ELECTRIC INDUSTRY RESTRUCTURING
AND A NATIONAL ENERGY SECURITY FUND[1]

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This paper proposes the creation of a National Energy Security Fund (NESF) to help maintain universal electric service for residential customers. Several of the principle components of the proposed NESF are modelled on other social safety net insurance programs such as workers compensation, unemployment compensation, and social security. The fund is capitalized through a per kilowatt hour (kWh) charge and is administered by agencies that currently administer the Low Income Home Energy Assistance Program (LIHEAP). The NESF is intended to supplement, not to replace, the existing LIHEAP mechanism. The NESF should be adopted as part of any federal effort to mandate (or promote) the restructuring and deregulation of the electric utility industry at the federal level.[2]

The purpose of the discussion below is to describe the basic outline of the plan, to set forth the rationale of the plan, and to project the revenues which such a plan might generate.

THE RATIONAL BEHIND THE ENERGY SECURITY PLAN

The proposed National Energy Security Plan (NESF) is intended to be a supplement to (not a substitute for) the existing Low Income Home Energy Assistance Program (LIHEAP). As currently structured, LIHEAP has serious substantive problems. Perhaps the greatest substantive problem with LIHEAP is the lack of funding. No-one seriously suggests that the LIHEAP program comes close to meeting the energy needs --however defined-- of low-income households. One recent analysis of the energy needs of low-income households in four selected U.S. cities,[3] for example, found that the needs of low-income households in those cities alone --the cities included Baltimore, Northern New Jersey, St. Louis and Seattle-- reached nearly one-half *billion* dollars.[4] A somewhat more dated analysis[5] found that LIHEAP recipients continued to

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[2]   For a discussion of the policy issues behind creating a similar state-specific structure by means of a "wires charge," *see*, Colton, *Structuring a Low-Income "Wires Charge" for Kentucky* (1996); Colton, *Structuring a Low-Income "Wires Charge" for Montana* (1996); Colton, *Structuring a Low-Income "Wires Charge" for New Jersey* (1996); Colton, *Structuring a Low-Income "Wires Charge" for Iowa* (1996). Colton, *Structuring a Low-Income "Wires Charge" for Oklahoma* (1996); Colton, *Structuring a Low-Income "Wires Charge" for Ohio* (1996); Colton, *Structuring a Low-Income "Wires Charge" for Indiana* (1996).

    These respective reports discuss the quantification of a wires charge imposed on electric and gas only (alternatively for all customer classes and for residential customers) as well as a wires charge imposed on all fuels (again alternatively for all customer classes and for residential customers).

[3]   Colton, *Defining and Measuring Energy Needs in Selected U.S. Cities*, Masters Thesis, Antioch University (October 1993).

[4]   "Energy needs" were defined to be the excess bill over a designated percentage of income. The percentage of income deemed "affordable" in this estimate was fifteen percent (15%) for a combined electric and natural gas bill.

be billed 20 percent plus of their incomes on their home energy bills.[6]

In contrast to these quantifications of low-income energy needs, the existing fuel assistance program is funded at only $1.0 billion. Therefore, it is clear that whatever other problems LIHEAP has, its biggest problem is that it is insufficiently funded to adequately address the energy needs of the poor.

The problem with inadequate funding is exacerbated by the recognition that LIHEAP is generally designed to address only a small portion of the home energy needs of the poor in the first instance. While there is a cooling component to the federal fuel assistance effort, the substantial majority of LIHEAP dollars is devoted simply to home heating assistance. In Fiscal Year 1994, for example, out of a $1.397 billion dollar funding availability, $1.062 billion was used for heating assistance while only $0.024 billion was used for cooling assistance.[7] No dollars are available for energy uses not involving space heating or cooling (*e.g.*, hot water).

Heating comprises only a portion --a substantial portion, but perhaps not as substantial as most people believe-- of a low-income household's energy bill.[8] Work done in Washington State by Fisher, Sheehan & Colton, Public Finance and General Economics (FSC) for example, found

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[5]   National Consumer Law Center, *Energy and the Poor: The Forgotten Crisis* (1989).

[6]   It is not accurate to say that low-income households "spend" 20 percent of their income on home energy. Rather, the bills, if fully paid, represent 20 percent plus of their income. Due to the unaffordability of these bills, however, they are rarely fully paid. This distinction, between what households are billed and what they actually pay becomes important below.

[7]   Other portions of the appropriation were used for administration, crisis intervention, weatherization, transfers to HHS block grants, and carryover. *LIHEAP Annual Report to Congress: FY 1994*, at 75 (March 1996).

[8]   Despite this, the fact is that hot weather is extremely deadly to low-income households. *See generally*, R.Colton and M.Sheehan (1994). *The Other Part of the Year: Low-Income Households and their Need for Cooling: A State-by-State Analysis of Low-Income Summer Electric Bills*, Fisher, Sheehan & Colton, Public Finance and General Economics: Belmont, MA. According to that report:

"The loss of utility service during non-winter months can be just as deadly, if not more so, than the loss of winter heating service. Heat-related deaths are a little-recognized, and even less well understood, public health problem. Heat-related deaths tend to be under-counted, and are certainly under-considered in the formulation of public policy.

"Hot weather can be deadly to low-income households, recent research has found. Without having identified precisely what the *most* vulnerable population is, there is general agreement that the susceptibility to death due to hot weather varies significantly based on age, sex and race. Heat-related deaths are concentrated in the northeast and midwestern regions of the country. They generally occur only after certain city-specific threshold temperatures are reached.

that home heating was only 55 percent of the total bill of low-income households.[9] Hence, as currently structured, LIHEAP is addressed to only a portion of low-income energy needs, even if fully funded.[10]

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> "Hot weather, in combination with other meteorological conditions, contributes significantly to human mortality rates in American cities. Traditional measures of heat-related deaths substantially *under*state the dangers attributable to hot weather. Statistics that have been reported in the past have tended to report only `heat stroke' as a heat-related death. Many causes contribute to heat-related deaths, however, of which heat stroke is but one minor one. In fact, heat stroke only accounts for roughly 10 percent of the deaths in which heat was a contributing factor.

> "There are two big spikes in heat wave deaths: heart attack and stroke. These spikes have occurred for every heat wave in the last 50 years. There is a very important relationship between heat and the heart. What `heat stress' means is that hot weather places a burden on the heart. The greatest danger during a heat wave is thus not heatstroke, but heart attack or stroke. Heart attacks and real strokes account for nearly 90 percent of all deaths due to heat.

> "Heat-related deaths cannot be isolated among a few designated causes, however. Instead, research shows that `mortality from a wide variety of causes increases during extreme summer weather, and the notion of a few specific weather-related causes in summer appears to be specious.'

> "Deaths attributable to hot weather are not a `southern' phenomenon.  Indeed, a variety of estimates `confirm for various climate change scenarios that the mortality impact on northern and midwestern US cities will be greater than in southern cities.' Indeed, one set of researchers. . .found that cities in `temperate areas' experience a `sharp rise in total mortality during unusually hot weather while mortality rates in warmer cities seemed to be less affected no matter how high the temperatures rose.'"

[9] *See generally*, M.Sheehan and R.Colton (1994). ***An Assessment of Low-Income Energy Needs in Washington State***, Fisher, Sheehan & Colton, Public Finance and General Economics: Scappoose, OR (prepared under contract with the Washington Department of Communities, Trade and Economic Development).

[10] Weatherization programs face the same problem. As a report by Fisher, Sheehan & Colton, Public Finance and General Economics, found for Washington State, even if WAP were successful in reaching all homes, that research found, the scope of the program is more limited than low-income households need. As the Washington State report notes with regard to that state:

> "Moreover, weatherization programs generally deal only with space heating. Thus, even if the more ambitious 20-year goal is achieved, the results will be an increase in efficiency for only the half of the typical household energy bill dedicated to heating. Low-income households will still face a burden in their energy bills, which will be exacerbated if actual weatherization program savings are lower than those predicted."

The Washington research concluded:

> "space heating represents about 50 to 55 percent of a household's energy budget. Thus, for every two percent of heating energy saved

Because of these inadequacies, any federal effort to mandate the competitive restructuring of the electric utility industry should include a component devoted to helping to pay for electric services for low-income residential customers.

GOALS OF THE NATIONAL ENERGY SECURITY FUND (NESF)

The goals of an NESF adopted as part of electric industry restructuring efforts are to address, and redress, each of the problems identified above. In brief, the goals of the proposed NESF advanced below are five-fold:

1. **Expand financial resources:** The one thing that is *not* likely to occur in any future consideration of federal fuel assistance funding is a substantial expansion of federal funding. Hence, an NESF program should seek additional non-federal resources to be brought to bear on low-income energy problems.

2. **Public/Private Partnerships:** Given (a) the need for greater resources; (b) the perception of fuel assistance being "welfare for utilities"; and (c) the substantial benefits that flow to the energy industry as a result of fuel assistance, an expanded public/private partnership is an essential component of an NESF.

3. **Increased Targeting:** Given scarce resources relative to need, an NESF should precisely target benefits to those households most in need.

4. **Increased Weatherization Integration:** Given (a) the one-time nature of fuel assistance benefits; and (b) scarce resources relative to need, an NESF should fully integrate weatherization and fuel assistance to promote the self-liquidation of the need for NESF assistance as an income supplement program.

5. **Increased Personal Responsibility:** Consistent with other current welfare reform proposals, an NESF should promote

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through a weatherization program, approximately one percent of the *total* energy budget would be saved.

"Weatherization programs thus appear to offer an opportunity for substantial savings for low-income households. While it is true that these programs can substantially cut costs for heating and cooling homes, they are less valuable for helping reduce total energy costs."

M. Sheehan and R.Colton (1994). *An Assessment of Low-Income Energy Needs in Washington State*, prepared for Washington Department of Communities, Trade and Economic Development, Fisher, Sheehan & Colton, Public Finance and General Economics: Scappoose, OR.

individual household responsibility and self-sufficiency.

In general, the National Energy Security Fund advanced below stands on two basic propositions. *Proposition I* is that each party to the bargain --this includes the low-income household, the government, and the energy vendor-- should contribute in some fashion to resolving the inability-to-pay problem. *Proposition II* is that the government and industry components should be structured such that the cash supplement responsibilities are finite and potentially liquidating through the implementation of energy efficiency measures. Each of these propositions is discussed in greater detail below.

STRUCTURE OF A NATIONAL ENERGY SECURITY FUND

The National Energy Security Fund is based on two propositions. Proposition I is that each party to the bargain --this includes the low-income household, the government, and the energy vendor-- should contribute in some fashion to resolving the inability-to-pay problem. Proposition II is that the government and industry components should be structured such that the cash supplement responsibilities are finite and potentially liquidating.

Proposition I: Equal Contributions

Government, industry and the low-income household, itself, all have a role to play in helping to address inability-to-pay problems. Accordingly, the structure of an NESF should involve three steps:

Step 1: The first step is to define the extent of low-income energy needs. Within *this* paper, "need" is defined to be the excess energy bill over a predetermined affordable percentage of income burden. The burden deemed to be affordable will be left to state discretion to be established within federal guidelines. A combined heating/non-heating bill of 15 percent of income, however, would seem to be the absolute uppermost limit on a permissible burden.

Step 2: The second step is to quantify low-income energy needs. Low-income "needs" in this regard will be calculated based on actual energy bills and actual household income. Assume that the percentage of income burden deemed to be affordable in a particular state is twelve percent (12%). An actual home energy bill of $480 would represent a twelve percent (12%) energy burden to a household with an actual income of $4,000. A household with such a bill ($480) would be deemed to be "not in need" under these circumstances. However, for a household with an income of $4,000, any energy bill in excess of $480 would represent an "energy need" of that particular household subject to payment through the fuel assistance program.

Step 3: The final step then is to apportion the responsibility of the energy bill amongst the relevant players. The household would have the first

responsibility to pay. The household would be required to pay the designated affordable percentage of income toward its home energy bill each month. The excess of that bill over the affordable burden, (*i.e.*, the "need") would then be apportioned to government and utility programs. Look again at Step 2. If this household has an actual energy bill of $700, the household will have an energy need of $220 ($700 - $480 = $220). The responsibility of this excess burden of $220 would be apportioned to the household's energy vendors and the government.

The National Energy Security Fund would thus see a combined effort involving households, industry, and government to address inability-to-pay problems as follows:
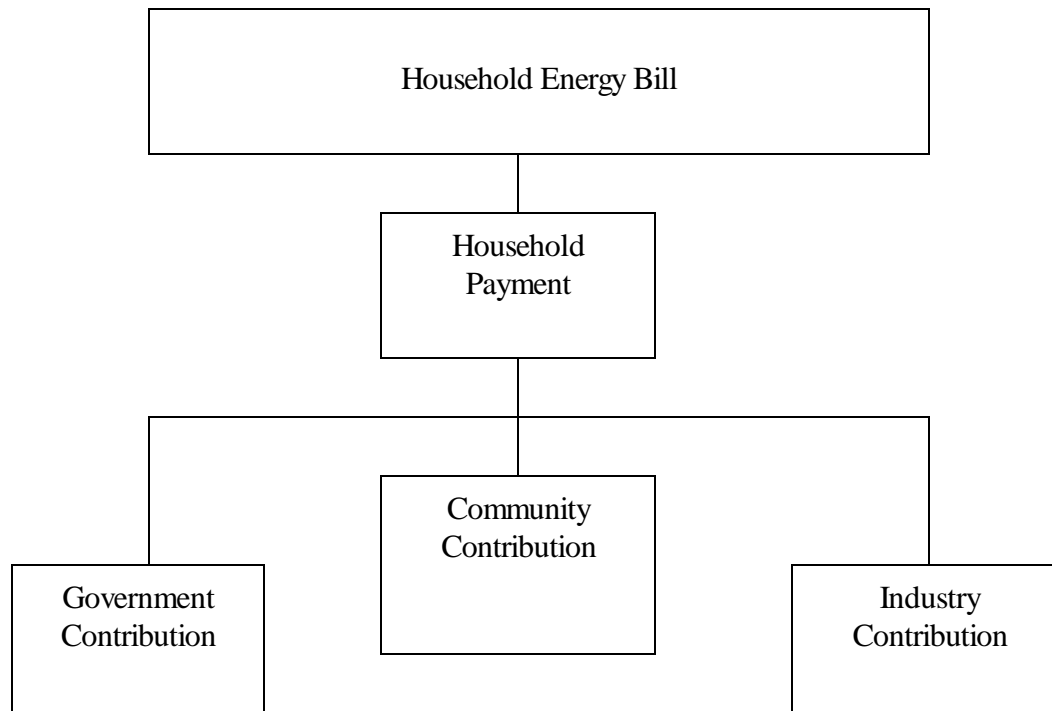
The government contribution would come in the form of fuel assistance. The industry contribution would come in the form of a rate discount or similar reduction in the amount billed to the customer. The community contribution would come in the form of a per kWh surcharge on electric rates. Hence, in our example above, assuming a 50/50 split of the government/industry portion of the responsibility, of the $700 total bill, the household would pay $480, government would pay $110 and industry would pay $110.

The advantages of having this National Energy Security Fund are several-fold, including:

- o First, the program takes into account the proposition that households must make a responsible contribution toward their own home energy bills. Like Percentage of Income Payment Plans (PIPPs) extant around the country today, households are required to pay that portion of their energy bill which represents an affordable burden.

- o Second, the program takes into account the notion that while inability-to-pay problems represent a social problem, they are not *strictly* a social problem. Thus, while government has a role to play in addressing the problem, private industry has a role to play as well.

- o Third, the program eliminates the political objection that federal fuel assistance is simply a welfare program for utilities. While utilities are benefiting from the program, they are at the same time being required to pay "their fair share" as well.

- o Fourth, as detailed below, the program promotes a close integration with energy efficiency efforts. Both government and industry may fulfill their "fuel assistance" obligations through the delivery of energy efficiency improvements.

- o Finally, again as detailed below, the program allows both the government and industry to control its exposure to liability in a cost-effective manner. If either party is able to meet its obligation to provide annual benefits to the household most cost-effectively through the delivery of energy efficiency improvements rather than through cash payments, it is permitted to do so.

Proposition II: Liquidating Liability

Not all benefits to a household would be required to be cash benefits under the NESF. Rather than requiring the delivery of cash benefits (either in the form of fuel assistance by the government or in the form of discounts by the industry), the responsible party can deliver bill reductions in the form of energy efficiency improvements which delivers the equivalent amount of annual dollar benefits in energy savings.

Consider this proposition in light of the Illustration above. In that Illustration, the government is responsible for delivering $110 in fuel assistance benefits to the low-income household. If by installing energy efficiency measures in that household's dwelling unit, however, the government can reduce the annual energy bill from $700 to $590, the government will have met its obligation to provide assistance.

Government Contribution

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                    ┌─────────────────────────┐
                    │     NESF Obligation      │
         ┌──────────┤                          ├──────────┐
         │          └─────────────────────────┘          │
         │                                                │
┌────────┴────────┐                            ┌──────────┴──────────┐
│  Cash Assistance │          and/or           │  Energy Efficiency  │
│  (fuel assistance)│- - - - - - - - - - - - - -│    Improvements     │
└─────────────────┘                            └─────────────────────┘
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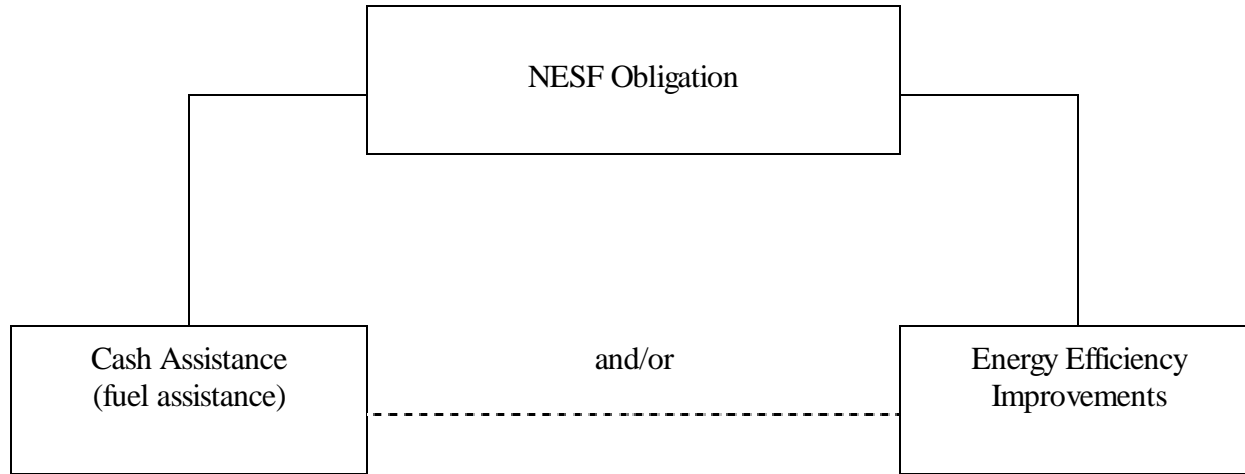
The same would be true for the utility industry. If, instead of providing a rate discount, the utility would provide energy efficiency improvements that reduced the annual bill to $590, the utility would have met its obligations.

Utility Contribution

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                    ┌─────────────────────────┐
                    │     NESF Obligation      │
         ┌──────────┤                          ├──────────┐
         │          └─────────────────────────┘          │
         │                                                │
         │                   and/or                       │
         │                                                │
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Cash Assistance (rate discounts)		Energy Efficiency Improvements
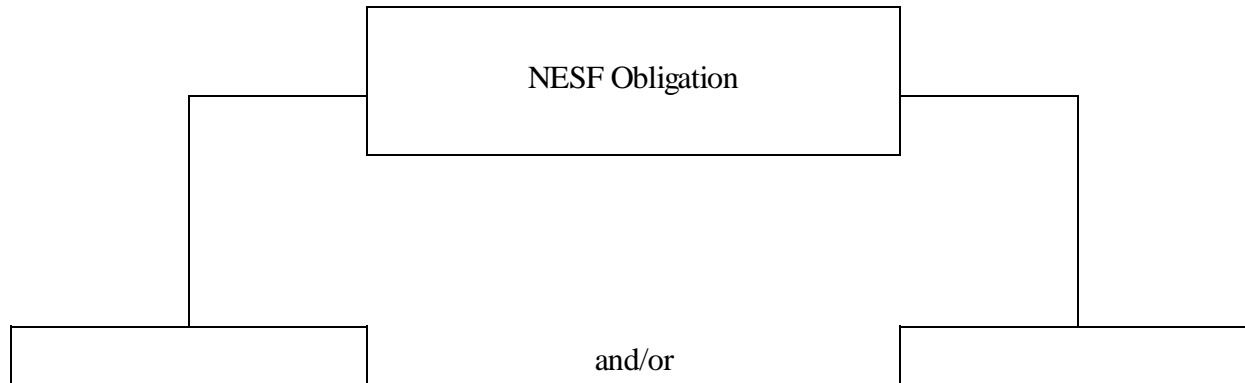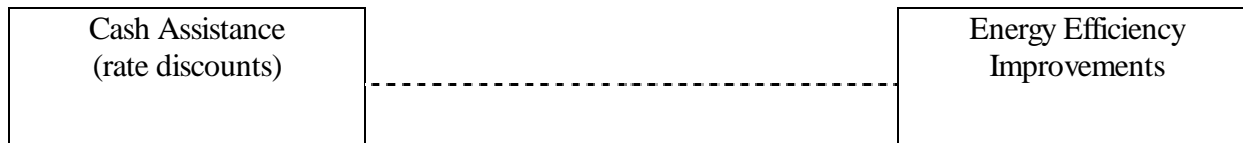
In sum, the obligation to provide their respective contributions can thus be met by either the government or the utility industry in two alternative ways as follows: either through a cash supplement/rate discount, or through energy efficiency improvements, or some combination of the two. Hence, the delivery of benefits from the government can take the form of either cash fuel assistance payments or energy efficiency improvements. The delivery of benefits from the utility industry can take the form of either discount rates or energy efficiency improvements. The delivery of benefits from either can involve a combination of the two alternatives as well (*e.g.*, a $200 responsibility met by a $100 cash payment *and* a $100 bill reduction through energy efficiency improvements).

The ability to liquidate the liability for providing benefits represents a significant advance in the means of delivering low-income fuel assistance. The proposed program provides a market incentive for both government and the utility industry to deliver all potential cost-effective energy efficiency improvements to low-income households. If through the expenditure of $100 on energy efficiency improvements, in other words, a utility (or the government) may eliminate its obligation to provide $110 in cash benefits, it has an incentive to do so.

Second, the ability to liquidate the liability for providing benefits provides a market incentive for both government and the utility to efficiently target their delivery of energy efficiency measures. Assume two households are on a system, for example. We'll call them Household A and Household B. Because of high consumption (and thus high bills), Household A poses a fuel assistance obligation of $500 to the utility (or to the government); because of low consumption, Household B poses a smaller fuel assistance obligation of only $100 to the utility (and to the government). The utility and government thus would now have a financial incentive to target that high consumption household (Household A) for energy efficiency improvements. Indeed, it might be possible that there would be competitive pressures for parties to reach those high consumption households "first" (so as to "count" the bill reductions against that particular party's obligation to provide assistance).[11]

Third, the ability to liquidate the liability for providing benefits provides a market incentive for both government and the utility to expeditiously target its delivery of energy efficiency measures. Each year of delay in reaching the high consumption households would mean another year of delivering one-time cash payments that provide no on-going benefits.

Finally, the ability to liquidate the liability for providing benefits provides an opportunity for both government and the utility to substantially reduce, if not eliminate, its *ongoing* responsibility for low-income energy assistance. If a utility can show, in other words, that it has reached

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[11]   Similarly, there might be pressure to cooperate to avoid lost opportunities.

each of the 10,000 applicants for NESF assistance in its service territory, providing an equivalent bill reduction through energy efficiency, the utility will have met its responsibility without further financial expenditures.

GENERATING REVENUE THROUGH THE NATIONAL ENERGY SECURITY FUND

Estimating the Necessary Revenue

The amount of money needed to provide assistance through the National Energy Security Fund depends upon four factors.

o   **Defining the "energy bill" to be covered:** For all of the reasons outlined in the first section of this paper, the proposed National Energy Security Fund should be designed to address the non-heating electric component of low-income bills. This focus supplements the current LIHEAP focus on heating bills with a new focus on total home energy bills (excluding transportation). Together with LIHEAP, the NESF will address the affordability problems of total low-income home energy bills.

o   **Defining "low-income":** The NESF must next define what is meant by "low-income."   Historically, the cap for LIHEAP participation has been established by federal statute as being either 150 percent of the federal Poverty Level *or* 60 percent of median income, at the state's discretion. In contrast, most HUD programs define "low-income" as extending up to 80 percent of median income. Based on the historical inadequacy of 150 percent of Poverty as an indicator of inability-to-pay,[12] the NESF should set its definition of "low-income" at 200 percent of the federal Poverty Level.

o   **Making assumptions as to participation levels:** The third decision which goes into making a determination of how much money is necessary for the NESF involves estimating the participation rate from amongst the eligible population. Nationwide, LIHEAP participation rates range from roughly 20 percent to roughly 40 percent of the eligible population. An assumed participation rate of 30 to 35 percent in NESF would not be unreasonable.

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[12]   While not having space to document the discussions in the literature, it should be noted that 150 percent of Poverty does not reach many of the "working poor" who do not qualify for public assistance, but who nonetheless lack the financial ability to pay ongoing household expenses. In addition, many Social Security recipients also fall over (not far over, but nevertheless over) the 150 percent of Poverty Level ceiling. Finally, increased income does not necessarily translate into an increased ability-to-pay. *See generally*, Roger Colton (1996). *Setting Income Eligibility for Fuel Assistance and Energy Efficiency Programs In a Competitive Electric Industry: The Marginal Impacts of Increasing Household Income*, Fisher, Sheehan and Colton, Public Finance and General Economics: Belmont, MA.

o **Targeting assistance:** The final decision that goes into making a determination of how much money to raise involves the decision rule for targeting assistance. The most commonly used benchmark is to establish lowering low-income energy burdens (*i.e.*, energy bills as a percent of income) to the total population average as the "ideal." This goal, however, often involves expenditures beyond a magnitude that would be politically acceptable. Lowering total energy burdens to a range of 10 - 12 percent allows for reasonable success in making payments by low-income households while staying within reasonable budgetary constraints.[13]

As part of the decision on how much money to raise for the NESF, it would be appropriate, also, to establish a cap on administrative expenses for both the fuel assistance and energy efficiency components of the program. A cap based on existing LIHEAP statutory restrictions is not unreasonable.

Estimating the Available Revenue

The review of costs below assumes the creation of an NESF funded by a uniform national per kWh charge. More specifically, the analysis assumes that the NESF is financed through a per kWh charge on all retail consumption, irrespective of customer class. The Table sets forth, on a state-by-state basis, the dollars generated by imposing a uniform national charge of eleven one-hundredths of one cent per kilowatt hour ($0.0011/kWh) on all retail energy consumption irrespective of customer class[14] delivered by major investor-owned[15] and publicly-owned electric utilities,[16] as well as rural electric cooperatives (RECs).[17]

The Table shows the charge that would be necessary to generate the national equivalent of LIHEAP funding through a uniform national

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[13]　It would be reasonable, also, to vary the target energy burden by household size. Ten percent of income is more important to a household with eight persons than it is to a household with two persons.

[14]　This excludes, in other words, sales for resale reported by electric utilities.

[15]　A "major" investor-owned utility was defined to include an electric utility that, in the pst three consecutive calendar years, had sales or transmission services that exceeded one or more of the following: (1) 1 million mWh of total annual sales; (2) 100 mWh of annual sales for resale; (3) 500 mWh of annual power exchanges delivered; or (4) 500 mWh of annual wheeling for others (deliveries plus losses).

[16]　A "major" publicly-owned utility was defined to include an electric utility that had 120,000 megawatthours of sales to ultimate consumers or 120,000 megawatthours of sales for resale.

[17]　The RECs included in this analysis are those which are borrowers from the Rural Electrification Administration (now called the Rural Utility Service).

Universal Service Fund charge. This Table shows that a fund equal to LIHEAP at its 1986 level (in 1995 dollars) plus roughly 20 percent ($2.9 billion vs. $2.4 billion) would result in a per kWh price increase of, on average, between one and two percent.

Because of the extent to which electric consumption is not covered by LIHEAP, but is equal to at least the level of home heating charges (which *are* covered by LIHEAP), a charge equivalent to LIHEAP would be appropriate. The additional funding assumed in the scenario studied below is appropriate to help fund the energy efficiency component of the program.

CONCLUSION

In sum, a uniform charge appears to be a reasonable and affordable mechanism to use to generate a National Energy Security Fund as part of any federal electric restructuring initiative. A charge of $0.0011 per kWh would fund an NESF at the LIHEAP 1986 level (1995 dollars) plus roughly 20 percent. Such a charge would represent a price increase of from one to two percent, depending on the state.

State	Total Retail		NESF Charge	NESF Revenue	Price per kWh		
	Sales (kwh)	Revenue			Without NESF Charge	With NESF Charge	Pct Increase
AK	6,445,409,000	$491,749,194	$0.0011	$7,089,950	$0.0763	$0.0774	1.4%
AL	60,442,691,000	$3,532,594,103	$0.0011	$66,486,960	$0.0584	$0.0595	1.9%
AR	23,061,568,000	$1,643,934,372	$0.0011	$25,367,725	$0.0713	$0.0724	1.5%
AZ	42,910,235,000	$3,551,039,849	$0.0011	$47,201,259	$0.0828	$0.0839	1.3%
CA	203,843,079,000	$20,140,991,988	$0.0011	$224,227,387	$0.0988	$0.0999	1.1%
CO	30,388,250,000	$1,843,602,883	$0.0011	$33,427,075	$0.0607	$0.0618	1.8%
CT	28,472,444,000	$2,936,212,000	$0.0011	$31,319,688	$0.1031	$0.1042	1.1%
DC	23,367,059,000	$1,588,273,000	$0.0011	$25,703,765	$0.0680	$0.0691	1.6%
DE	11,674,833,000	$836,332,721	$0.0011	$12,842,316	$0.0716	$0.0727	1.5%
FL	148,698,329,000	$10,687,782,654	$0.0011	$163,568,162	$0.0719	$0.0730	1.5%
GA	87,419,232,000	$5,858,007,350	$0.0011	$96,161,155	$0.0670	$0.0681	1.6%
HI	7,523,154,000	$757,047,000	$0.0011	$8,275,469	$0.1006	$0.1017	1.1%
IA	32,142,400,000	$1,946,654,565	$0.0011	$35,356,640	$0.0606	$0.0617	1.8%
ID	13,038,982,000	$513,091,627	$0.0011	$14,342,880	$0.0394	$0.0405	2.8%
IL	110,217,641,000	$8,681,799,816	$0.0011	$121,239,405	$0.0788	$0.0799	1.4%
IN	77,207,026,000	$4,140,791,985	$0.0011	$84,927,729	$0.0536	$0.0547	2.1%
KS	21,496,572,000	$1,392,662,023	$0.0011	$23,646,229	$0.0648	$0.0659	1.7%
KY	53,382,382,000	$2,513,275,680	$0.0011	$58,720,620	$0.0471	$0.0482	2.3%
LA	60,709,375,000	$3,640,311,946	$0.0011	$66,780,313	$0.0600	$0.0611	1.8%
MA	51,653,356,000	$4,931,549,030	$0.0011	$56,818,692	$0.0955	$0.0966	1.2%
MD	41,804,258,000	$2,845,551,108	$0.0011	$45,984,684	$0.0681	$0.0692	1.6%

State-by-State Total Retail Price Impacts of Uniform National Energy Security Fund (NESF) Charge
(Using 1993 Utility Data)

| | Total Retail | | NESF Charge | NESF Revenue | Price per kWh | | |
State	Sales (kwh)	Revenue			Without NESF Charge	With NESF Charge	Pct Increase
ME	11,742,417,000	$1,068,055,073	$0.0011	$12,916,659	$0.0910	$0.0921	1.2%
MI	80,233,535,000	$5,857,715,642	$0.0011	$88,256,889	$0.0730	$0.0741	1.5%
MN	41,911,969,000	$2,227,300,000	$0.0011	$46,103,166	$0.0531	$0.0542	2.1%
MO	64,763,951,000	$4,096,237,261	$0.0011	$71,240,346	$0.0632	$0.0643	1.7%
MS	30,625,141,000	$1,996,921,155	$0.0011	$33,687,655	$0.0652	$0.0663	1.7%
MT	8,856,524,000	$439,984,598	$0.0011	$9,742,176	$0.0497	$0.0508	2.2%
NC	119,955,152,000	$7,711,958,700	$0.0011	$131,950,667	$0.0643	$0.0654	1.7%
ND	4,849,503,000	$303,683,584	$0.0011	$5,334,453	$0.0626	$0.0637	1.8%
NE	15,461,088,000	$865,816,618	$0.0011	$17,007,197	$0.0560	$0.0571	2.0%
NH	6,885,101,000	$771,027,560	$0.0011	$7,573,611	$0.1120	$0.1131	1.0%
NJ	65,202,525,000	$6,510,443,461	$0.0011	$71,722,778	$0.0998	$0.1009	1.1%
NM	9,508,474,000	$764,997,752	$0.0011	$10,459,321	$0.0805	$0.0816	1.4%
NV	18,178,977,000	$1,111,902,488	$0.0011	$19,996,875	$0.0612	$0.0623	1.8%
NY	114,960,933,000	$13,068,260,728	$0.0011	$126,457,026	$0.1137	$0.1148	1.0%
OH	133,232,127,000	$8,844,634,738	$0.0011	$146,555,340	$0.0664	$0.0675	1.7%
OK	39,871,563,000	$2,359,527,903	$0.0011	$43,858,719	$0.0592	$0.0603	1.9%
OR	69,783,314,000	$3,211,919,318	$0.0011	$76,761,645	$0.0460	$0.0471	2.4%
PA	118,042,393,000	$9,352,442,881	$0.0011	$129,846,632	$0.0792	$0.0803	1.4%
RI	6,508,158,000	$675,287,000	$0.0011	$7,158,974	$0.1038	$0.1049	1.1%
SC	34,379,071,000	$1,948,987,558	$0.0011	$37,816,978	$0.0567	$0.0578	1.9%
SD	4,862,883,000	$314,832,861	$0.0011	$5,349,171	$0.0647	$0.0658	1.7%

State-by-State Total Retail Price Impacts of Uniform National Energy Security Fund (NESF) Charge
(Using 1993 Utility Data)

State	Total Retail Sales (kwh)	Revenue	NESF Charge	NESF Revenue	Price per kWh Without NESF Charge	With NESF Charge	Pct Increase
	Total Retail		**NESF Charge**	**NESF Revenue**	**Price per kWh**		
TN	70,947,639,000	$3,901,747,199	$0.0011	$78,042,403	$0.0550	$0.0561	2.0%
TX	257,024,042,000	$16,463,966,817	$0.0011	$282,726,446	$0.0641	$0.0652	1.7%
UT	2,817,526,000	$159,557,408	$0.0011	$3,099,279	$0.0566	$0.0577	1.9%
VA	92,632,932,000	$5,660,913,475	$0.0011	$101,896,225	$0.0611	$0.0622	1.8%
VT	4,213,311,000	$384,787,370	$0.0011	$4,634,642	$0.0913	$0.0924	1.2%
WA	69,904,572,000	$2,842,402,702	$0.0011	$76,895,029	$0.0407	$0.0418	2.7%
WI	53,762,543,000	$2,928,107,873	$0.0011	$59,138,797	$0.0545	$0.0556	2.0%
WV	11,051,879,000	$567,550,000	$0.0011	$12,157,067	$0.0514	$0.0525	2.1%
WY	2,855,199,000	$160,504,516	$0.0011	$3,140,719	$0.0562	$0.0573	2.0%
U.S.				$2,971,014,989			

Table title: State-by-State Total Retail Price Impacts of Uniform National Energy Security Fund (NESF) Charge (Using 1993 Utility Data)