization agency. Such an approach has the advantage of relieving utilities of sole responsibility for public purpose programs in the upheaval of restructuring, and would make utilities willing allies. However, the idea of a new tax for any purpose is a non-starter in many states.⁵²

4.2.3 Local Agency Coordination of Resources

Third, a local agency that administers the DOE Weatherization program and other energy efficiency resources can coordinate funds from multiple sources, encouraging the use of funds for all-fuels savings programs. Under this system the electric utility resource would continue to be used largely to reduce electricity expenses but would be coordinated by the local agency with other funding sources to create an integrated program where comprehensive Weatherization is conducted using multiple funding sources. Local weatherization agencies in many parts of the country have been leveraging their resources this way for many years.

4.2.4 Utility Proprietary Programs

Fourth, electric utilities can continue to run low-income electricity savings programs as they have in the past. This would not provide the benefits of an integrated fuels program, but in states where it may not be possible to bargain for more, it is still a reasonable option.

4.3 Service Delivery

Low-income energy efficiency specialists in the Weatherization Assistance provider network have long argued that joint delivery of utility low-income DSM with weatherization services is the most efficient approach to quality service delivery in the low-income community.⁵³ The established infrastructure of staff and/or contractors, the trust developed in the community, the use of cutting edge technology such as blower-door infiltration testing, the proven track record of DOE's Weatherization Program,⁵⁴ are all reasons why weatherization service providers are natural candidates to deliver low-income energy efficiency services. The participation of weatherization providers in the process of hammering out an entirely new structure also places them at the table when the decisions are made, at least initially, on how programs will be delivered.

Independent energy service companies (ESCOs) may object that it is anti-competitive to "hard-wire" the low-income energy efficiency market to a given set of vendors, whatever their reputation and qualities. They may urge a bid process, to find the least-cost vendor. In some cases, weatherization providers are proficient in weatherization techniques but untrained in baseload electricity conservation.

4.4 Program Evaluation/Cost-Effectiveness

The standards by which an individual measure or an entire program will be tested are obviously important whether or not a program is developed in the context of restructuring. But restructuring raises unique problems and provides unique opportunities on these issues.

Traditionally, non-low-income energy efficiency was evaluated by determining if a proposed program and its measures would cost less than the cost to the utility of the energy and capacity that the efficiency savings would allow the utility to avoid. Under a competitive model, utilities will no longer be in the business of estimating their avoidable costs for energy. There will be no more posted marginal or avoided cost of energy. Thus, at least the generation portion of the industry's costs may not have a posted benchmark price for determining the level of savings achievable from energy efficiency.

But not calculating avoided costs does not pose a problem for evaluating low-income programs. Restructuring has given advocates the opportunity to advance, with success, the argument that targeted energy efficiency for low-income customers serves a number of objectives, with resource acquisition⁵⁵ being only one, and that the traditional DSM measures should not be applied to low-income efficiency.

This does not mean that no performance measures should apply to low-income programs but rather that different measures of performance should be applied. Performance measurement is the key to demonstrating proper stewardship of ratepayer funds, even in a restructured and competitive electric industry. It may well be the key to the long-term durability of public support for low-income energy efficiency programs.

A number of methods have been applied to measuring the effectiveness of low-income energy efficiency programs. The National Weatherization Evaluation and numerous state evaluations have used a quasi-scientific method to assess whether the benefits to low-income consumers through reduced bills have exceeded the cost of installing energy efficiency measures. Implicit in this methodology is the assumption that the alternative way in which efficiency funds might be spent is in the form of direct assistance to the beneficiary households to help pay their energy bills.

An alternative approach to this direct benefit/cost approach is a more comprehensive societal benefit/cost ratio. In this case the cost of implementing the program remains the same for measurement purposes but the potential benefits may include a number of other elements in addition to savings on the household energy bill. These may include savings to the utility system for reduced bad debt, arrearages, collection expenses, and payment assistance. They may also include distribution system benefits such as reduced or delayed need for distribution or transmission system expansion. Finally, they may include broader societal benefits such as pollution emissions reductions, reduced forced household mobility, and lower levels of homelessness.

As a general matter, the broader the scope of the benefits being measured, the more cost effective the efficiency program is likely to be. As a practical matter, some of the societal benefits, while quite real, are difficult to quantify.



5. REPRESENTATIVE EXPERIENCES IN SELECTED STATES

Twelve states have passed electric industry restructuring legislation and many of these have attempted to deal with low-income issues, including energy efficiency, to varying degrees. Furthermore, a number of state regulatory commissions have initiated restructuring programs without state legislation while other states have reached an advanced stage of negotiations regarding the format of future legislation or regulation. The following descriptions are brief summaries of conditions in a limited number of states and are not intended to be a comprehensive review of state legislation or regulation. Rather they describe developments in certain states that may illustrate some of the issues and approaches that have been previously described.

5.1 Pennsylvania Legislation Provides a Wires Charge

In November 1996, the Pennsylvania General Assembly enacted HB 1509, requiring investor-owned utilities and electric cooperative corporations to ensure that universal service and energy conservation services and activities are appropriately funded and available in their respective service areas. The term "universal service and energy conservation" is defined in the bill as "policies, protections and services that help low-income customers to maintain electric service, including customer assistance programs and policies and services that help low-income customers to reduce or manage energy consumption in a cost-effective manner, such as the low-income usage reduction programs and customer education."⁵⁶

As a policy principle, HB 1509 finds that electricity service is essential and should be available to all customers on reasonable terms and conditions. This means that, at a minimum, the state must continue the protections, policies, and services that now assist low-income customers to afford electricity service. The bill directs each utility to file a plan with the PUC describing how it will meet its universal service and energy conservation obligations. The PUC is also to encourage the use of community-based organizations to provide services that assist low-income customers to afford electricity.⁵⁷

The Pennsylvania legislature, though conservative, generally likes the DOE Weatherization Assistance Program. Conservation is viewed as taking a step towards self-sufficiency and personal responsibility; thus legislators can sometimes be persuaded to support it. Note that 15 percent of LIHEAP funds go toward weatherization in Pennsylvania. Conservation is also increasingly viewed as a public health and safety issue since unaffordability sometimes results in freezing and heating-related fire deaths.

In September/October of 1996, low-income advocates were asked to join the Governor's Universal Service Task Force. The Governor's Universal Service Task Force came up with general principles that agreed (a) there was a *need* for low-income programming, and (b) there is an obligation to meet that need, especially if it can be done in a cost-effective way. In addition, they agreed that low-income programs should be financed, at a minimum, at the current level.

Essentially, low-income advocates got what they sought in the negotiations: (1) the non-bypassable charge; and (2) language supporting the use of community-based organizations to deliver programs.

However, this Task Force could not agree on the administration of the programs. Some advocates wanted utilities to implement the programs but with state requirements; others were looking for core statewide programs due to inconsistent efficacy in prior years' Low Income Usage Reduction Programs across utilities. Core statewide programs, however, have political problems for a number of reasons, especially an anti-urban sentiment among legislators and other state government agencies or their representatives.

The Public Utility Commission was charged in the Competition Act with the task of implementing restructuring. The Commission opened several dockets to develop policies to carry out the legislation. One of these dockets was the Universal Service docket, No. M-00960890 f 0010. After taking comments from many parties, the Commission issued a Tentative Order on Universal Service April 24, 1997. In the Tentative Order, the Commission determined that (a) the funding for Customer Assistance Programs⁵⁸ (CAPs) should be equal to or greater than 0.5 percent of a utility's gross operating revenues⁵⁹ and (b) the funding for Low Income Usage Reduction Programs⁶⁰ (LIURP) should be equal to or greater than 0.2 percent of gross operating revenues. This would provide a substantial increase in resources committed to both payment assistance and low-income energy efficiency.

However, in the Final Order on Universal Service and Energy Efficiency Programs, the Commission decided to defer the question of funding levels to the individual company restructuring dockets. The Commission did settle the question of statewide administration by deciding that, for the time being, Universal Service programs will be run by each utility, and the issue of statewide administration will be deferred for later consideration.

Under Commission directives, each electric utility in Pennsylvania has or will soon file a proposed restructuring plan, and dockets have been opened to litigate the merits of these plans. In the case of PECO Energy Inc., the largest Pennsylvania electric company, serving Philadelphia and surrounding areas, a settlement has been reached between the Company and many key parties, including the state's Office of Consumer Advocate. The settlement, which was approved by the Commission on December 23, 1997,⁶¹ would include an expansion of the PECO LIURP effort from approximately \$3 million per year (serving 8,400 low-income customers per year)⁶² to \$5.6 million per year.⁶³ The expansion of the PECO CAP payment assistance program would roughly double the number of households served by the program, to 100,000.⁶⁴

Generally, companies have come in with proposals to expand existing CAP and LIURP programs.⁶⁵ The expansion proposals are particularly dramatic in the case of companies that had only pilot programs before restructuring. However, not every company is proposing an expansion. And other advocates for universal service have pressed for even higher spending than proposed by the utilities. For example, in another major case, that of Pennsylvania Power & Light Company, the Office of Consumer Advocate, as he has done in each restructuring case, proposed a LIURP floor of 0.2 percent of gross operating revenues. Witnesses sponsored by the

Weatherization network proposed a floor of 0.25 percent of revenues. Briefs were due to be filed in October, 1997.

5.2 Statewide Low-Income Programs (California, Wisconsin Task Force)

5.2.1 California Legislation Provides Independent State Administrator

The California legislature passed a comprehensive restructuring statute, A.B. 1890, in August of 1996. The statute provides for a systems benefits charge, with funds for low-income programs to be raised according to need. In California, the low-income programs include the California Alternate Rates for Energy (CARE) program, a 15 percent rate discount for those at 150 percent of the Federal Poverty Level (FPL) or less, and utility specific low-income energy efficiency programs that provide no-cost weatherization and energy education (usually called Direct Assistance).

Before the legislation was passed, and while the CPUC was studying options for restructuring policies, the Low-Income Working Group (LIWG) was convened by the Commission to work towards a consensus recommendation on low-income programs. The Working Group was chaired by a representative from the statewide CAA organization and included representation from utilities, energy services providers, low-income and consumer advocates.

The Commission charged the Working Group with providing a detailed analysis of the need for low-income energy efficiency services before CPUC would decide whether the amount of funds for these services should be capped. In the end, the legislation settled the question, by providing that low-income services funding be needs-based, and therefore not capped. The LIWG was also to provide information on the necessary level of funding and details of administration. The LIWG did not reach consensus other than agreement that a uniform process for establishing initial eligibility and re-certification should exist.

The legislation superseded the work of the Working Group. AB 1890 requires that low-income customer services include energy efficiency services. In addition to requiring needs-based funding, the statute says that low-income services shall be funded at not less than 1996 levels in any event. The statute also said the funds should be collected as a non-bypassable charge on the basis of usage, and that the funding should be collected by the utilities in their capacity as operators of the electricity distribution network.

(a) To ensure that the funding for the programs described in...Section 382 are not commingled with other revenues, the commission shall require each electrical corporation to identify a separate rate component to collect the revenues used to fund these programs. The rate component shall be a nonbypassable element of the local distribution service and collected on the basis of usage...(A.B. 1890, Section 381).

In its January 1997 decision, the CPUC moved low-income energy efficiency and CARE away from the utilities' administration for 2 reasons: (a) under restructuring, the Commission found, "utilities are more motivated than ever to increase sales and customers, rather than encourage reductions in energy use," and (b) the Commission saw no reason why customers of a non-utility provider should be required to go to a utility to be certified eligible. Thus the CPUC decided upon a statewide Low-Income Governing Board with 7 members composed of one Commission representative, one representative of the Commission's Division of Ratepayer Advocates, and members of the public. The Commission took nominations from the public and selected the remaining members, including the Board Chair of the statewide community action organization, a national low-income advocate, a representative of Latino customers, a representative of a local housing organization that provides low-income weatherization services, and a utility representative. Under the new structure, low-income programs currently run by energy utilities will be "integrated and administered on a statewide basis,"⁶⁶ and the Governing Board will act as a "means of overseeing and administering the low-income programs, subject to Commission oversight and approval."⁶⁷

The Governing Board is to issue an RFP for one or more independent administrators. The Board has not decided whether there should be one administrator for both rate assistance and energy efficiency programs, or separate administration for these two types of low-income programs. Nor has the Board, as of this date, made its recommendation to the Commission about whether there should be geographic divisions among the programs, with separate administrators for different parts of the state. These recommendations were due in the spring of 1998.

The RFP will specify how the administrator's performance will be monitored and evaluated. Under a recent Order of the Commission, the deadline for transfer of programs to independent administration is January 1, 1999.

The CPUC also set up a board to oversee the independent administration of other energy efficiency programs, not restricted to low-income customers. The Commission requested that even though low-income programs are to be administered separately from all other energy efficiency programs that have a separate wires charge and will have separate independent administration, the two administering entities set up coordination procedures.

Note that once in effect, gas and electric utilities will be treated equally so that low-income customers receive consistent service. Low-income energy efficiency program design was not finalized by the LIWG, and the CPUC assigned that responsibility to the Governing Board. Finally, the CPUC set 1998 spending levels for low-income programs at 1996 funding levels.

5.2.2 Wisconsin Would Double Expenditures

On October 30, 1997, the Public Service Commission of Wisconsin announced that retail competition cannot occur until all of the prerequisite safeguards identified in its original 32-step plan (which became a consolidated 7-step Workplan) are put in place to protect consumers.⁶⁸ The recommendations made by the group working on low-income issues are contained in

docket # 05-BU-100. The Working Group submitted four distinct proposals in the form of recommendations.

Low-income advocates are pleased with the proposals. Funding for overall energy efficiency programs (including residential, commercial and industrial, but not low-income) and renewable energy is controversial, but the utilities have been more agreeable on the low-income issue. The following discussion relates to low-income energy assistance and efficiency only. Although access issues and the moratorium on winter shut-offs also have consequences for low-income customers, the parties generally believe that these topics should be reviewed coincidentally with the gas restructuring that is also taking place in Wisconsin, and which is further along in the decision-making/implementation process. According to advocates, the universal service and shut-off policies should be linked, and the treatment of them should be the same for both gas and electric customers.

The four proposals break down along the following lines, though there is remarkable similarity among them and, for the most part, differences could probably be worked out. The "Alliance" is comprised of four of the five Class A electric utilities serving a total of approximately 90 percent of the state's customers. The "Coalition" is composed of the remaining Class A utility (Madison Electric), cooperatives, municipals, public interest groups, renewable energy supporters, the Citizens Utility Board, representatives of labor, businesses, seniors agencies and WisCAP (a statewide association of community action agencies). The third proposal is from Wisconsin Gas, whose territory is mostly within Milwaukee, and whose customer base comprises the largest low-income population in the state. The last proposal is that of the "Low-Income Issues" group which includes low-income, weatherization and conservation advocates and of which WisCAP is also a member.

The Low-Income Issues group proposal is for a minimum level of funding of \$106 million per year for low-income energy efficiency and customer assistance. The conservation and weatherization portion would be \$50 million/year, including DOE weatherization money. Current year funding for weatherization assistance is \$9 million; thus the fund contribution required of utilities would be \$41 million to bring the total to \$50 million. This would essentially more than double the utilities' present spending on low-income energy efficiency. If weatherization funding were to decrease, the utilities' contribution would go up; if weatherization funding were to increase, the utility contribution would go down. The program would be statewide with core programs and eligibility criteria and be jointly delivered with the state's weatherization program. The state's Division of Housing (which currently oversees the weatherization program) would administer the fund with direction and oversight from either a new Public Benefits Policy Board established by the PSC or from the legislature.

The funding mechanism is a flat charge not based on usage on all electricity customers' bills. Though the conservation measures would be all-fuels based, the electric bill mechanism was chosen because electric bills reach 98 percent of the state's population. Their proposal contains an interesting review mechanism. A needs assessment would be conducted every 2 years, and would take into account the number of low-income households, the size of energy bills, and the cost of energy, to arrive at the "energy burden" on the low-income population. The \$106 million

proposed funding level represents 33 percent of the total energy burden on the low-income community in Wisconsin today. The remaining 66 percent would be paid by the low-income customers themselves.

Two considerations in developing the needs assessment and related budgeting procedure are (1) removing the “political element” in the funding determination, and (2) neutralizing the opposition to funding grounded in the claim that rates will go down under competition. If rates do go down, the burden-based formula would automatically reduce the level of support needed to cover one third of the low-income customers’ energy burden. The bill payment/customer assistance portion is \$56 million total including LIHEAP funds (Wisconsin currently receives \$37 million).

The “Coalition’s” proposal mimicked the low-income proposal except that the cooperatives and municipals are not supportive of statewide programs—they want to run their own programs. The “Wisconsin Gas” proposal supports the entire low-income agenda but also calls for a specific level of cost recovery assured for uncollectibles. The company claims that 25 percent of its uncollectibles are on account of low-income customers.

The “Alliance” proposal was virtually the same as the low-income group’s with the exception that the Alliance supported a funding level of \$96 million—\$41 million for weatherization and \$55 million for bill payment assistance.

The Commission was supportive of the low-income working group proposal, and the proposal has been submitted to the legislature with no substantive change. The weatherization component supports the “self-sufficiency” idea that the WPSC likes, and also agrees with what advocates describe as Wisconsin’s conservation ethic. Assisting with this is the fact that for the first time, conservation savings per household have equaled the LIHEAP payment per household. All in all, there is room for optimism.

5.3 Vermont Regulators Propose Combined Administration

There are no customer assistance programs or other discounted payment programs in Vermont under traditional regulation—the Vermont Public Service Board has historically viewed these as discriminatory towards other ratepayers. However, for over a decade Vermont has funded a statewide all-fuels low-income weatherization program via a 0.5 percent gross receipts tax on all fuels. Regulated utilities can receive credits against their tax liability to the extent of their low-income energy efficiency programs. Funds paid into the weatherization trust are used to augment weatherization assistance efforts across the state.

The Vermont Public Service Board issued its final order on restructuring on December 30, 1996⁶⁹ after a process of deliberation with representatives of the major affected interests in the state. The VPSB position can be summarized in the following statement of their final order: “With customer choice comes the need and the opportunity to implement new mechanisms to help our most vulnerable citizens.” First, the VPSB acknowledges the need of low-income

customers, and that state and federal LIHEAP funds are insufficient, and in any event provide nothing more than heating assistance. The Board's initial draft order had recommended an "all-fuels, broad-based funding mechanism" to support the energy needs of low-income customers, or a non-discriminatory charge on electric customers. If the broad-based funding is not possible, the Board suggests the legislature target assistance consistent with the low-income subcommittee recommendations⁷⁰ through a charge on all electric customers.

The VPSB calls for a program administrator who is independent of utilities or energy providers, and for a program structured to encourage the efficient use of energy. The order also addressed protection and disconnection policies for consumers.

While endorsing proposals that advocate a shift to market-driven energy efficiency programs, the VPSB believes that during the transition period (5 years), mechanisms are needed to maintain or expand current acquisition of this cost-effective resource, conservation. To take the place of direct utility investment responsibility under integrated resource planning obligations of a vertically integrated monopoly,⁷¹ the VPSB suggests using an "appropriately structured, non-discriminatory, non-bypassable [wires] charge" collected by the distribution utilities. In turn, the charge would fund the continuation of cost-effective utility energy efficiency programs during the transition to distribution utility programs, [energy efficiency building/housing] codes and standards, market-based initiatives and statewide benefits programs.

The Systems Benefits Charge would be reviewed and possibly revised on an ongoing basis. Evaluation would continue to be based on the total resource cost test including consideration of impacts on the state economy and the environment. The charge would have to at least maintain current levels of energy efficiency resource programs. The Board differentiates this standard from the present "investment levels" in that it evaluates total *resources* and a target amount is set based on the resource need. That said, the VPSB expects efficiency spending to remain at historic levels, i.e., 2-4 percent of total electric system revenues.

As for delivery, VPSB proposes the creation of "efficiency utilities" to oversee development and implementation of a statewide program.⁷² Such a utility would be chartered and regulated by the VPSB, be able to solicit and review bids for cost-effective energy efficiency programs and fund them from the SBC. VPSB also emphasizes a strong role for the Department of Public Service in planning, advocacy and evaluation, development of statewide avoided costs, and advocating "optimal" design and delivery of the energy efficiency programs.

This concept of a separate entity to receive and spend energy efficiency funds is similar to that of the California Public Utilities Commission, with the exception that the Vermont Public Service Board contemplates one entity to deliver all the efficiency programs funded via systems benefits funding, rather than two entities, one for low-income programs (including low-income energy efficiency) and one for all other energy efficiency funded by ratepayers.

The Vermont State Senate passed a retail competition bill consistent with the VPSB Order, S.62, in 1997, but the measure stalled in the House in early 1998. Meanwhile, a separate proceeding to establish the statewide efficiency programs and fund them through a wires charge

without restructuring has moved ahead. This would be put into place under current regulatory authority and includes explicit funding of statewide low-income efficiency programs, administered by an independent statewide entity which could be the Weatherization Program. A proposed decision of the VPSB endorsed this "Efficiency Utility" plan in mid-1998.

5.4 Arizona Commission Funds Historical Expenditures

Low-income advocates, together with renewables and consumer advocates, proposed that the Arizona Corporation Commission order a systems benefits charge of 3 mils (3 tenths of a cent) per kilowatt-hour⁷³ for all systems benefits, including low-income energy efficiency, low-income bills assistance, energy efficiency generally, and support of renewable generation technology. The proposal did not include a breakdown of amounts for each program, e.g., low-income energy efficiency.

The Arizona Corporation Commission issued a restructuring order on December 27, 1996 which included a Systems Benefits Charge "sufficient to fund the Affected Utilities' *present* Commission approved low-income, demand side management, environmental, renewables and nuclear power plant decommissioning programs (emphasis supplied)." The ACC's order did not specify the amount of the charge or the amount of funding for each purpose listed. Arizona has only funded low-income energy efficiency programs in the last couple of years—usually at an amount less than \$500,000 statewide. Under the ACC's order, a series of workshops were to be held to determine specific funding for each of the programs.

The working groups consist largely of the same group of stakeholders as before—utilities, consumer groups, environmentalists, low-income advocates, industrial customers. As a result of the large amount of press restructuring has received, a couple of new players may be involved, including the cities and other municipalities. Low-income advocates believe this is generally favorable.

5.5 Rhode Island Still To Determine Long Term Funding

The Rhode Island legislation comes at low-income program budgets from two perspectives. Section 39-1-1, principles for restructuring, declares

(7)... in a restructured electrical industry the same protections currently afforded to low income customers shall continue.

This language suggests a continuation of current levels of effort, including current (and in Rhode Island, small) energy efficiency budgets. The statute speaks more directly to energy efficiency and low-income rate levels:

Preservation of environmental and low income programs—Effective as of January 1, 1997, and for a period of five (5) years thereafter, each electric distribution

company shall include a charge of 2.5 mills per kilowatt-hour delivered to fund demand side management programs and renewable energy resources. The allocation of this revenue between demand side management programs and renewable energy resources shall be determined by the commission. During the aforementioned five (5) year period the commission may, in its discretion, after notice and public hearing, increase the sums for demand side management and renewable resources; thereafter, the commission shall, after notice and public hearing, determine the appropriate charge for these programs..... Special rates for low income customers in effect as of the effective date of this act shall be continued, and the costs of all such discounts shall be included in the distribution rates charged to all other customers. Nothing in this section shall be construed as prohibiting an electric distribution company from offering any special rates or programs for low income customers which are not in effect as of the effective date of this act, subject to the approval by the commission. RI Stat. 39-2-1(b).

According to this language, it would appear that low-income energy efficiency is to be included within the general category of "environmental...programs" such as demand-side management and renewables, and to be funded from the moneys raised by the kilowatt-hour charge of 2.5 tenths of a cent.⁷⁴ The Commission may increase this during the five years of the program. The authority to impose such a charge and raise moneys for such efforts appears to end after five years. However, utilities may in addition offer special rates or programs for low-income customers not now being offered. This might include energy efficiency above and beyond the level represented in the 2.5 mill rate. Also, the Speaker of the Rhode Island legislature has promised that Rhode Island will match the benefits to its citizens in restructuring that are available to residents of other New England states, and this might provide a basis for reopening the question of continuing needed programs to help low-income customers manage and afford their utility bills.

While the Commission has rejected one targeted low-income efficiency program on the grounds that it was not cost-effective and discriminated against other customers, a new coalition of low-income energy efficiency supporters has developed (including the major utilities, and state and private low-income interests). This group has revised the low-income efficiency programs, and Naragansett Electric Company has refiled for permission to mount an "Appliance Maintenance Program" that would replace inefficient refrigerators and light bulbs, as well as water beds.

5.6 Illinois Law Provides Flat Charge

In late 1997 the State of Illinois passed a new electric industry restructuring law that greatly expands resources for both low-income energy efficiency and payment assistance. The state will collect revenues via a flat charge (although it varies for each customer class) per month on both gas and electric customer bills, to be deposited in a "Supplemental Low-Income Energy Assistance fund." The annual funding for the program is estimated at \$76 million with \$7.6 million provided for low-income energy efficiency.

A study group has been authorized by the law to recommend the creation of a new integrated energy assistance system for implementation by the year 2003. In the interim, funds for assistance will be administered by the existing Low-Income Home Energy Assistance and Weatherization Assistance Programs.

6. DECISION MAKING FORUMS

In states with serious restructuring activity there will likely be at least three decision makers that are in a position to have a direct effect on the low-income aspects of restructuring policies. The regulatory commission, the legislature, and the governor will all have an important role in restructuring policy-setting. In addition to the processes before formal governmental bodies or parties in a position to make decisions, there will be a variety of informal routes for advocacy.

First, the regulatory commission probably must approve specific utility restructuring plans and generic implementation policies. Second, the legislature will most likely need to pass enabling legislation at the very least. Third, the governor will have a role in proposing legislation, and will have the opportunity to shape it through exercise of the veto power and other means of influencing the legislature. Meanwhile, the utilities themselves will be in a position to include low-income program concepts in their plans, and inclusion in the plan will give a policy a head-start in the debate over implementation of the legislation.

Some states may follow the lead of California, which set up by Order a so-called "governing board" for public interest programs, which will not only administer many aspects of the programs, but will play a key role in developing and overseeing the shape of the programs. And in many states, expect to see some kind of Working Group, Roundtable, Task Force or other informal body of stakeholders convened on behalf of the regulators, to debate and flesh out specifics of implementation policies. New Hampshire's PUC, for example, set out a requirement that a \$13.2 million fund be created from systems benefits charges to fund low-income affordability work in that state, and convened a Working Group to develop the specific program and funding details.

Whether a particular forum is more or less likely to provide opportunities for low-income energy efficiency advancement depends on the circumstances in the given state. It is a question of access, resources, track record, political ties, and other intangibles. Unfortunately, it is likely to be necessary to become an acknowledged member of any Roundtable committees, Task Forces or collaboratives, despite the fact that they often have no formal decision making powers. Participation is time-consuming, and thus participation is costly. But the mood and the intention of leadership may switch with unexpected speed from a go-slow attitude towards rapid implementation of retail competition, and it is important to be at the table in case such a crystallization of political will occurs.



7. STATUS OF RESTRUCTURING IN EACH STATE

7.1 States at Three Stages of Restructuring

In a few short years, the idea of retail electricity and gas competition has taken hold among utility policymakers. However, not every state is moving ahead at the same pace. Certain states have emerged as the leaders in developing the ideas of a new energy industry structure. Some states have expressly rejected retail competition, at least for the time being.⁷⁵ Others are moving towards retail competition, but with greater deliberation.

This report makes the assumption that all states are considering retail competition, and that the policy movement is towards retail competition. In some states, leaders are giving active consideration to promoting greater wholesale competition, rather than opening retail markets up to competition. However, experience in those states that have considered electricity competition to any degree suggests that once the general topic of "competition" becomes a serious subject of debate in a state, it is not possible to limit the discussion to wholesale-only competition. Indeed, most observers of the electric industry now agree that retail competition will inevitably spread. The major disagreements concern the pace at which such competition will roll out across the states.

The issues that determine the extent of electric industry investment in energy efficiency in the homes of low-income customers will vary from state to state, as the policy underpinnings of the industry are in flux. It may be useful to determine which of three loosely-defined categories most closely characterizes the stage of restructuring in any given state:

- Full-Speed-Ahead,
- Go-But-Slower,
- Wait-and-See.

Using these categories, a member of the Weatherization network can decide how fast restructuring is moving in the state in question, and what types of issues remain to be decided. This in turn will help determine the types of rationales for utility low-income energy efficiency that fit the state's current circumstances. It will also help focus a member of the Weatherization network on the extent to which opportunities remain to shape the restructuring debate and encourage further low-income energy efficiency investments.

The debate on introducing competitive power sales is likely to go on for a number of years, if the introduction of competition in the telephone industry is any precedent. In the states that are actively considering restructuring, advocates of energy efficiency for low-income families have an opportunity to participate in shaping the future of the electricity and gas industries in their states for several generations. In states where restructuring is on the back burner, member of the network can look for opportunities to leverage targeted low-income efficiency investments using a combination of traditional tools, even while they lay the groundwork for successful participation in future restructuring debates.

7.2 Deciding Where Any Given State Is Today

As the name implies, the twelve Full-Speed-Ahead states are those that have already made the decision to implement retail competition in the electricity industry.⁷⁶ The states have agreed on the general principles that will guide restructuring, and the legislature has set out the framework for the introduction of competition. In these states, many of the core decisions have been settled, at least within recognizable boundaries. In many Full-Speed-Ahead states the major task is now implementation of legislative principles through actual design of programs and regulation. This can be a task that is just as difficult and important as establishing the legal principles for a more competitive industry.

In Go-But-Slower states, it seems clear that the state is moving to open retail electricity sales competition, but many key issues are still up for grabs. Regulatory commissions or legislative study committees may have issued general principles to guide restructuring. However, these principles are typically so general that the real debate about the structure of the new industry is still underway. And legislation authorizing the change in industry structure has yet to be passed.

Placing a state in this intermediate category based on the express intentions of policymakers' leadership is risky absent concrete actions taken to further the restructuring. This is because there are many reasons why a policy leader may wish to express the intention to move quickly towards restructuring even where it is unlikely that such action will take place. On the one hand, a strong proponent of retail competition may wish to stir up support for the concept and make it seem more viable, by stating that it is inevitable. On the other hand, a leader who is privately skeptical may announce that he or she is spearheading the drive to restructuring so as to deflate any efforts of a more committed policymaker to take over the leadership of the issue and push harder and faster for the changes. It is necessary to weigh the seriousness of the push for competition, and gauge the likely rate at which it will move.

In Wait-and-See states, no decision has been made to open retail electricity sales to competition. These states may have opened some kind of informal discussion of the pros and cons of restructuring, but have decided not to forge ahead until seeing what happens in the more aggressive states. Some of these states have formal declarations of the intention to introduce competition, but there are several hurdles that must be overcome to get to that point, and it is not expected to occur for some time. In the meantime the state can observe how other states are handling the details of implementation. In many cases, legislatures have not begun to address the myriad issues raised by the topic. "Wait and See" refers not only to states with a slower pace of change, but also to the states with the express intention not to change.

Many such states have formed regulatory commission task forces or legislative study committees. In these relatively informal settings, the stakeholders who will mold legislative or regulatory opinion engage in long discussions of restructuring principles and options, and may issue a report with recommendations at the end of the process. Again, where there is no express rejection of retail competition, the weatherization network participant must gauge the seriousness of the debate and the speed at which the debate is likely to unfold.

In Wait-and-See states, however, it is not too soon to start identifying issues, allies and opportunities to advance low-income efficiency investments in the move to a restructured world. It is remotely possible that the move to competition will founder on some as-yet unresolved issue⁷⁷. However, every sign today suggests that retail competition is coming to virtually every state, eventually. It becomes a question of how soon, and how exactly. Those concerned with the ability of low-income families to manage and afford their energy services must become involved in the debate over restructuring.

Table 4 summarizes factors that help determine the stage of restructuring in any given state:

Table 4. Factors by which to categorize state's stage of restructuring

Full Speed Ahead	Go But Slower	Wait and See
<ul style="list-style-type: none"> • Legislation mandating retail competition 	<ul style="list-style-type: none"> • Express intention of regulators or legislative leaders to move to retail competition 	<ul style="list-style-type: none"> • Legislation or commission order rejecting retail competition (not superseded by later concrete movement towards competition)
or	or	
<ul style="list-style-type: none"> • Final Order of regulatory body with authority to institute retail competition 	<ul style="list-style-type: none"> • Announced intention of major utility to move to retail competition 	<ul style="list-style-type: none"> • Legislative or regulatory task force or committee with no specific charge to develop retail competition plan
or	together with:	
<ul style="list-style-type: none"> • Approved agreement with major utility to open territory up to retail competition 	<ul style="list-style-type: none"> • Statement of restructuring principles adopted by regulators 	<ul style="list-style-type: none"> • Legislative or regulatory proceeding with extended deadline (e.g. report of study committee due out in not less than two years)
	<ul style="list-style-type: none"> • Agreement in principle with major utility to move to retail competition 	or
	<ul style="list-style-type: none"> • Ongoing formal regulatory proceeding to adopt specific restructuring plans and policies 	<ul style="list-style-type: none"> • Lack of any specific announced intention of any major utilities or policymakers to institute retail competition
	<ul style="list-style-type: none"> • Appointment of special legislative committee to draft retail competition bill 	
	or	
	<ul style="list-style-type: none"> • Legislative study committee or Roundtable/Task Force/ Working Group mandated to develop specific restructuring plan 	

7.3 Examples of States at Different Stages Today

As of this writing, Arizona, California, Connecticut, Illinois, Maine, Massachusetts, Montana, Nevada, New Hampshire, New York, Oklahoma, Pennsylvania, Rhode Island, and Virginia have moved faster and further towards introducing retail competition than any other states. Legislation has passed in each state mandating the pace, nature, and timing of the shift to competition. These states could be called the Full-Speed-Ahead states.

Go-But-Slower states include some that were earlier thought of as front-runners in the movement towards retail electric competition. The Wisconsin legislature, for example, was widely expected to introduce retail electric competition in 1996, and its Public Service Commission had announced that it intended to move the state in the direction of retail competition. However, no legislation was passed, and the Commission later backed off its ambitious schedule. The Commission has started down a 5-year, 7-step course of study and policy development to create a more thoughtful path towards retail competition. A coalition, including consumer groups, labor, rural electric cooperatives, renewables advocates and small utilities pointed out various risks to small customers, small electric systems, efficiency and renewable resource development, and other important issues. Meanwhile, the policy framework for guiding electric utility energy efficiency investments remains largely intact in Wisconsin.

Most states, however, could be called Wait-and-See states.⁷⁸

States have moved back and forth between these categories as the debate has unfolded. For example, while Wisconsin forged ahead and since has fallen back, New York has been pushing steadily ahead, and negotiations with key stakeholders may have already produced concrete utility restructuring plans.

Vermont is in this category as well, because its Public Service Board has issued a Final Order outlining a plan to introduce retail competition, but the regulators' report contains many issues that still need to be addressed, and it is likely that retail competition will not be implemented soon. Pennsylvania surprised many analysts by passing a comprehensive retail competition bill in late November of 1996, which moved it into the Full-Speed-Ahead category directly from the Wait and See status suggested by its PUC staff report earlier advising against the move to retail competition.

Thus, the report's characterization of states by their relative movement towards retail competition is a moving target. It is important to check with a state's regulatory commission and legislature to see what the latest developments are in any given state. Still, it helps to consider specific examples when trying to understand how these different attitudes towards the changing electric industry affect chances to develop energy efficiency for low-income customers.

In a few short years, the idea of retail electricity competition has taken hold among utility policymakers. The debate on introducing competitive power sales is likely to go on for a number of years, if the introduction of competition in the telephone industry is any precedent. Typically, regulatory agencies have taken up the question of industry restructuring first, although some

legislatures are starting to grapple with the issue. Ultimately, legislation will be required in most states, because public utility regulatory agencies either do not have jurisdiction to introduce competition, or may be reluctant to exercise this power without the agreement of the legislature.⁷⁹

7.4 Go-But-Slower: Maximum Opportunities to Shape the Future

It is primarily in the Go-But-Slower states that there is still room to shape the overall structure of the new industry, and build into the framework documents (legislation and regulatory commission orders or rules) detailed provisions protecting the interests of their low-income constituents. These states are the most fruitful ground for meaningful change, because leadership of the state has indicated change is coming, but the ground rules of that change remain fluid and subject to debate.

States that have announced a firm intention to proceed to retail competition, but are taking a deliberate pace to get there, present a wide variety of opportunities to advance low-income energy efficiency. Go-But-Slower states are in the earlier stages of moving towards competition. All of the issues around how a competitive world will be structured are on the table. It is a good idea to get involved early in the informal or formal roundtables, Task Forces, legislative study groups, and other issue-identification and consensus-building activities around restructuring.

In a Full-Speed-Ahead state, the decision has been made to introduce retail competition, and at least the general outlines of the new industry structure have been established. The next step is to make sure the implementation of the new policies maximizes the energy efficiency opportunities open to low-income households. There may also be openings to improve the policies, and strengthen the protections available to low-income customers. For example, in Pennsylvania the funding level and structure of low-income programs has been left by the law and the regulatory commission to a regulatory proceeding for each utility.

Where there is specific legislation, the issues on the table are what the legislation mandates in the way of low-income energy efficiency. In some cases, the issue is construing what the legislature meant by the statute. For example, both California and Pennsylvania have an explicit or implicit needs-based definition of the low-income efficiency budget level. However, they both also have overall rate caps, and utilities in these states have argued that the rate cap controls, and effectively limits the spending they are required to make on low-income energy efficiency programs. Where a statute leaves such questions unclear, the stakeholders, regulators and courts must sort it out, or the legislation must be amended to clarify the rule that will be applied.

Legislation may also have left open the question of who will administer the programs, and details of how the funds will be collected. In some cases, such as New Hampshire, legislation has set forth broad principles, and kicked the development of specific policies back to the regulatory process. To the extent the legislation leaves such questions open, the issues look more like "Go-But-Slower" state issues, because there is more scope to fashion the rules of the road for the new industry.

7.5 Issues in a “Wait-and-See” State

As far as pursuing low-income energy efficiency investments in a Wait-and-See state before it moves to a more directed pursuit of competition, the situation is quite variable. To some extent the opportunities depend on the path the state was on before talk of retail competition began across the country. For example, the state may have been implementing integrated resource planning or least cost planning (LCP) policies before the talk of restructuring began.⁸⁰ In such a state, if retail competition remains far off the regulatory radar screen, it may be possible to continue using such tools to advance low-income efficiency investments. However, most of the advanced IRP states are also states that have seriously pursued retail competition⁸¹ Thus, there are few states where competition is still not the dominant issue but IRP or LCP is an important tool. More likely, in Wait-and-See states the chief avenue to promote low-income energy efficiency will be to find points of leverage that interest utilities in voluntary development of energy efficiency programs for low-income consumers. These include the rate case proceedings, mergers, alternative regulation cases, flexible rate approvals, and the like. In addition, equity arguments and other appeals to utility and regulator interest in making energy affordable will be important bases for low-income energy efficiency spending.

As you can see from the list of “wait-and-see” states in Appendix B, much of the country is in this category. However, within this group, states are in different places with respect to regulation of electric utilities. For the purposes of this report, we have assumed that introducing retail competition is not under active consideration in the state. Thirty-seven states have opened proceedings of some kind to look at more energy utility competition. At the same time, policymakers in many of these states have announced that they do not want to be industry restructuring pioneers. Meanwhile, regulators and industry executives are focussing on business as usual.

Business as usual for the electricity industry historically involved looking for ways to sell more electricity, not to save it. The same has been true for the gas industry. When prices for electricity started shooting up in the 1970's, and when consumers objected to utilities building large new power plants, a movement began to push utilities towards investing in energy efficiency. The concepts that were begun in the electric industry were carried by advocates to the gas industry, and applied there as well.

The momentum for this movement has slacked off as pioneering states refocus on electricity restructuring. However, it has not stalled completely. One of the most hopeful developments in recent years is the slow and steady progress in some of the wait-and-see states to expand energy efficiency opportunities for low-income customers.

Examples include Texas, Kentucky, Colorado, and Florida. In these states, groups of low-income customers, often represented by Legal Services and/or Community Action advocates, have successfully promoted new low-income energy efficiency programs in the last two years.

In Kentucky, grass roots groups and local weatherization agencies have banded together, with leadership from former legal services staff, and have achieved major low-income energy

efficiency programs from Louisville Gas & Electric (LG&E) and other Kentucky utilities. The low-income groups did not litigate, did not lobby the legislature, but instead relied on persistent, insistent, steady negotiation. This strategy paid off, and LG&E has funded low-income DSM to the tune of \$1 million per year, while KPC's new program will spend up to \$1200 per household to help 1530 low-income Kentuckians each year. This program is piggybacked with Weatherization Assistance Program. Similar programs are being offered now by Union Light Heat and Power and West Kentucky Gas Company.

8. SUMMARY

Without adequate protection, electric industry restructuring poses threats to society's most vulnerable citizens. A multi-faceted approach that ensures access to electric energy on reasonable terms, and facilitates the ability of low-income citizens to afford that service, must be the basis of legislative provisions for low-income customers. An integrated package of low-income energy efficiency assists low-income citizens to afford electricity, and achieves energy savings for society.

Many of the states that have passed legislation to move to retail competition have acknowledged the underlying principle that low-income citizens must be given extra protection in a deregulated environment, and that energy efficiency services are an essential component of that. Many states have provided a steady, reasonable funding source for low-income citizens to ensure reasonable access, affordability and continued energy savings. The momentum afforded by these pioneer states can be a powerful tool in negotiating for low-income efficiency services in slower states. Advocates must get involved early in their state proceedings, even as more and more states move rapidly toward some form of retail competition.



ENDNOTES

1. California is an example of a state that requires energy efficiency investments for low-income customers. California recently reaffirmed this requirement in its electric industry restructuring legislation.
2. Brown, Marilyn A., Mark A. Beyer, Joel Eisenberg, Edward J. Lapsa, and Meg Power, *Utility Investments in Low-Income Energy-Efficiency Programs*, ORNL/CON-379, Oak Ridge National Laboratory, Oak Ridge, TN, September 1994.
3. I.e., whether the price per kilowatt-hour is the same regardless of usage (flat rates), or goes up or down the higher the usage (inclining or declining block rates).
4. *Report on Low-Income Usage Reduction Plan*, Pennsylvania Public Utility Commission, Bureau of Consumer Services, Collaborating with Pennsylvania State University, July 1995.
5. *Energy Policy Act of 1992*, Public Law 102-486.
6. Brown, et al., ORNL, 1994.
7. DSM can raise rates, while lowering bills. See *A Guide to Low-Income Energy Efficiency*, National Consumer Law Center, 1995.
8. These and other barriers were cited by the Massachusetts Department of Public Utilities over ten years ago, when it articulated an explicit policy of targeted low-income energy efficiency services by utilities under its supervision. See In Re Western Massachusetts Electric Company, D.P.U. 87-260 (1988).
9. *LIHEAP Act of 1981*, Section 2604, Public Law 97-35 as amended.
10. Other types of leveraging funds include state tax-based funding, and landlord-contributions.
11. A formal request by a utility, under traditional ratemaking, to increase rates.
12. Colton, Roger D., *The "Obligation to Serve" and a Competitive Electric Industry*, ORNL/CON-459, Oak Ridge National Laboratory, Oak Ridge, TN, 1997.
13. Alexander, Barbara, *The Consumer Protection Agenda in the Electric Restructuring Debate*, William A. Spratley & Associates Public Utility Consultants, May 1996.
14. A recent metaevaluation by Oak Ridge National Laboratory of the Department of Energy's Low-income Weatherization Assistance Program indicates a benefit/cost ratio of 1.79. See Berry, Linda, *State-Level Evaluation of the Weatherization Assistance Program in 1990-1996: A Metaevaluation that Estimates National Savings*, ORNL/CON-443, Oak Ridge National Laboratory, Oak Ridge, TN, January 1997.

15. See Section 5.2.1 *supra*.
16. The point here is not to agree that the traditional reasons for utility support of general energy efficiency investments have lost their foundations in restructuring, but merely to acknowledge that in practice, policymakers have been making a distinction between energy efficiency generally and energy efficiency targeted to low-income customers.
17. Discussed in Section 2.2.4 *infra*.
18. Schlegel, J., and R. Prah, *DSM Resource Acquisition and Market Transformation: Two Inconsistent Policy Objectives?*, American Council for an Energy Efficient Economy (ACEEE) Summer 1994 Proceedings.
19. Audits funded by electricity companies through the successors to the old federal Residential Conservation Services program give energy savings information about saving gas, fuel oil, propane and wood, as well as electricity, although they are paid for by electricity customers. In Connecticut, United Illuminating Company funds a successful "fuel-blind" energy efficiency program, that provides building shell insulation and infiltration prevention for low-income customers, regardless of the fuel used to heat the house.
20. In one state, Vermont, all non-transportation energy sources are subject to a 0.5 percent gross receipts tax, the proceeds of which go into a fund for low-income energy efficiency. In practice, however, the moneys spent on electricity energy efficiency in Vermont are funded by the utilities much as they would be in a state without the gross receipts tax. This is because the electric companies get a credit against the gross receipts tax to the extent they provide energy efficiency to their customers. Thus, electricity-only savings provided by electricity companies to their low-income customers count towards the electric company's liability under the fuel-blind tax.
21. Note that a gas DSM program that saves cubic feet of gas has an impact on the cost of the gas commodity (energy), as well as a (smaller) impact on the amount of pipeline capacity the distribution company must secure to deliver the gas (distribution). Similarly, if an efficiency program reduces electricity usage, it has an effect on generation costs (energy) as well as on the cost of distributing the power (distribution). In both cases, the impact on distribution costs is greater if the savings occur at the peak load times.
22. This is the term in the electric industry. In the gas industry, presumably the charge is a "pipes charge."
23. Massachusetts terms its charge an "access charge." This language picks up on the concept that what a customer is paying for is access to the grid. Conceiving of the charge as an access charge is consistent with the Federal Energy Regulatory Commission policy in FERC Order 800 and 888 on wholesale competition in electricity (Docket nos. RM95-8-000 and RM94-7-001, April 24, 1996) to the effect that states will retain jurisdiction over the fact of a retail sale. Note that in regulatory parlance, "access charge" is often confused with a flat per-customer charge (as in the telephone monthly charges). For this reason, the term is

potentially confusing and misleading, where low-income customers are advocating for a volumetric charge.

24. This concern arises where it is considered that it is not preferable to fund such programs using a tax-based fund.
25. It is possible to charge based on the contribution a customer (or the class to which the customer belongs) makes to the peak load on the system in the billing period. This would be called a demand charge. Small customers are not billed based on peak usage, because this requires an expensive demand meter that is not worth the additional precision in allocating costs. However, very large customers do have a three-part bill, with a customer charge, energy charge, and demand charge. Energy and demand charges are "volumetric" because they vary with usage. In the case of energy charges, they vary with the number of kilowatt-hour used. In the case of demand charges, they vary with the relative level of the customers' peak demands.
26. Industrial customers in Pennsylvania and other states have argued that the relative level of peak load demand ought to be factored into such volumetric charges, and not just the energy drawn from the system over the billing period. These proposals would have the effect of shifting some of the cost burden over to residential and small business customers, and within the large customer classes, away from the largest customers and onto the smaller customers in the group.
27. A.B. 1890, Section 385.
28. RI Stat. 39-2-1.
29. D.P.U. 96-100, Plan: Model Rules and Legislative Proposal, December 30, 1997, at 319-320.
30. If a class of customers has not been asked to support low-income or residential energy efficiency under traditional regulation, they will naturally resist being asked to take on a new responsibility for sharing in the costs of such programs.
31. This point becomes somewhat more complex in a restructured world, where the risk of non-payment by a low-income customer must be split between the risk of a distribution bill non-payment, and the risk of an energy bill non-payment. To the extent the distribution company (the former monopolist) is the supplier of last resort (SOLR), and low-income customers tend to be bunched among those taking service from the SOLR, then the risk of non-payment is merged again, and is faced by the distribution utility and all its customers with regard to the energy as well as the distribution portion of the low-income customers' bill. To the extent a separate firm is the SOLR, ratepayers may again be the source of support for bad debt (and benefit from reductions in that bad debt) if the SOLR receives support via the distribution company (or a dedicated surcharge) for its bad debt. This might be done because the SOLR is presumably carrying a higher credit risk. Here, the low-income customers' risk of non-payment of the energy portion of the bill is once again shifted back to the entire body

of consumers. Finally, to the extent the low-income customer takes the energy portion of service from a completely independent competitive supplier, with no recourse back to the monopoly revenue base to support the credit risk of that portion of the bill, the associated credit and collection savings (from the improved payment of the energy portion of the low-income customers' charges) do not necessarily accrue to the general body of customers. That is, the competitive supplier, and its customers, would gain in reduced credit and collections costs, and the investment made to produce this benefit would be made by all customers. This is of course an argument for insisting that all suppliers contribute to the cost of low-income energy efficiency, and that all suppliers share in the responsibility to provide affordable electricity supply to low-income consumers.

32. These factors were implicitly recognized by the New Hampshire Public Utilities Commission in its February 28, 1997 order setting out principles for utility restructuring plans in that state under the recently passed legislation.
33. The argument for all classes to support energy efficiency is harder to make in the case of programs not targeted to low-income customers.
34. The presentation of the charges separately on the bill is likely to draw disproportionate complaint from customers.
35. It is important in doing such a study, or any of these analyses, to consider that families move into poverty, as others move out, and that any snapshot of need for efficiency will not capture the dynamic nature of the need.
36. State Energy Programs Building Module for the evaluation/projection of program outcomes developed by Economic Research Associates and Oak Ridge National Laboratory for the Department of Energy, Office of Buildings, State and Local Programs, Office of State and Community Programs. Excel 5.0 Format. December, 1997.
37. Note that the Weatherization Assistance Program began to authorize programs to go back to homes previously weatherized, because the evolving standards of the program and emerging efficiency technologies meant that earlier weatherization jobs did not go as far in achieving savings as it was currently possible to go. This same phenomenon has occurred with utility conservation programs.
38. For weatherization, the Department of Health and Human Services reported that, based on Energy Information Administration data, there were 29.1 million households with income near or below the federal poverty guidelines for weatherization eligibility in 1994.
39. ORNL's National Evaluation of the DOE Weatherization Assistance Program indicated that an estimated 4 million households had received full scale weatherization services through 1990. Allowing for an additional 1 million weatherizations in the period since that estimate, a very generous estimate, would still indicate that an estimated 24.1 million households (29.1 less 5 million weatherized) could benefit from weatherization. This calculation is for illustrative purposes only. Since DOE Weatherization is targeted at heating and cooling

efficiency many potential electricity measures have not been installed in the houses that have previously received Weatherization services. See, Brown, Marilyn A., Linda Berry, Richard Balzer, and Ellen Faby, *National Impacts of the Weatherization Assistance Program in Single-Family and Small Multifamily Dwellings*, ORNL/CON-326, Oak Ridge National Laboratory, Oak Ridge, TN, May 1993.

40. Ohio Department of Development, Office of Energy Efficiency, *Ohio's Home Weatherization Assistance Program: An Independent Evaluation*, Columbus, OH, 1997.
41. Eisenberg, Joel F., Eugene Michels, David Carroll, and Nancy Berdux, *The Scope of the Weatherization Program: Profile of the Population in Need*, ORNL/SUB/92-SK904/V2, Oak Ridge National Laboratory, Oak Ridge, TN, March 1994.
42. Worse yet, the budget may be healthy, but the execution will lack the care for achieving usage savings that is the point of the program.
43. See, e.g., H. Gil Peach & Associates, *Impact Assessment of the Equitable Gas Company Energy Assistance Program*, H. Gil Peach & Associates Monograph 969-1, prepared for Equitable Gas Company, September 1996. See also *A Guide to Low-Income Energy Efficiency*, National Consumer Law Center, 1995.
44. Of course, explicitly removing such budgets from the operation of the rate cap is a clearer and more certain solution. There is precedent for exempting low-income benefits from the impacts that otherwise would be created by restructuring legislation: Rhode Island's statute for example states that rate increases permitted under the statute's alternative regulation provisions do not apply to low-income customers.
45. Telephone conversation with Craig Keunnen, Commission on Economic Opportunity of Luzerne County, November 1997.
46. See, Prefiled Direct Testimony of Elliott Jacobson, *In re: Massachusetts Electric Company Proposed Increase in Rates*, D.P.U. 96-25, March 1996.
47. Brown, et al., ORNL, 1994.
48. United Illuminating in Connecticut runs such a program.
49. In principle, water utilities could be added to this effort.
50. Hamilton, B., D. Carrol, B. Adams, and S. Ringhof, *An Integrated Approach to Low-Income Energy Affordability for a Restructured World*, Proceeding of the 1998 ACEEE Summer Study on Energy Efficiency.
51. Note however that gas and electric utilities can get credit against their tax liability to the extent of their (separately run) DSM programs. This offset provision undercuts the whole house effect of a central fund raised on taxes.

52. Obviously the oil and propane dealers would likely be opposed. Also, the support of the utilities may not be sufficient, especially if it is a low priority for them, given the many other crucial issues at stake for them, and the possible argument that other techniques are sufficient to meet low-income needs.
53. See, *A Guide to Low Income Energy Efficiency*, National Consumer Law Center, 1995.
54. Berry, Linda, *Progress Report of the National Weatherization Assistance Program*, ORNL/CON-450, Oak Ridge National Laboratory, Oak Ridge, TN, September 1997.
55. See Section 2.2.4 *infra*.
56. House Bill 1509, Section 2804 (9).
57. Baxter, Lester W., *Low-Income Energy Policy in a Restructuring Electricity Industry: An Assessment of Federal Options*, ORNL/CON-443, Oak Ridge National Laboratory, Oak Ridge, TN, July 1997.
58. Since 1992 Pennsylvania has encouraged electric and gas utilities to offer Customer Assistance Programs, whereby bills for payment-troubled low-income customers are reduced to an affordable percentage of income, in an attempt to lower credit and collection costs by improving customer payment behavior. See *Policy Statement on CAPS*, Pennsylvania Bulletin, Vol. 22, #30, July 25, 1992.
59. Gross operating revenues are the total revenues received by a utility from operating the regulated utility business in the state in question. No deductions are made for expenses, interest payments, profits or other items.
60. LIURP programs are energy efficiency programs offered by Pennsylvania electric and gas utilities under the regulations of the Pennsylvania Commission.
61. Opinion and Order Regarding the Application of PECO Energy Company for Approval of its Restructuring Plan, Under Section 2806 of the Public Utility Code, and Joint Petition for Partial Settlement, Docket # R00973953, December 23, 1997.
62. Telephone conversation with Wayne Williams, Bureau of Consumer Services, Pennsylvania Public Utility Commission, January 1998.
63. The settlement also calls for a major expansion of the PECO CAP bill assistance program, to as many as 100,000 low-income customers.
64. Telephone conversation with Craig Kuennen, Commission on Economic Opportunity of Luzerne County, December 1997.
65. One company, UGI, has not had a CAP program, and did not propose in its restructuring plan to institute one. The Office of Consumer Advocate will oppose this proposal.

66. Charter and Bylaws of the Low-Income Governing Board, Section 2.1, website: <http://www.cpuc.ca.gov>.
67. Ibid.
68. Press release, November 19, 1997, website: <http://badger.state.wi.us/agencies/psc>.
69. Before their draft and final orders were issued, the PSB had a restructuring Working Group which, in turn, had subcommittees including the Consumer Protection and Low-Income Subcommittee. There was also a Renewable Energy and Energy Efficiency Subcommittee.
70. Affordable access, no distortion of incentives to energy efficiency, recognition of utility avoided costs in program design, adequate funding through a non-bypassable charge, and central or statewide eligibility and administration of programs.
71. Used now with a 10 percent downward revision of costs to indicate the consequent reduction in risk compared to supply-side resources.
72. Note that one program has already been sent out to bid--for a multi-family building energy efficiency program, i.e., a statewide program to which all the utilities contribute and which has one set of standards, a menu of measures and reduced administrative costs, and will help ensure consistency of delivery everywhere in the state.
73. A mil is a thousandth of a dollar, or a tenth of a cent. Thus, a three mil per kilowatt-hour charge would be equal to \$0.003/kWh, or 0.3 cents per kWh. Residential electricity rates range between 6 cents per kWh and 15 cents per kWh, and in Arizona they average around 9 cents per kWh making a 3 mil/kWh charge equal to about 3.3 percent of the rate.
74. Where the average rate is about 10 cents per kilowatt-hour, this would amount to a charge of a little over 2 percent of the bill.
75. Idaho is one such state. See Appendix I.
76. Although most of the public attention has gone to electricity industry restructuring, the concepts set out here for the electric industry can be readily adapted to the debate on introducing retail competition into the gas industry, with a few differences.
77. For example, the complexities of running an integrated transmission grid and power market with hundreds or thousands of brokers and sellers may lead to unacceptably high reliability risks, and consumers in so-called "load pockets," where demand for power is high but transmission capacity into the area is low, may balk if prices are allowed to rise in such constrained areas.
78. See Appendix I for further details on these states.
79. Brockway, Nancy, *Regulatory Jurisdiction to Enforce Consumer Protections Against Competitive Electricity Suppliers: The Case of New England*, National Consumer Law

Center, 1996 (published in Barbara R. Alexander and the National Consumer Law Center, *Consumer Protection Proposals for Retail Electric Competition: Model Legislation and Regulations*, Regulatory Assistance Project, Gardiner, ME, 1996).

80. IRP and LCP are tools for long-range planning to meet electricity resource needs, and they emerged in the 1970's as a way to get public input into utility resource acquisition planning. They have been a key vehicle for promoting energy efficiency by electric (and some gas) utilities.
81. California and Massachusetts, for instance.

APPENDIX I

**STATUS OF RESTRUCTURING
State by State, by Summer 1998**

STATUS OF RESTRUCTURING State by State, by Summer 1998			
STATE	STAGE OF ELECTRIC RESTRUCTURING	RECENT DEVELOPMENTS	RESIDENTIAL GAS COMPETITION?
Alabama	Wait and See	Statute giving 100% stranded cost recovery to utilities, and providing public interest review of proposed bypass sales signed 5/96. Cooperatives supported law. Law challenged 1/97 and ruled invalid. "Stay" ordered for an appeal. PSC opened docket #26427 on electric restructuring 4/98 and will be soliciting comments from all interested parties.	
Alaska	Wait and See	Territorial legislation introduced 1995 session, did not pass. PUC has initiated rulemaking.	
Arizona	Full Speed	ACC issued rule 12/96 calling for phase-in of retail competition by 2003, beginning 1/99. Arizona Supreme Court recently rejected utilities' attempts to overturn ACC's ruling.	
Arkansas	Wait and See	PSC decided late 1997 to hold a general review of electricity competition issues. Held hearings 5/98; will draw up recommendations for 1999 state legislative session. IRP discontinued because of competition 10/95.	

STATUS OF RESTRUCTURING

State by State, by Summer 1998

STATE	STAGE OF ELECTRIC RESTRUCTURING	RECENT DEVELOPMENTS	RESIDENTIAL GAS COMPETITION?
California	Full Speed	<p>AB 1890 enacted 8/96 - retail competition launched 3/31/98. Statute provides for needs-based budget for low-income programs, but utilities are challenging, citing revenue cap in statute. SMUD to cut back public goods investments to meet expected competition. Non-bypassable charge authorized for about 3.1% of DISCO charges. PUC issued order 1/97 calling for public benefits "Governing Board" to run low-income rate and energy efficiency programs. Utilities to run during transition. Energy efficiency budgets for 1998 set at 1996 levels; Governing Board to determine "need" for rate discount (CARE). Gas utilities have option to transfer low-income programs to Governing Board administration. In future, PUC plans gas program surcharge. Departing large customers (over 500 kW in a two month period) must pay average of 39% of bill as exit fee (covers stranded costs).</p>	YES
Colorado	Wait and See	<p>Legislature considered three bills on electric deregulation in 1998. Legislation (SB 98-152) passed 5/4/98 and signed by Governor 5/26/98. Law creates an advisory panel to conduct a study on whether electric industry restructuring is in the public interest.</p>	
Connecticut	Full Speed	<p>The legislature passed restructuring bill (HB 5005) 4/15/98, which provides for the introduction of full retail choice by end of 2000. Provides for a non-bypassable SBC that will pay for public benefits, including bill payment assistance and low-income energy efficiency programs. Bill mandates 10% rate reduction; allows securitization.</p>	
Delaware	Go But Slower	<p>Commission Order containing principles and recommendations for electric industry restructuring passed on 1/27/98. HB 570 supported by all utilities, currently being debated in Legislature. Bill calls for full retail access by 7/99 for IOU customers, and 7/2000 for DEC customers.</p>	

STATUS OF RESTRUCTURING
State by State, by Summer 1998

STATE	STAGE OF ELECTRIC RESTRUCTURING	RECENT DEVELOPMENTS	RESIDENTIAL GAS COMPETITION?
District of Columbia	Wait and See	PSC formal competition inquiry opened fall 1996 (case 945). PEPCO and BG&E merger proposal called off. OPC wants retail pilot, and continued universal service.	
Florida	Wait and See	Restructuring bill requiring full retail access 1/2001 did not pass. Unclear if next session will take up bill. PSC holding forum to discuss competition issues.	
Georgia	Wait and See	Competition workshops by PSC began spring 97. Staff presented PSC with recommendations 1/23/98. Report established guiding principles for restructuring and recommended the opening of several different dockets to investigate restructuring.	YES
Hawaii	Wait and See	PUC opened generic restructuring investigation. Bills allowing retail competition died 3/96. PUC Order 15285: "Electricity is basic to human survival. Thus it must be provided at affordable rates." Collaborative established to study restructuring issues.	
Idaho	Wait and See	Legislature to hire consultant for study of deregulation, while legislative committee holds public hearings. Legislation delayed while state AG studies issue. Washington Water Power pilot for partial direct access by large customers approved 9/96.	
Illinois	Full Speed	Legislature passed an electric industry restructuring bill (HB 362) 11/97. Governor signed the three relevant bills (including HB 1817, HB 56) 12/97. Retail competition phased in from 10/99. Residentials get full direct access 5/2002. Allows for 15% rate cut in 8/98. Legislation creates an Energy Efficiency Trust Fund of \$3 million contributed by electric utilities and alternative suppliers; requires the Fund to focus on low-income consumers. Also a Low-Income Energy Assistance Fund paid for by varying customer charges, that can fund low-income weatherization up to a maximum of 10% of the moneys.	Limited

STATUS OF RESTRUCTURING
State by State, by Summer 1998

STATE	STAGE OF ELECTRIC RESTRUCTURING	RECENT DEVELOPMENTS	RESIDENTIAL GAS COMPETITION?
Indiana	Wait and See	All 1998 restructuring bills died in legislature. State's five IOUs currently meeting to consider electric industry restructuring.	Limited
Iowa	Wait and See	Iowa Utilities Board released report 2/97 finding no compelling need for restructuring. Legislation introduced 1998 to overhaul utility taxation; passed House and Senate. Seen as prerequisite to restructuring. IUB holding public hearings on restructuring.	Limited
Kansas	Wait and See	Law passed 4/96 to defer retail competition 3 years and study. The legislature's task force on retail wheeling reported 11/97, calling for retail choice 7/2001. However a 'minority report' of the task force, signed by key industry players, urged caution. Only bill passed, HCR 5035, urges Congress not to mandate retail wheeling but to leave resolution to the states.	
Kentucky	Wait and See	HB 443, a deregulation bill, stalled in committee after being introduced 1/98. Finally, HJR 95 was passed 4/98, forming a Task Force to examine electric restructuring issues and report by next biennial session in 2000.	
Louisiana	Wait and See	12/97 PSC approved a cautious staff report recommending starting a formal proceeding on deregulation but not definitively determining retail competition to be in the public interest. Still needs to look into a few more issues before making final recommendation. No legislation expected in 1998 session. Disagreed with Entergy's deregulation plan for 100% cost recovery. Entergy had filed proposal to accelerate and guarantee non-bypassable recovery of nuclear costs in anticipation of retail competition - it called the surcharge a "Universal Service Charge."	

STATUS OF RESTRUCTURING
State by State, by Summer 1998

STATE	STAGE OF ELECTRIC RESTRUCTURING	RECENT DEVELOPMENTS	RESIDENTIAL GAS COMPETITION?
Maine	Full Speed	Restructuring bill LD 1804 approved unanimously 5/97. Full retail choice to begin 3/2000. Legislation provides for PUC to collect funds from T&D utilities in the state to maintain current levels of low-income assistance and also respond to need caused by 'economic exigencies'. For energy efficiency, provides for utilities mounting programs and paying for them through rates; funding level to be determined by PUC.	by 2000
Maryland	Go But Slower	PSC's revised schedule proposes introducing retail competition between 7/2000 and 7/2001. Regulations called for a statewide roundtable to issue proposals on consumer protections, energy assistance and low-income weatherization programs, and to develop proposals for a Universal Charge. However, PSC's legal status to order competition challenged by OPC and utilities. OPC also opposes time schedule on the basis that small consumers' interests will not have time to prepare for legislation. Proposed merger of PEPCO/BG&E has been called off.	Limited
Massachusetts	Full Speed	11/97 DPU final decision to officially open electric market to competition 3/1/98. Legislation enacted to restructure electric industry requiring retail access 3/98, rate cuts of 10% by 3/98 and another 5% 18 months later. Low-income utility contracts with weatherization network increased and initiated in unserved areas. Discounts for low-income increased. Consumer education authorized, not funded.	Limited

STATUS OF RESTRUCTURING
State by State, by Summer 1998

STATE	STAGE OF ELECTRIC RESTRUCTURING	RECENT DEVELOPMENTS	RESIDENTIAL GAS COMPETITION?
Michigan	Go But Slower	PSC has issued many orders on restructuring since 6/97; directed Consumers Energy (CE) and Detroit Edison (DE) to file revised retail tariffs by 2/25/98. Low-income payment assistance and weatherization would be continued at least at current levels. No SBC. DE & CE, as well as the Attorney General, filed notices with Court of Appeals that they intend to challenge PSC's orders. Attorney General argues PSC's orders will not reduce rates for small consumers. DE & CE have now presented PSC with conflicting deregulation plans calling for full competition in 1999 and 2000, respectively.	Limited
Minnesota	Wait and See	PUC adopted principles for retail competition 5/96. PUC barred industrial customer from direct access 10/25/96 pending restructuring. PUC's Electric Competition Work Group (ECWG) issued report 10/96 on wholesale competition and participation in Midwest Area Power Pool. During 1997 legislative session, Senate File 1820 established a task force to study electric industry restructuring and report to Legislature 1/15/98.	
Mississippi	Wait and See	PSC staff issued plan to start retail competition 1/1/2001; utilities want delay and industrials want it sooner. PSC received further comments 4/98 (docket #96-UA-389), due to decide by summer 98 whether to support retail choice and will also make recommendations to the Legislature.	
Missouri	Wait and See	Two bills introduced in 1998 session. PSC approved experimental pilot for Public Service and Utilicorp.	

STATUS OF RESTRUCTURING
State by State, by Summer 1998

STATE	STAGE OF ELECTRIC RESTRUCTURING	RECENT DEVELOPMENTS	RESIDENTIAL GAS COMPETITION?
Montana	Full Speed	Senate passed SB 390 on 4/97, allowing customer choice of suppliers from 7/1/98 for industrial consumers, and from 7/1/2002 for residential, commercial and small industrial consumers. Called for 2.4% of 1995 utility annual retail sales in Montana to be spent on Universal Systems Benefit programs and a minimum of 17% of that to be spent on low-income assistance and weatherization. Legislators recently voted 93-52 not to hold a special session to consider delaying restructuring. Move to delay restructuring was supported by environmental and labor groups, worried that Montana's low cost electricity would be sold out of state and Montana would have to import higher priced power. Organized labor is also worried about job loss from utility restructuring.	by 2001
Nebraska	Wait and See	Currently does not regulate electric utilities at state level. Most customers supplied by RECs. Legislative study bills (LR 245 in 1995, and LR 445 in 1996) passed. After 1 year studying RECs, Task Force will spend 2 years on competition issues. Final report due 1999.	
Nevada	Full Speed	AB 366, passed by the Legislature 4/15/97, calls for the PSC to establish a timetable by 1/1/99 for implementation of customer choice. No provisions made for low-income programs or a Systems Benefit Charge.	
New Hampshire	Full Speed	Statute passed mandating PUC to implement retail competition by 6/30/98. Contains strong universal service principle, and mandate for PUC to create programs to enable low-income customers to "manage and afford" essential electricity. Retail competition pilot begun 5/96. "Collaborative" developed PIPP and energy efficiency programs for low-income customers.	

STATUS OF RESTRUCTURING
State by State, by Summer 1998

STATE	STAGE OF ELECTRIC RESTRUCTURING	RECENT DEVELOPMENTS	RESIDENTIAL GAS COMPETITION?
New Jersey	Go But Slower	Alternative regulation and flexible rate bill passed 7/95. BPU policy decision 1/16/97 (Energy Master Plan, Phase II) - calls for phase in of competition with 5% of customers by 10/98, increasing to 50% by 4/1/00, and 100% by 4/1/01. Utilities were to file plans by July 1998. BPU Order 4/30/97 further ordered continuation of low-income assistance and weatherization programs, and proposes a Systems Benefit Charge. Governor supports Order. Legislature should take up the issue soon.	Limited/Soon
New Mexico	Wait and See	AG proposed competition. Several bills introduced 1998 session, not much chance of passing. PUC appointed hearing examiner to handle Texas-New Mexico utility requests for competition. Regulations for competition being formulated.	
New York	Full Speed	PSC order issued 5/96 for utility competition plans, filed late 1996 for implementation by early '98. Court ruled 1996 that PSC has retail competition authority. Retail competition will begin for more than 47,000 ConEd customers. Most of the largest IOUs have filed plans, and as required by 5/96 framework, they continue the substantial low-income conservation run through the WAP providers -- at present these are negotiated in separate contracts. Structure is being debated.	YES
North Carolina	Wait and See	2/97 Bill established study commission. Customer choice bill introduced in Legislature. Commission monitoring competition issues.	
North Dakota	Wait and See	Bill introduced to study restructuring. PSC Order 9/11/96 cool towards retail competition. 12/96 informal hearing at PSC also had little enthusiasm for wheeling. Alternative regulation guidelines issued 9/95.	

STATUS OF RESTRUCTURING
State by State, by Summer 1998

STATE	STAGE OF ELECTRIC RESTRUCTURING	RECENT DEVELOPMENTS	RESIDENTIAL GAS COMPETITION?
Ohio	Go But Slower	Two companion bills, SB 237 and HB 732, would introduce competition 1/1/2000. Creates 'retail marketing areas', approach by Johnson and Mead designed to guarantee competition for small consumers. Under proposal, customers would be aggregated into groups of 100,000 during a five-year transition period ending 12/31/2004. About 75 RMAs would be formed.	Soon
Oklahoma	Full Speed	SB 500 passed 4/97. Mandates studies relating to competition by 2002. Current bill SB 888 would (if passed) allow restructuring to happen up to three years sooner. SB 500 does not mention discount rates or low-income assistance programs but allows for a distribution access fee that could cover 'social costs'.	
Oregon	Go But Slower	HB 2821 calling for retail competition by 2000 defeated in 1997. PUC approves PacifiCorp and Pacific Power pilot proposals. PG&E/Enron open-access tariff filing to serve as a forum for restructuring proposals. Enron has agreed with intervenors to provide low income ratepayer assistance and other benefits with 3% Systems Benefits Charge.	
Pennsylvania	Full Speed	Bill passed November 25, 1996 (HB 1509) that mandates phase-in of retail competition, continuation of low-income programs (rates and energy efficiency), consumer protections to be maintained. PUC must develop/approve utilities' plans. PUC docket opened to develop plans. PECO plan approved by PUC.	Limited
Rhode Island	Full Speed	Statute passed to phase in competition by 7/1/98. Current low-income programs grandfathered; limited PUC authority for improved programs. Default supplier provided. Utilities filed plans in 1997 and RI opened retail competition on 1/1/98.. PUC rejected new low-income program as discriminatory.	

STATUS OF RESTRUCTURING

State by State, by Summer 1998

STATE	STAGE OF ELECTRIC RESTRUCTURING	RECENT DEVELOPMENTS	RESIDENTIAL GAS COMPETITION?
South Carolina	Wait and See	Bill introduced for study of competition. Legislature asked PSC for study by 1/31/98. PSC report finds retail wheeling "not in best interest" of SC at this time.	
South Dakota	Wait and See	Legislative panel voted early 1998 to delay competition by at least one year. Alternative regulation law was passed 2/96. Customers of 2MW or larger can petition PUC to select suppliers.	
Tennessee	Wait and See	Joint Committee created to study deregulation. Senate Joint Resolution passed opposing a federal date certain for retail competition. Most of Tennessee supplied by RECs or munis who buy from TVA. TVA and other federal power authorities undergoing structural review as part of federal budget process. Meanwhile, TVA is merging marketing operations with other public power agencies in region.	
Texas	Go But Slower	Legislature introduced bill for retail wheeling beginning 1999. Governor's plan for competition beginning 9/2000 was not passed. 7-person committee formed to investigate competition. PUC submitted report to legislature recommending full competition after 2000. IRP bill passed 1995. PUC IRP rules call for utility to work with CAAs on low-income energy efficiency without requiring bid. Entergy has filed restructuring plan. PUC issued rules on wholesale competition 2/96 and transmission 4/96.	
Utah	Wait and See	Task Force formed to investigate deregulation. Task force voted in November to study issue further, with goal of introducing legislation in 1999.	

STATUS OF RESTRUCTURING
State by State, by Summer 1998

STATE	STAGE OF ELECTRIC RESTRUCTURING	RECENT DEVELOPMENTS	RESIDENTIAL GAS COMPETITION?
Vermont	Go But Slower	PSB 12/31/96 Order promotes competition, affirms need for low-income programs, calls for all-fuels program with state funding if possible, so-called "efficiency utilities," leaves many questions to be resolved. Alternative regulation (5/96) and retail competition study bills (4/95) died. Legislature has not passed any restructuring bills so far. Green Mountain Power and CVPS filed restructuring plans 1/96 (modeled on NEES "grand bargain"). Gross receipts tax low-income weatherization fund extended past sunset to replace part of LIHEAP losses.	
Virginia	Full Speed	HB 1172 was passed by the legislature 3/12/98 calling for retail competition by 1/1/2004. No provisions for a Systems Benefit Charge. Calls for SCC to play a significant role in setting up appropriate consumer safeguards.	
Washington	Go But Slower	HB 2831, passed by the legislature, calls for utilities to submit studies on unbundling their costs by 9/98. For unbundling itself to occur, more legislation is required. SB 6560 ensures consumer protections, and HB 2773 encourages renewable energy. Washington Water Power proposal for partial direct access by large customers approved 9/96.	
West Virginia	Go But Slower	Legislation (HB 4277) passed 3/14/98. Law empowers PSC to study retail competition and, if it finds that to be in the public interest, to develop a deregulation plan in conjunction with a wide variety of interested parties. The deregulation plan would then have to be approved by the State Legislature.	

STATUS OF RESTRUCTURING
State by State, by Summer 1998

STATE	STAGE OF ELECTRIC RESTRUCTURING	RECENT DEVELOPMENTS	RESIDENTIAL GAS COMPETITION?
Wisconsin	Go But Slower	PSC drafted a new 7-step plan: retail wheeling "not inevitable" but legislative authority needed. Legislature to hold hearings, action on specific issues possible in 1998. Working Group on details of plans for low-income support and maintenance of other public benefits issued report with 4 versions of plan proposed by low-income advocates, all calling for substantial increase in low-income energy efficiency. Meanwhile, PSC continues to process "Advance Plan" (IRP) filings, but staff recommends eventual evolution to "strategic evaluation" under competition.	Limited
Wyoming	Wait and See	Joint Committee will discuss restructuring at next session. Legislative Committee rejected consideration of restructuring bill in 1998 Legislative Session. Alternative regulation law passed 3/95. PSC White Paper released 11/97 called for a comprehensive study of the economic impacts of electric restructuring in the state; PSC to contract for Wyoming economic analysis. PSC has become supporter of restructuring in spite of the fact that two analyses have stated that there is little or no positive benefit.	Limited

APPENDIX II

SUMMARY OF STATUS OF ELECTRIC RESTRUCTURING EFFORTS

Summer 1998

Full Speed (14)	Go But Slower (11)	Wait and See (26)	Merger Activity (15)	Alternative Regulation Authorized for Electric Rates (9)
Arizona California Connecticut Illinois Maine Massachusetts Montana Nevada New Hampshire New York Oklahoma Pennsylvania Rhode Island Virginia	Delaware Maryland Michigan New Jersey Ohio Oregon Texas Vermont Washington West Virginia Wisconsin	All the rest	Delaware D.C. Kansas Maryland Minnesota Mississippi New York North Carolina North Dakota Ohio Oregon Rhode Island South Carolina Virginia Wisconsin	Delaware Indiana Mississippi New Jersey North Dakota Oregon South Dakota Vermont Wyoming

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Sources: (a) Personal communications, commission orders and legislation; (b) *Current Connections*, Electric Consumers' Alliance, November 1996, December 1997, February, May & June 1998; (c) *LEAP Letter*, September-October 1996, Vol. 1, No. 3; January-February 1997, Vol. 2, No. 1 (d) NARUC bulletins, (e) email 12/6/96 from "owner-eadvocate-1@igc.org", (f) <http://www.state.in.us/iurc/electric/table97c.html>, (g) EIA press releases, (h) *Status of State Electric Utility Deregulation Activity as of May 1, 1998*, National Community Action Foundation.



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