

UNPLUGGED

HOW POWER COMPANIES HAVE ABANDONED
ENERGY EFFICIENCY PROGRAMS





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Environmental Working Group

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Unplugged

Hot Enough For You?

The summer of 1998 was the hottest on record, and that's saying something. After all, the seven warmest years since scientists began keeping records in 1853 have all occurred in the past ten years, and 1997 was the warmest ever. So far, every month of 1998 has broken the temperature record for that month, and July 1998 was the single hottest month on record (NOAA 1998). To put it another way, we've probably just lived through the hottest seven-month period in 600 years.

Among scientists, there is a overwhelming consensus that this warming trend is at least partly the result of human activities such as electricity production, which annually spews billions of tons of greenhouse gases like carbon dioxide and other pollutants into the atmosphere.

In the face of these growing problems utilities should be working overtime to increase energy efficiency. But between 1993 and 1997, U.S. utilities cut their combined investment in energy-saving programs by 45

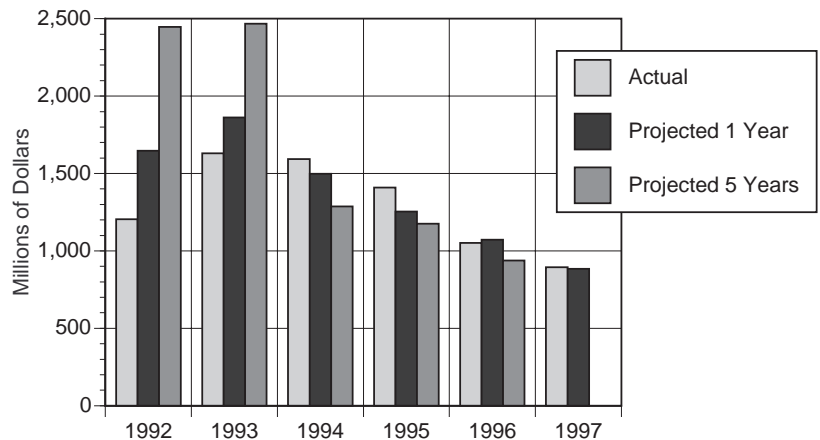
percent, or \$736 million, largely in response to industry deregulation (Figure 1). After promising in the early 1990s to fund and even expand energy conservation programs for their customers, most utilities have done just the opposite (Table 1).

If utilities had funded energy efficiency programs in 1997 at the levels they promised five years earlier:

- **The air would be cleaner.** Utilities would have avoided emitting 11 million

Between 1993 and 1997, U.S. utilities cut their combined investment in energy-saving programs by 45 percent, or \$736 million, largely in response to industry deregulation.

Figure 1. Utilities have drastically cut their investments in energy efficiency programs.



Source: Environmental Working Group. Compiled from Department of Energy, Energy Information Administration Data Form 861, 1992-1997.

Table 1. Without deregulation, utilities would have spent much more on energy efficiency in 1997.

Rank	Utility	State	Energy Efficiency Expenditures		Difference (\$ in thousands)
			1992 Projected Spending for 1997 (\$ in thousands)	Actual Spending (\$ in thousands)	
1	PacifiCorp	OR/WA	160,226	4,982	155,244
2	Pacific Gas & Electric Co	CA	185,000	81,123	103,877
3	Public Service Electric&Gas Co	NJ	140,000	38,808	101,192
4	Consolidated Edison Co-NY Inc	NY	119,278	25,656	93,622
5	Southern California Edison Co	CA	131,361	53,574	77,787
6	Consumers Power Co	MI	63,195	-	63,195
7	Massachusetts Electric Co	MA	102,800	45,620	57,180
8	Puget Sound Power & Light Co	WA	58,749	4,174	54,575
9	Duke Power Co	NC/SC	45,053	-	45,053
10	Los Angeles City of	CA	41,862	-	41,862
11	Baltimore Gas & Electric Co	MD	68,489	27,791	40,698
12	Northern States Power Co	MN/ND	64,890	24,548	40,342
13	Georgia Power Co	GA	34,996	-	34,996
14	Potomac Electric Power Co	DC/MD	63,424	29,562	33,862
15	New York State Elec & Gas Corp	NY	35,618	2,448	33,170
16	Pennsylvania Electric Co	PA/NY	30,200	498	29,702
17	Wisconsin Electric Power Co	WI/MI	29,497	-	29,497
18	Dayton Power & Light Co	OH	34,000	4,783	29,217
19	Sacramento Municipal Util Dist	CA	41,450	17,379	24,071
20	Boston Edison Co	MA	37,185	13,542	23,643
21	Niagara Mohawk Power Corp	NY	21,882	635	21,247
22	Jersey Central Power&Light Co	NJ	28,704	8,073	20,631
23	San Diego Gas & Electric Co	CA	43,537	24,330	19,207
24	Connecticut Light & Power Co	CT	51,461	32,691	18,770
25	PSI Energy Inc	IN	21,928	4,742	17,186
26	Appalachian Power Co	WV/VA	15,869	-	15,869
27	Montana Power Co	MT/WY	17,972	2,923	15,049
28	Hawaiian Electric Co Inc	HI	21,056	6,515	14,541
29	Orange & Rockland Utils Inc	NY	16,745	2,613	14,132
30	Detroit Edison Co	MI	13,950	-	13,950
31	Narragansett Electric Co	RI	22,240	8,493	13,747
32	Wisconsin Public Service Corp	WI/MI	16,000	2,480	13,520
33	United Illuminating Co	CT	15,950	2,742	13,208
34	Ohio Power Co	OH	13,106	-	13,106
35	Rochester Gas & Electric Corp	NY	12,137	-	12,137
36	Central Maine Power Co	ME	24,549	12,494	12,055
37	Long Island Lighting Co	NY	18,198	6,396	11,802
38	Portland General Electric Co	OR	22,328	10,923	11,405
39	Montaup Electric Co	MA	11,376	-	11,376
40	Columbus Southern Power Co	OH	10,555	500	10,055
41	Southern Indiana Gas & Elec Co	IN	9,590	131	9,459
42	Indiana Michigan Power Co	IN/MI	9,445	-	9,445
43	Florida Power Corp	FL	15,020	5,638	9,382
44	Puerto Rico Electric Pwr Auth	PR	9,460	89	9,371
45	Seattle City of	WA	23,300	13,938	9,362
46	Central Hudson Gas & Elec Corp	NY	9,718	413	9,305
47	Washington Water Power Co	WA/ID	12,524	3,225	9,299
48	Philadelphia Electric Co	PA	8,417	-	8,417
49	PUD No 1 of Snohomish County	WA	8,061	-	8,061
50	Public Service Co of Colorado	CO	11,000	2,972	8,028

Source: Environmental Working Group. Compiled from Department of Energy, Energy Information Administration Data Form 861, 1992-1997.

tons of global warming gases and 79,000 tons of air pollution in 1997 alone. Thanks largely to deregulation, utilities are increasingly turning to cheap power from older coal-burning power plants in the Midwest to meet peak electricity demand. These huge power stations are mostly exempt from contemporary clean air standards, and they generate enormous amounts of air pollution including millions of tons of nitrous oxides, sulfur dioxide, and global warming gases. According to a recent analysis, the air quality was the worst when power shortages were the most prevalent (CAN/U.S. PIRG 1998). On June 25, 1998, the day many Midwestern utilities asked customers to cut their power usage, there were 110 violations of the new ozone air quality standard in 27 states and the District of Columbia.

- **Consumers would save money.** Americans would have saved \$1 billion on electric bills in 1997. These savings would have continued every year for the next 10 to 15 years, a total of at least \$10 billion

in consumer savings lost due to cuts in energy efficiency programs by utilities, inspired largely by utility deregulation.

- **Power would be available when people need it.** With well-funded energy efficiency programs in place, utilities would very likely not have had to ask customers to turn down their air conditioners in the peak of the summer heat wave in June. This past summer, two utilities that slashed their energy efficiency spending, Commonwealth Edison of Chicago and American Electric Power¹ asked their customers to cut daytime power use during the peak of the summer heat wave in June. In Denver, Public Service of Colorado instituted a “rolling blackout” plan, and thousands of families were forced to endure the heat without any power at all.

Cuts in Energy Efficiency Programs are Big, and they Hurt Consumers

Since the October 1992 passage of the Energy Policy Act, the federal law that paved the way for the industry deregulation, utilities have cut investments in

¹American Electric Power (AEP) is an electric holding company that operates in 7 states. AEP's principal operating companies are Appalachia Power Company which serves Virginia and West Virginia, Columbus Southern Power Company in Ohio, Indiana Michigan Power Company, Kentucky Power Company, and Ohio Power Company.

Table 2. Cuts in energy efficiency programs cost consumers money.

Rank	Utility Name	State	Projected Savings in 1992 for 1997 (Mwh)	Actual Savings in 1997 (Mwh)	Cost to Customers
1	PacifiCorp	OR/WY	2,880,000	89,562	\$131 million
2	Consumers Power Co	MI	1,349,000	-	\$93 million
3	Consolidated Edison Co-NY Inc	NY	638,000	137,270	\$70 million
4	Southern California Edison Co	CA	1,170,000	477,028	\$70 million
5	Los Angeles City of	CA	710,000	-	\$67 million
6	New York State Elec & Gas Corp	NY	608,000	41,758	\$66 million
7	Public Service Electric&Gas Co	NJ	832,000	230,595	\$60 million
8	Niagara Mohawk Power Corp	NY	648,000	18,792	\$59 million
9	Pacific Gas & Electric Co	CA	941,000	412,593	\$52 million
10	Pennsylvania Electric Co	PA/NY	569,000	9,388	\$41 million
11	Wisconsin Electric Power Co	WI/MI	666,000	-	\$35 million
12	Appalachian Power Co	WV/VA	421,000	-	\$20 million
13	Massachusetts Electric Co	MA	358,000	159,001	\$20 million
14	Hawaiian Electric Co Inc	HI	233,000	72,224	\$18 million
15	Northern States Power Co	MN/ND	472,000	178,416	\$17 million
16	Jersey Central Power&Light Co	NJ	205,000	57,578	\$17 million
17	Dayton Power & Light Co	OH	294,000	41,403	\$17 million
18	Indiana Michigan Power Co	IN	294,000	-	\$16 million
19	Wisconsin Public Service Corp	WI/MI	381,000	59,051	\$15 million
20	Puget Sound Power & Light Co	WA	235,000	16,723	\$12 million
21	Sierra Pacific Power Co	CA	150,000	-	\$10 million
22	United Illuminating Co	CT	98,000	16,905	\$9 million
23	Duke Power Co	NC/SC	159,000	-	\$9 million
24	Baltimore Gas & Electric Co	MD/DC	196,000	79,613	\$8 million
25	Long Island Lighting Co	NY	80,000	28,124	\$8 million
26	Detroit Edison Co	MI	100,000	-	\$8 million
27	Potomac Electric Power Co	DC	193,000	90,087	\$7 million
28	Ohio Power Co	OH	162,000	-	\$7 million
29	Montana Power Co	MT/WY	149,000	24,254	\$7 million
30	Public Service Co of Colorado	CO	135,000	36,391	\$6 million
31	Rochester Gas & Electric Corp	NY	59,000	-	\$6 million
32	Arizona Public Service Co	AZ	63,000	-	\$5 million
33	Cincinnati Gas & Electric Co	OH	106,000	22,630	\$5 million
34	Narragansett Electric Co	RI	77,000	29,439	\$5 million
35	Sacramento Municipal Util Dist	CA	112,000	46,828	\$5 million
36	Cleveland Electric Illum Co	OH	57,000	-	\$5 million
37	Florida Power Corp	FL	109,000	40,737	\$5 million
38	PUD No 2 of Grant County	WA	236,000	26,150	\$5 million
39	Connecticut Light & Power Co	CT	125,000	79,626	\$5 million
40	Columbus Southern Power Co	OH	72,000	3,406	\$4 million
41	Georgia Power Co	GA	71,000	-	\$4 million
42	Portland General Electric Co	OR	152,000	74,423	\$4 million
43	South Carolina Electric&Gas Co	SC	56,000	-	\$3 million
44	Central Maine Power Co	ME	68,000	34,644	\$3 million
45	Central Vermont Pub Serv Corp	VT	38,000	10,553	\$3 million
46	Omaha Public Power District	NE	50,000	335	\$3 million
47	Washington Water Power Co	WA/ID	75,000	19,270	\$3 million
48	Tallahassee City of	FL	48,000	13,334	\$3 million
49	PSI Energy Inc	IN	68,000	14,676	\$3 million
50	Green Mountain Power Corp	VT	38,000	9,727	\$3 million

Source: Environmental Working Group. Compiled from Department of Energy, Energy Information Administration Data Form 861, 1992-1997. Projected savings estimated from actual costs of energy efficiency programs for each utility, and 1992 projections of investment in energy efficiency programs for 1997. Cost to customer based on each utility's average electric rate.

energy efficiency programs by 45 percent. In 1992, in disclosures required by the Department of Energy, utilities projected investing \$2.4 billion on conservation in 1997. In fact, they spent only \$894 million.

This means that actual spending on energy efficiency in 1997 was well less than half of one percent of the \$276 billion in revenues reported by the utilities. Although the cost to the utilities of providing these energy-saving programs would have been minuscule compared to their revenues, fully funded efficiency programs would have saved customers \$1 billion in 1997 (Table 2), and those investments would have continued to save customers money for the next 10 to 15 years.

Both American Electric Power (AEP) and Commonwealth Edison, utilities that asked customers to turn off their air conditioners to avoid blackouts this summer, cut their investments in energy efficiency in 1997. Commonwealth Edison cut its program entirely, as did every AEP operating company except Columbus Southern. In fact, AEP paid its president and CEO, Linn Draper, four times more in 1997 (\$2 million) than its ten operating companies combined spent on energy efficiency in the same year (\$500,000) (AEP 1997).

The efficiency programs that utilities cut range from home energy efficiency audits and other forms of consumer educa-

tion to rebates (or low-interest loans) for the purchase of new products such as efficient water heaters, lights, shower heads, air conditioners, and heat pumps. Many of these programs save customers substantial amounts of money.

Simple efforts like replacing ordinary incandescent light bulbs with compact fluorescent bulbs that use one-quarter the energy can save customers \$50 per bulb over the life of the bulb. If every household in America replaced just one ordinary bulb in this way, carbon dioxide emissions could be reduced by nearly 5 million tons a year. Replacing old refrigerators can also provide easy savings. The Chicago Housing Authority replaced old refrigerators with new, more efficient units, and will save more than \$500,000 on its electric bill in 1998. Home weatherization programs often produce savings in excess of 25 percent. For example, the Department of Energy's Weatherization Assistance Program saves customers an average of \$193 per dwelling annually and returns \$1.80 per dollar invested.

Cutting energy efficiency keeps electric bills unnecessarily high and forces utilities to generate more power to serve inefficient homes and businesses. Inefficient use of power also means that less power is available when people really need it, during summertime heat waves. As the global warming trend continues, we need to invest

Spending on energy efficiency in 1997 was well less than half of one percent of the \$276 billion in revenues reported by the utilities.

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Movement toward the deregulation of the retail power market has led to cuts in energy efficiency programs.

more in energy efficiency, not less. Global warming will not only change the weather and damage agriculture and natural habitats, but may also exacerbate the health effects of air pollution. Hotter summers may result in increased smog formation and more build-up of pollutants in urban air masses during heat waves. No one benefits from energy efficiency cuts.

Deregulation Has Driven Cuts in Energy Efficiency Programs

Few people realize that the power that utilities *buy* from each other is already deregulated. This is known in the industry as “wholesale” deregulation. Congress and the states, meanwhile, are struggling to deregulate the decades-old system by which power utilities *sell* electricity to their customers — the “retail” end of the electricity industry. While it is highly unlikely that any legislation will pass Congress this year, 13 states have already passed laws and four states have issued commission orders that deregulate their electric industries.

This movement toward the deregulation of the retail power market has led to cuts in energy efficiency programs. Some utilities have explicitly stated in their filings with the Department of Energy that they have cut their energy efficiency programs to prepare for the deregulation of the electricity market. For example, two of Allegheny Power System’s four operating compa-

nies, Monongahela Power, which serves Ohio and West Virginia, and West Penn Power, stated in their DOE filing that they were canceling their energy efficiency programs because of increased competition in the industry. American Electric Power said it was trimming its demand-side management programs in anticipation of the emerging competitive market. Other utilities, like Georgia Power, claim that they are cutting these programs because they have determined that they are not cost-effective in a deregulated market.

In the past, through a combination of market forces and progressive regulation, some utilities had an incentive to promote energy efficiency. Because most state regulators allowed utilities to purchase power only in special circumstances and not as a day-to-day method of supplying their customers, the cost of energy efficiency was balanced against the high cost of building new power plants. Energy efficiency programs helped utilities avoid the costs of new construction, and many utilities were refunded with interest for their investment in energy efficiency programs just as they would have been for a new power plant. In the process, consumers saved money and reduced pollution.

Now, due to wholesale power deregulation, utilities no longer compare energy efficiency programs to the costs of

Table 3. Fifty-two utilities with revenues over \$1 billion spent less than half of one percent of their total revenues on energy efficiency programs in 1997.

Utility	State	Total Revenue (\$ in thousands)	Percent spending on efficiency
Commonwealth Edison Co	IL	7,073,086	0.00%
Texas Utilities Electric Co	TX	6,135,417	0.24%
Tennessee Valley Authority	TN	5,753,883	0.22%
Consolidated Edison Co-NY Inc	NY	5,646,917	0.45%
Virginia Electric & Power Co	VA/NC	4,797,946	0.06%
Georgia Power Co	GA	4,383,320	0.00%
Duke Power Co	NC/SC	4,296,181	0.00%
Houston Lighting & Power Co	TX	4,251,243	0.06%
Philadelphia Electric Co	PA	4,166,069	0.00%
PacifiCorp	OR/WA	3,683,923	0.14%
Detroit Edison Co	MI	3,619,178	0.00%
Niagara Mohawk Power Corp	NY	3,307,601	0.02%
Alabama Power Co	AL	3,149,110	0.00%
Pennsylvania Power & Light Co	PA	3,047,659	0.00%
Consumers Power Co	MI	2,512,792	0.00%
Long Island Lighting Co	NY	2,480,747	0.26%
Florida Power Corp	FL	2,448,436	0.23%
Los Angeles City of	CA	2,332,904	0.00%
Union Electric Co	MO/IL	2,188,571	0.10%
Ohio Edison Co	OH	2,168,775	0.20%
Jersey Central Power&Light Co	NJ	2,093,972	0.39%
Gulf States Utilities Co	TX/LA	2,067,485	0.00%
Ohio Power Co	OH	1,975,291	0.00%
PSI Energy Inc	IN	1,958,469	0.24%
Cincinnati Gas & Electric Co	OH	1,908,132	0.11%
Louisiana Power & Light Co	LA	1,803,272	0.00%
New York State Elec & Gas Corp	NY	1,792,164	0.14%
Arizona Public Service Co	AZ	1,790,276	0.00%
Cleveland Electric Illum Co	OH	1,784,728	0.00%
Puerto Rico Electric Pwr Auth	PR	1,734,976	0.01%
Appalachian Power Co	WV/VA	1,720,010	0.00%
Arkansas Power & Light Co	AR/TN	1,715,714	0.00%
New England Power Co	MA/VT	1,677,903	0.00%
Salt River Proj Ag I & P Dist	AZ	1,558,798	0.12%
Public Service Co of Colorado	CO	1,454,717	0.20%
Illinois Power Co	IL	1,419,941	0.00%
Wisconsin Electric Power Co	WI/MI	1,412,115	0.00%
Indiana Michigan Power Co	IN/MI	1,391,917	0.00%
Central Power & Light Co	TX	1,376,283	0.13%
Puget Sound Power & Light Co	WA	1,231,424	0.34%
Oklahoma Gas & Electric Co	OK/AR	1,191,690	0.00%
West Penn Power Co	PA	1,151,242	0.00%
Duquesne Light Co	PA	1,147,233	0.00%
Columbus Southern Power Co	OH	1,139,604	0.04%
MidAmerican Energy Co	IA/SD	1,126,300	0.25%
Public Service Co of NH	NH	1,108,459	0.08%
South Carolina Electric&Gas Co	SC	1,103,091	0.00%
Delmarva Power & Light Co	DE/MD	1,093,883	0.21%
Pennsylvania Electric Co	PA/NY	1,052,935	0.05%
Oglethorpe Power Corp	GA	1,047,784	0.00%
Northern Indiana Pub Serv Co	IN	1,017,083	0.00%
Dayton Power & Light Co	OH	1,014,977	0.47%

Source: Environmental Working Group. Compiled from Department of Energy, Energy Information Administration Data Form 861, 1992-1997.

Cuts in energy efficiency compound the need for more power.

new plants. In looking for the cheapest way to meet peaks in demand for power, utilities now compare the cost of energy efficiency programs to the cost of wholesale power. In effect, where they once “paid” customers to use less power, now they can just buy power on the wholesale market.

In this new cost equation, energy efficiency programs are typically the losers. And in the electricity “price wars” that are expected as fully deregulated utilities compete for customers, energy conservation services and the mechanisms that fund them are even more likely to be eliminated. The ultimate loser is the customer, who loses both the savings and the environmental benefits of energy efficiency.

Utilities often use heavily polluting coal-fired power plants to meet this demand, and in some cases even re-open polluting old facilities that had been mothballed.

Since 1993, energy efficiency investments at 52 electric utilities with revenues over \$1 billion shrank to less than half of one percent of their total revenues (Table 3). Thirty-eight other large utilities have cut their investment by over 50 percent (Table 4), and 42 have eliminated investments in energy efficiency programs altogether (Table 5).

Even some of the top investors in energy efficiency have cut their energy efficiency programs significantly. In California, the Sacramento Municipal Utility District, which spent 2.4 percent of its revenue on energy efficiency in 1997, cut its funding from \$38 million in 1995 to \$17 million in

1997. San Francisco-based Pacific Gas & Electric, which invested more than any utility on energy efficiency in 1997, cut its funding from nearly \$125 million in 1994 to \$81 million in 1997 (Table 6).

Deregulation and Cuts in Energy Efficiency Increase Incentives to use Cheap Polluting Power

Deregulation produces price competition, which has two main effects on utilities. First, it puts pressure on utilities to cut programs like energy efficiency that are no longer seen as profitable in the short term. Cuts in energy efficiency compound the need for more power. Second, as utilities search for more power, deregulation drives them to produce or buy the cheapest power available. Utilities often use heavily-polluting coal-fired power plants to meet this demand, and in some cases even re-open polluting old facilities that had been mothballed (see Sidebar). Many of these huge, coal-fired plants are exempt from the Clean Air Act’s most stringent requirements.

Environmental Working Group estimated the reduction in electric usage that would have resulted if utilities had invested \$2.4 billion in energy efficiency programs, as promised, in 1997. By applying the utilities’ historical return from their energy efficiency investments to their projected spending for that year, we found that energy savings would have been over 4 times greater if the programs had been funded at the projected levels.

Table 4. Many large utilities cut their investments in energy efficiency programs by more than 50 percent as a result of wholesale power deregulation.

Rank	Utility	State	Spending 1993 (\$ in thousands)	Spending 1997 (\$ in thousands)	Percent Reduction
1	Omaha Public Power District	NE	459	7	98%
2	Niagara Mohawk Power Corp	NY	24,944	635	97%
3	New York State Elec & Gas Corp	NY	43,653	2,448	94%
4	Puget Sound Power & Light Co	WA	57,173	4,174	93%
5	Southern Indiana Gas & Elec Co	IN	1,695	131	92%
6	Turlock Irrigation District	CA	805	80	90%
7	Central Hudson Gas & Elec Corp	NY	3,688	413	89%
8	PacifiCorp	OR/WA	41,000	4,982	88%
9	Mississippi Power Co	MS	106	13	88%
10	Cambridge Electric Light Co	MA	2,391	311	87%
11	Washington Water Power Co	WA/ID	22,805	3,225	86%
12	Pennsylvania Electric Co	PA/NY	3,376	498	85%
13	Wisconsin Public Service Corp	WI/MI	16,200	2,480	85%
14	Orange & Rockland Utils Inc	NY	16,078	2,613	84%
15	PSI Energy Inc	IN	25,696	4,742	82%
16	Metropolitan Edison Co	PA	2,803	543	81%
17	Dayton Power & Light Co	OH	23,941	4,783	80%
18	United Illuminating Co	CT	12,414	2,742	78%
19	Consolidated Edison Co-NY Inc	NY	100,162	25,656	74%
20	Long Island Lighting Co	NY	24,932	6,396	74%
21	Kentucky Utilities Co	KY/TN	612	159	74%
22	Anaheim City of	CA	506	135	73%
23	Central Vermont Pub Serv Corp	VT	5,908	1,587	73%
24	Idaho Power Co	OR/ID	8,575	2,336	73%
25	Houston Lighting & Power Co	TX	9,021	2,554	72%
26	Nevada Power Co	NV	2,421	728	70%
27	Arizona Electric Pwr Coop Inc	AZ	400	122	70%
28	Boston Edison Co	MA	44,070	13,542	69%
29	Virginia Electric & Power Co	VA/NC	8,654	2,996	65%
30	Green Mountain Power Corp	VT	4,289	1,567	63%
31	Bonneville Power Admin	MT/OR	102,400	38,419	62%
32	Madison Gas & Electric Co	WI	4,283	1,673	61%
33	Fayetteville Public Works Comm	NC	25	10	60%
34	Montana Power Co	MT/WY	7,049	2,923	59%
35	Public Service Co of Colorado	CO	7,088	2,972	58%
36	Columbus Southern Power Co	OH	1,184	500	58%
37	Florida Power Corp	FL	11,874	5,638	53%
38	Commonwealth Electric Co	MA	3,498	1,748	50%

Source: Environmental Working Group. Compiled from Department of Energy, Energy Information Administration Data Form 861, 1992-1997.

Table 5. Many large utilities eliminated energy efficiency programs as a result of wholesale power deregulation.

Rank	Utility	State	Spending 1993 (\$ in thousands)	Spending 1997 (\$)
1	Commonwealth Edison Co	IL	600	0
2	Georgia Power Co	GA	37,958	0
3	Duke Power Co	NC/SC	9,423	0
4	Philadelphia Electric Co	PA	7,255	0
5	Detroit Edison Co	MI	3,371	0
6	Alabama Power Co	AL	4,473	0
7	Consumers Power Co	MI	46,951	0
8	Los Angeles City of	CA	15,348	0
9	Gulf States Utilities Co	TX/LA	2,500	0
10	Ohio Power Co	OH	638	0
11	Cleveland Electric Illum Co	OH	2,603	0
12	Arizona Public Service Co	AZ	3,720	0
13	Appalachian Power Co	WV/VA	1,383	0
14	Wisconsin Electric Power Co	WI/MI	33,962	0
15	Illinois Power Co	IL	497	0
16	Indiana Michigan Power Co	IN/MI	744	0
17	Oklahoma Gas & Electric Co	OK/AR	1,064	0
18	West Penn Power Co	PA	1,689	0
19	South Carolina Electric&Gas Co	SC	7,477	0
20	Atlantic City Electric Co	NJ	5,546	0
21	Toledo Edison Co	OH	1,077	0
22	Rochester Gas & Electric Corp	NY	9,109	0
23	Monongahela Power Co	OH/WV	301	0
24	Sierra Pacific Power Co	CA/NV	3,278	0
25	Texas-New Mexico Power Co	NM/TX	480	0
26	Lower Colorado River Authority	TX	2,506	0
27	Orlando Utilities Comm	FL	578	0
28	PUD No 1 of Snohomish County	WA	10,488	0
29	Montaup Electric Co	MA	9,276	0
30	Kentucky Power Co	KY	16	0
31	Savannah Electric & Power Co	GA	2,503	0
32	Withlacoochee River Elec Coop	FL	53	0
33	Jackson Electric Member Corp	GA	129	0
34	American Mun Power-Ohio Inc	OH	25	0
35	PUD No 1 of Chelan County	WA	652	0
36	Northern Virginia Elec Coop	VA	170	0
37	Hawaii Electric Light Co Inc	HI	183	0
38	Black Hills Corp	MT/SD	42	0
39	Wisconsin Public Power Inc Sys	WI	923	0
40	Walton Electric Member Corp	GA	101	0
41	Pasadena City of	CA	259	0
42	Kingsport Power Co	TN	210	0

Source: Environmental Working Group. Compiled from Department of Energy, Energy Information Administration Data Form 861, 1992-1997.

Table 6. Even utilities that invest more than one percent of total revenues on energy efficiency programs have cut spending in response to deregulation.

Rank	Utility	State	Percent of Revenue	Spending on Energy Efficiency Programs		
				1995 (\$ in thousands)	1996 (\$ in thousands)	1997 (\$ in thousands)
1	Eugene City of	OR	5.34%	3,800	5,700	5,500
2	Seattle City of	WA	3.81%	15,527	9,712	13,938
3	Granite State Electric Co	NH	3.52%	1,642	1,694	2,418
4	Tacoma City of	WA	3.43%	4,949	N/A	7,483
5	Massachusetts Electric Co	MA	2.81%	47,924	42,989	45,620
6	Sacramento Municipal Util Dist	CA	2.41%	38,069	19,910	17,379
7	Power Authority of State of NY	NY	2.30%	8,209	8,309	34,030
8	IES Utilities Inc	IA	2.11%	12,212	8,548	12,754
9	Western Massachusetts Elec Co	MA	2.10%	9,516	10,320	8,941
10	Bonneville Power Admin	MT/OR	1.66%	82,157	64,075	38,419
11	Narragansett Electric Co	RI	1.63%	7,771	8,550	8,493
12	Potomac Electric Power Co	DC/MD	1.59%	99,631	45,251	29,562
13	Southern Maryland EI Coop Inc	MD	1.58%	2,435	3,555	3,109
14	Interstate Power Co	IA/IL	1.49%	2,831	3,536	4,138
15	Wisconsin Power & Light Co	WI	1.49%	12,021	6,730	9,401
16	Austin City of	TX	1.45%	11,489	10,256	9,008
17	Eastern Edison Co	MA	1.44%	-	1,987	4,000
18	San Diego Gas & Electric Co	CA	1.37%	39,910	46,172	24,330
19	Connecticut Light & Power Co	CT	1.33%	33,065	27,017	32,691
20	Central Maine Power Co	ME	1.32%	11,912	15,705	12,494
21	Baltimore Gas & Electric Co	MD	1.27%	35,896	28,752	27,791
22	Minnesota Power & Light Co	MN	1.24%	14,260	15,597	5,816
23	Blackstone Valley Electric Co	RI	1.21%	-	1,162	1,699
24	Northern States Power Co	MN/ND	1.17%	44,350	34,471	24,548
25	Florida Power & Light Co	FL	1.05%	62,078	75,762	64,488
26	Pacific Gas & Electric Co	CA	1.04%	98,900	77,474	81,123
27	Otter Tail Power Co	MN/ND	1.03%	2,106	2,084	2,099
28	Madison Gas & Electric Co	WI	1.02%	2,191	1,448	1,673

Source: Environmental Working Group. Compiled from Department of Energy, Energy Information Administration Data Form 861, 1992-1997; and NRDC 1998 Benchmarking Report.

DEREGULATION ENCOURAGES UTILITIES TO REOPEN OLD POWER PLANTS

Some utilities are attempting to deal with the problem of inefficient power use by reopening mothballed, dirty power plants that do not meet modern pollution control standards. Detroit Edison, which eliminated its energy efficiency programs in 1997, is trying to open the Conners Creek power plant in Detroit. Detroit Edison lost the first round of regulatory battles to open Conners Creek without installing modern pollution control equipment, but is appealing the decision. Similarly, Illinois Power, which eliminated its spending on energy efficiency programs in 1994, recently announced plans to open five oil-burning units at its Havana plant which have been closed since 1996.

Table 7. Cuts in energy efficiency programs increase pollution.

Rank	Utility Name	State	Projected Savings in 1992 for 1997 (Mwh)	Actual Savings in 1997 (Mwh)	Increased CO2 (tons)	Increased SO2 (tons)	Increased NOx (tons)
1	PacifiCorp	OR/WA	2,880,000	89,562	3,131,000	7,900	6,800
2	Consumers Power Co	MI	1,349,000	-	1,077,000	5,900	3,000
3	Wisconsin Electric Power Co	WI/MI	666,000	-	610,000	2,900	1,300
4	New York State Elec & Gas Corp	NY	608,000	41,758	572,000	3,900	1,300
5	Pennsylvania Electric Co	PA/NY	569,000	9,388	540,000	6,200	1,300
6	Los Angeles City of	CA	710,000	-	500,000	1,700	800
7	Appalachian Power Co	WV/VA	421,000	-	420,000	2,500	1,600
8	Wisconsin Public Service Corp	WI/MI	381,000	59,051	329,000	1,100	700
9	Consolidated Edison Co-NY Inc	NY	638,000	137,270	324,000	200	300
10	Public Service Electric&Gas Co	NJ	832,000	230,595	299,000	1,500	700
11	Dayton Power & Light Co	OH	294,000	41,403	291,000	1,700	900
12	Niagara Mohawk Power Corp	NY	648,000	18,792	289,000	3,600	600
13	Southern California Edison Co	CA	1,170,000	477,028	289,000	500	500
14	Northern States Power Co	MN/ND	472,000	178,416	213,000	500	600
15	Puget Sound Power & Light Co	WA	235,000	16,723	182,000	400	300
16	Ohio Power Co	OH	162,000	-	171,000	1,700	800
17	Sierra Pacific Power Co	CA	150,000	-	118,000	100	200
18	Public Service Co of Colorado	CO	135,000	36,391	111,000	300	300
19	Potomac Electric Power Co	DC/MD	193,000	90,087	108,000	900	400
20	Indiana Michigan Power Co	IN/MI	294,000	-	104,000	1,000	500
21	Detroit Edison Co	MI	100,000	-	98,000	500	200
22	Cincinnati Gas & Electric Co	OH	106,000	22,630	93,000	600	300
23	Duke Power Co	NC/SC	159,000	-	92,000	600	300
24	Pacific Gas & Electric Co	CA	941,000	412,593	81,000	-	100
25	Baltimore Gas & Electric Co	MD	196,000	79,613	79,000	500	200
26	Montana Power Co	MT	149,000	24,254	78,000	100	100
27	Columbus Southern Power Co	OH	72,000	3,406	77,000	800	200
28	PSI Energy Inc	IN	68,000	14,676	72,000	600	100
29	Florida Power Corp	FL	109,000	40,737	65,000	500	200
30	United Illuminating Co	CT	98,000	16,905	60,000	300	100
31	Georgia Power Co	GA	71,000	-	58,000	400	100
32	Jersey Central Power&Light Co	NJ	205,000	57,578	52,000	500	100
33	Nevada Power Co	NV	32,000	5,440	50,000	100	100
34	Cleveland Electric Illum Co	OH	57,000	-	42,000	600	100
35	Omaha Public Power District	NE	50,000	335	42,000	200	100
36	Arizona Public Service Co	AZ	63,000	-	39,000	100	100
37	Portland General Electric Co	OR	152,000	74,423	39,000	100	100
38	Kentucky Power Co	KY	34,000	-	38,000	200	100
39	South Carolina Electric&Gas Co	SC	56,000	-	37,000	300	100
40	Coop Power Assn	MN	42,000	14,820	36,000	200	100
41	Long Island Lighting Co	NY	80,000	28,124	33,000	100	-
42	Wisconsin Power & Light Co	WI	103,000	70,010	33,000	100	100
43	Indianapolis Power & Light Co	IN	30,000	4,150	30,000	200	100
44	Connecticut Light & Power Co	CT	125,000	79,626	29,000	100	-
45	Houston Lighting & Power Co	TX	54,000	18,474	28,000	100	100
46	Montaup Electric Co	MT	35,000	-	28,000	100	-
47	Orange & Rockland Utils Inc	NY	29,000	4,549	25,000	100	-
48	Madison Gas & Electric Co	WI	59,000	32,058	25,000	100	100
49	Southern Indiana Gas & Elec Co	IN	16,000	223	24,000	200	100
50	West Penn Power Co	PA	23,000	-	24,000	200	100

Source: Environmental Working Group. Compiled from Department of Energy, Energy Information Administration Data Form 861, 1992-1997. Projected savings estimated from actual costs of energy efficiency programs for each utility, and 1992 projections of investment in energy efficiency programs for 1997. Increased pollution based on each utility's average emissions per unit of electricity generated.

At the same time, if the 50 utilities that cut back the most from their projected energy efficiency spending had invested at the rates that they promised, air pollution and greenhouse gas emissions would have been significantly reduced. In 1997 alone, energy efficiency programs at these 50 utilities would have reduced carbon dioxide emissions by over 11 million tons, and ozone and particulate-forming sulfur dioxide and nitrogen oxides by over 53,000 and 26,000 tons respectively (Table 7). These savings would have continued to benefit customers for the next 10 to 15 years, or for the entire useful life of the installed measures.

Some States Have Already Enacted Legislation

As a part of larger retail deregulation bills, a few states have already enacted legislation that provides funding for energy efficiency programs. In addition some states are considering legislation that would provide funding for energy efficiency programs in the absence of retail deregulation legislation.

The most common mechanism for funding energy efficiency programs in a deregulated market is a public benefits fund. Public benefits funds charge all consumers a percentage or rate based upon their energy usage. The funds are then used for energy efficiency and other environmental and consumer programs. They also provide a fi-

ancial backstop for low-income customers who cannot pay their electric bill.

Currently eleven states, Arizona, California, Connecticut, Illinois, Maine, Massachusetts, Montana, New Hampshire, New York, Pennsylvania and Rhode Island have implemented or are proceeding to implement public benefits funds that support energy efficiency programs (Kushler 1998). Several other states are considering public benefits funds as a part of their larger state deregulation proposal. Wisconsin is considering a similar program even though the state is not planning to deregulate the retail market.

The actual funding levels for these efforts vary tremendously. Massachusetts's public benefits funding is nearly \$160 million in 1998, or 3 percent of revenues, while similar legislation in Illinois only appropriates \$3 million, or less than one-tenth of one percent of revenues, sixty times less than in Massachusetts. Of the remaining states, four have reasonably well-funded programs (California, \$218 million or 1.4 percent; Connecticut, \$85 million or 2.6 percent; Montana, \$15 million or 2.4 percent, and Rhode Island \$15 million or 2.1 percent). Three states (Maine, \$9 million or .9 percent; New York, \$56 million or .5 percent; and Pennsylvania, \$10 million or .1 percent) are poorly funded. New Hampshire and Arizona have yet to set their funding levels (Kushler 1998).

Currently eleven states have public benefits funds that support energy efficiency programs.

As the electricity industry opens up for competition, so should the market for energy efficiency services.

The Clinton Administration's Comprehensive Electricity Competition Plan calls for the creation of a public benefits fund of up to \$3 billion. The fund would provide matching funds for state energy efficiency, low-income assistance, renewable energy, and public-interest energy research and development programs.

States have also used revolving loan funds to promote energy efficiency. Revolving loan funds provide interest-free capital to banks to subsidize loans on pre-approved products and can easily be incorporated into public benefits funds. These programs are designed to increase the demand for energy efficient products by involving lenders and contractors in the process. Nebraska currently uses a \$19 million revolving loan fund to support energy efficiency.

Since electric utilities now increasingly profit from the sale of electricity and not from a state-guaranteed return to their investments, retail conservation programs are no longer in their short-term economic interest. To mitigate this problem, energy efficiency programs should be designed to include providers other than utilities. As the electricity industry opens up for competition, so should the market for energy efficiency services. Opening the energy efficiency market to electric service companies, who sell products and information, rather than electricity, will substantially increase long-term

support for energy efficiency products and programs.

Conclusions and Recommendations

Energy efficiency reduces air pollution and the carbon pollution that causes global warming, and it saves consumers money. In spite of these clear benefits, energy efficiency programs have suffered huge cuts in funding under deregulation, primarily because they are not in the short-term financial interest of the utilities.

In light of the United States' international commitments to reduce greenhouse gas emissions under the 1997 Kyoto Protocol, promoting energy efficiency and reducing pollution should be priorities of national energy policy. The United States currently has no such national energy policy; in fact, carbon dioxide emissions are 11 percent above the target (1990) levels agreed to in the Protocol. For too long, the nation has relied on a patchwork of individual utility and state regulatory initiatives. As state regulation decreases, and prices alone govern utility investment decisions, utilities are dramatically cutting their energy efficiency investments.

The deregulation of the retail end of the electric utility business will only increase the incentives for further cuts in energy efficiency programs and other consumer services, unless

utilities are required by law to invest in energy efficiency programs. Without some way to reintroduce efficiency into energy policy, the public and the environment will lose.

To reverse this trend and restore the nation's investment in energy efficiency the federal government and the states must insure that future funding is available for energy efficiency programs — with or without retail deregulation. This can best be achieved through the use of a public benefits fund. Public benefits funds charge customers a small amount — gener-

ally 2 to 5 percent — to fund energy efficiency and other consumer and environmental programs.

These changes would complement other initiatives, such as strengthened appliance efficiency standards, power generation performance standards and minimum renewable energy portfolio standards. Together, these policies and tools could reverse the downward trend in energy efficiency investments, save consumers money, and ultimately result in significant reductions in air pollution and greenhouse gas emissions.

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