

Iowa Utility Energy Efficiency – Information presented by the Iowa Utilities Board to the Iowa House and Senate Commerce Subcommittees.

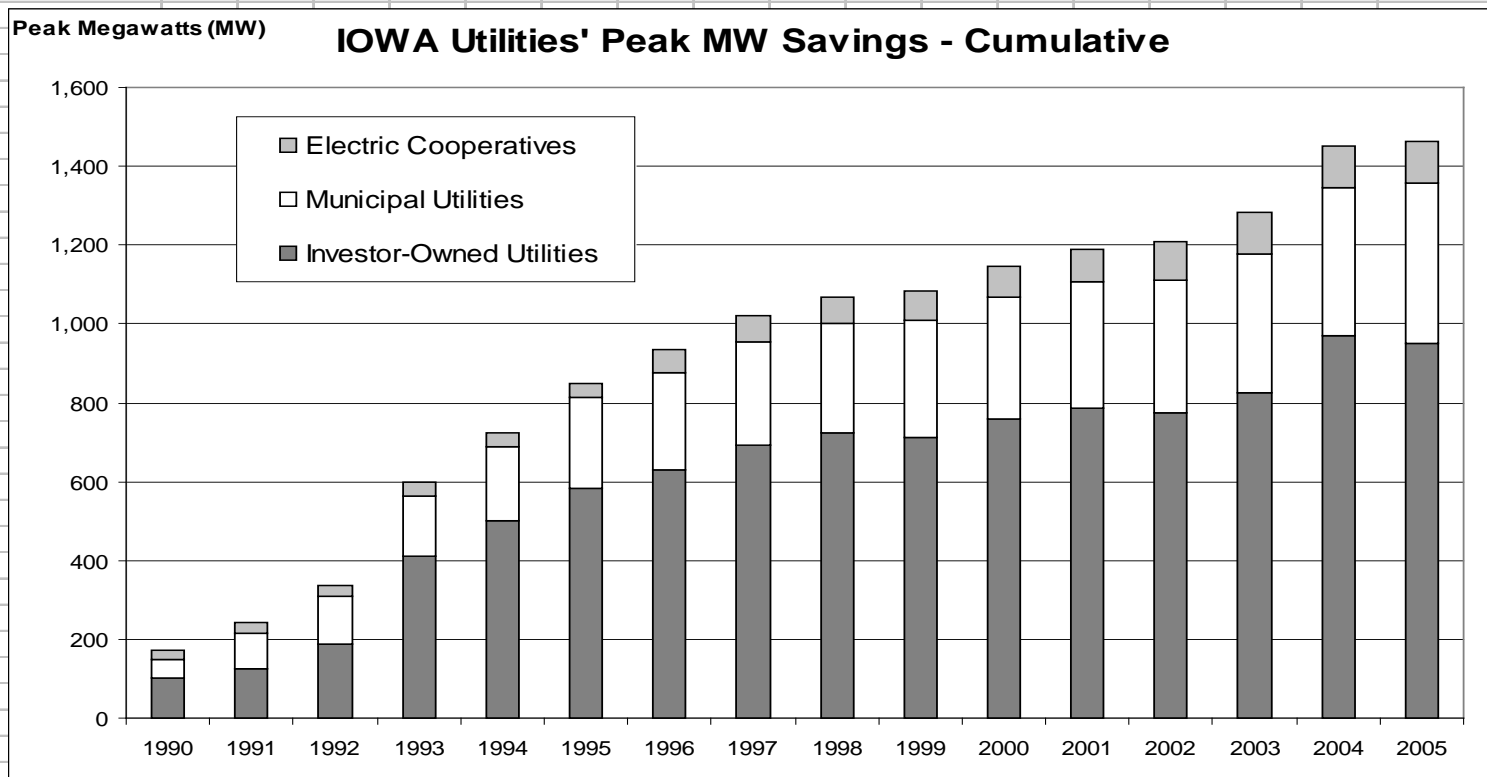
- NOTES AND CAVEATS. For contacts or to discuss the information, see the final slide.
- All tables and charts in this presentation were compiled by the staff of the Iowa Utilities Board (IUB) from data provided in reports by Iowa utilities. The reports include: the results of evaluations supporting cost recovery filings for investor-owned utilities (IOUs), evaluations supporting performance reviews for investor-owned utility energy efficiency plans, data compiled and submitted annually by investor-owned utilities, biennial reports on the plans of municipal utilities and retail electric cooperatives, and responses by utilities to data requests of the Iowa Utilities Board.
- IUB staff have compiled and in some cases reformatted the utilities' data. No formal evaluation of the data has been performed by the staff of the Iowa Utilities Board, but some of the data has been subjected to formal contested review in cost recovery and performance review proceedings.
- IUB staff have also used data available from public sources, principally the U. S. Department of Energy's Energy Information Administration (EIA). Some of these data may not precisely match utilities' numbers for certain parameters, such as peak electricity load, due to differing definitions of timeframes or jurisdictions.
- IUB staff has endeavored to assemble the data in time series, extending back to the beginning of energy efficiency programs authorized by Iowa Code § 476.6(19), enacted in 1990. Some utilities' programs for load management (also known as "demand response programs") existed prior to 1990 and the utilities reported their accumulated results in the first reports submitted in the early 1990s.
- IUB staff has compiled the data for the results of the utilities' programs in parallel time series, showing the year-to-year impacts (incremental savings), and the accumulated annual impacts (cumulative savings). Staff has made no attempt to account for attrition of impacts or savings from early results. In some cases utilities' data included the effects of attrition, in other cases attrition parameters were not applied.

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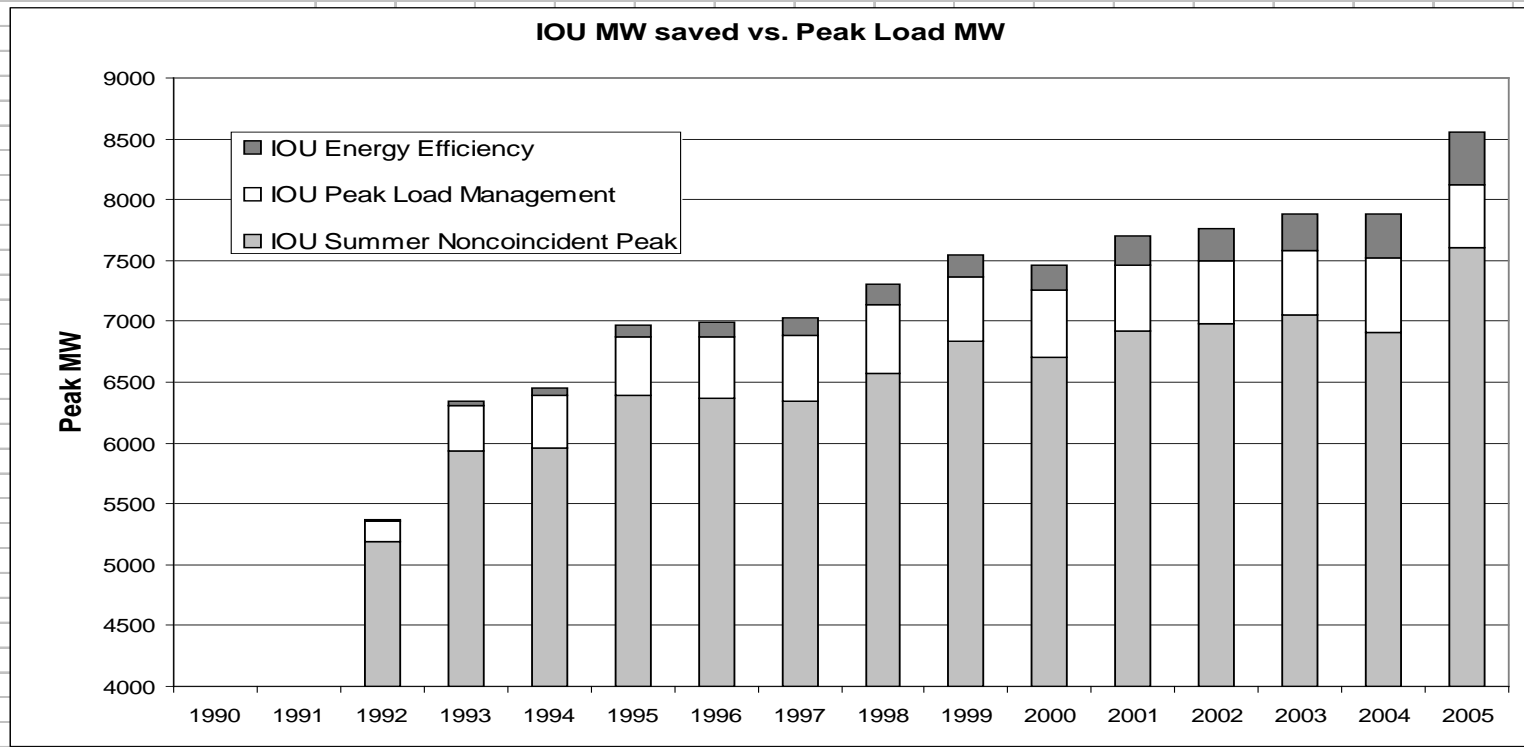
Iowa utilities have saved substantial amounts of peak electric use, typically defined as the maximum hourly electric load at the time of system peak. IUB staff compiled utilities' data to show the buildup of savings up over the 16 year reporting timeframe, by the three types of utilities. For sources and notes, see page ?? of this presentation.

Cumulative Peak Electric Capacity Savings - MW																
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Investor-Owned Utilities	103	125	189	412	501	582	630	691	723	711	757	785	774	825	969	953
Municipal Utilities	45	90	121	152	189	231	246	264	277	299	311	323	337	352	378	404
Electric Cooperatives	22	27	26	35	34	37	60	65	68	75	76	83	100	104	103	107
Totals	170	242	336	599	724	850	936	1,020	1,068	1,085	1,145	1,190	1,211	1,281	1,449	1,464



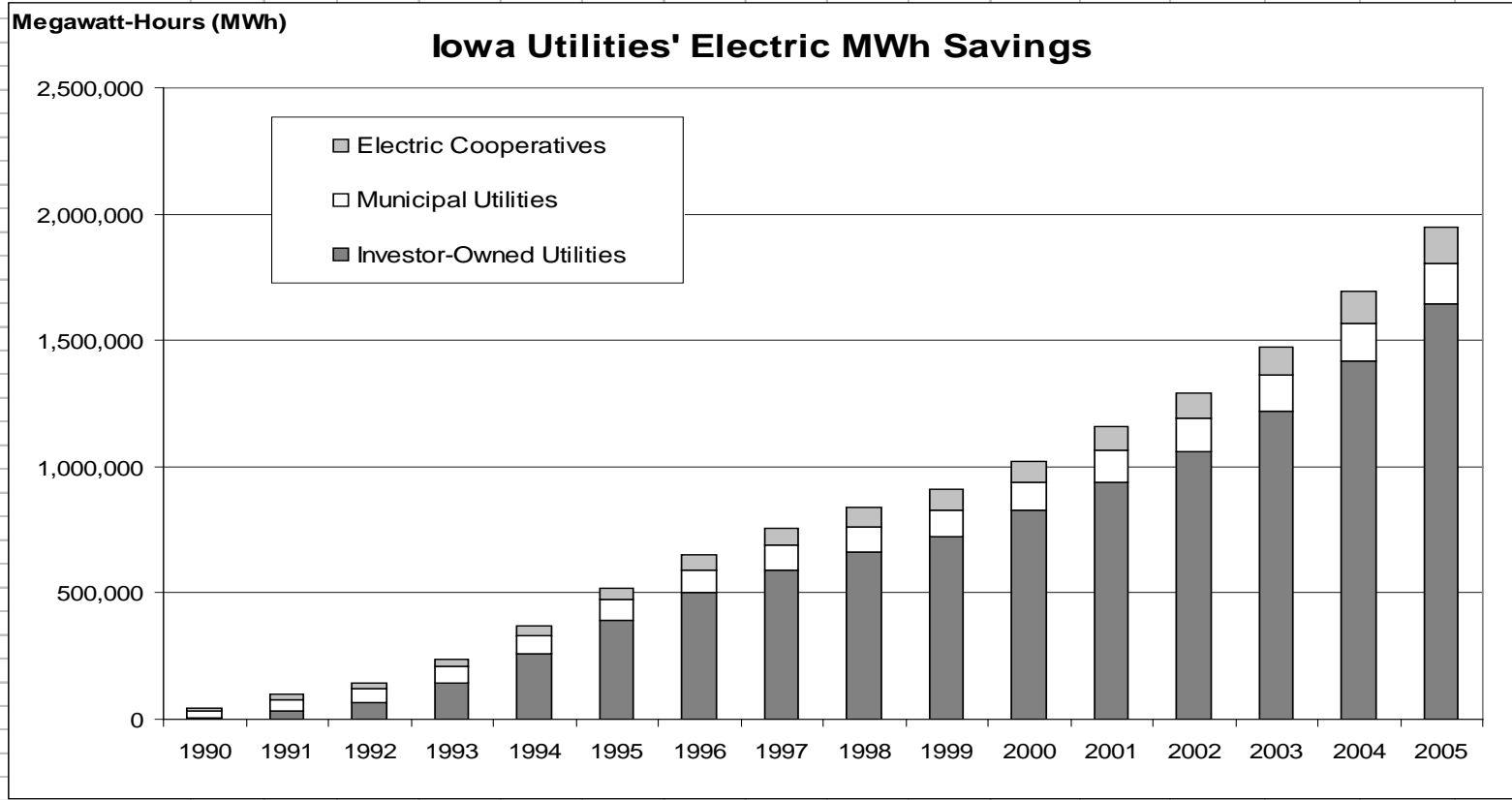
Investor-Owned Utilities (IOUs) have helped to mitigate increases in electric peak load through their energy efficiency programs. Peak load data in the following table and chart were compiled from the IOU reports to the EIA, which defines peak load as ????

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
IOU Summer Noncoincident Peak Load	NA	NA	5,185	5,931	5,954	6,388	6,367	6,340	6,578	6,840	6,710	6,917	6,986	7,058	6,911	7,600
IOU Peak Load Management	100	116	170	375	438	489	506	545	559	529	550	550	509	519	609	527
IOU Energy Efficiency	3	9	19	37	63	93	123	146	164	182	207	234	265	307	360	425
IOU Pk LM MW as % of Peak			3%	6%	7%	8%	8%	9%	8%	8%	8%	8%	7%	7%	9%	7%
IOU Energy Efficiency MW as % of PK			0%	1%	1%	1%	2%	2%	2%	3%	3%	3%	4%	4%	5%	6%
Total LM and EE as % of Peak MW			4%	7%	8%	9%	10%	11%	11%	10%	11%	11%	11%	12%	14%	13%



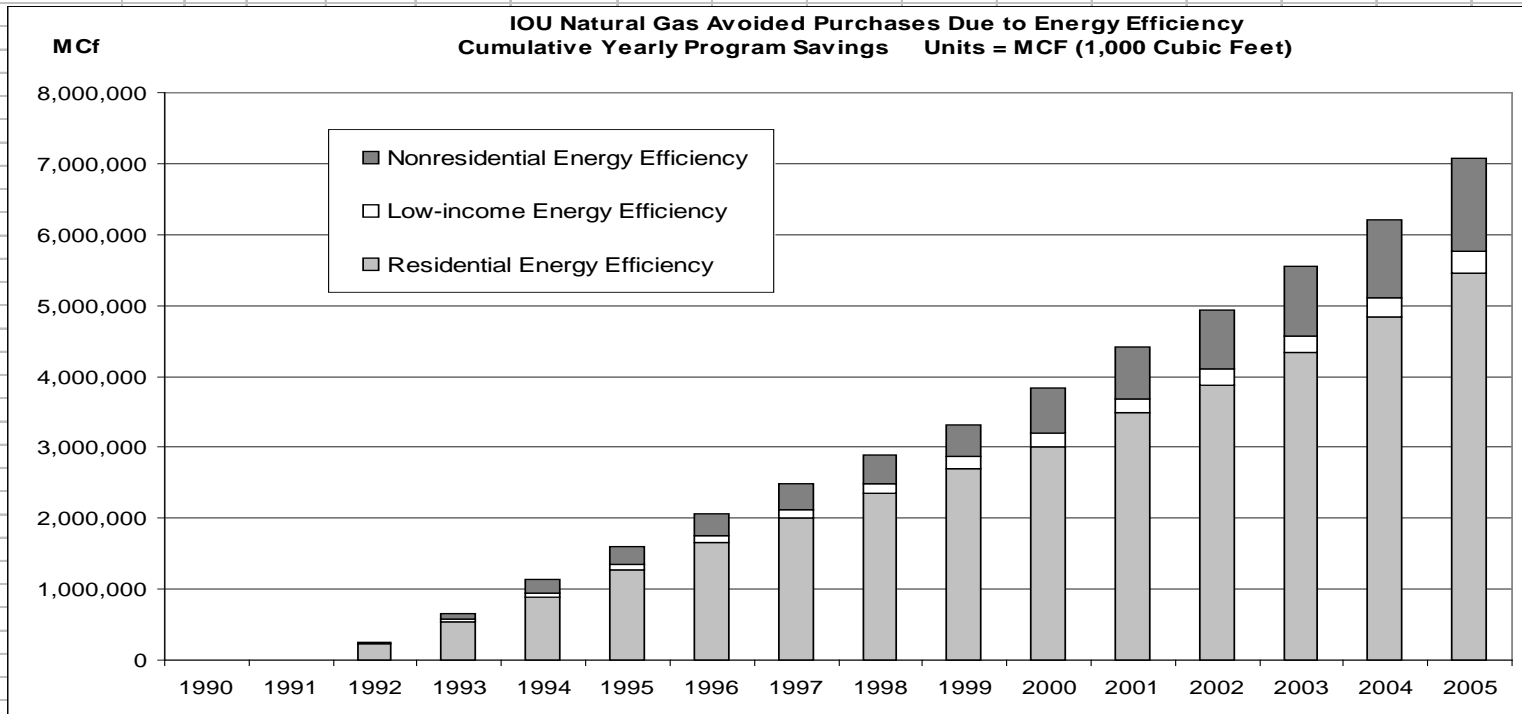
Iowa utilities' energy efficiency programs have also saved substantial amounts of electrical energy, shown here as megawatt-hours (MWh). The following table and chart shows how these savings have accumulated to nearly 2,000,000 MWh over the past 16 years.

Iowa Utilities' Cumulative Annual Energy Savings - MWh																
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Investor-Owned Utilities	6,820	31,125	66,035	146,006	259,219	391,376	499,776	592,218	660,654	722,322	827,097	939,873	1,056,968	1,219,250	1,417,309	1,642,072
Municipal Utilities	23,645	47,290	55,656	64,021	73,820	83,227	89,925	96,882	100,010	104,196	111,766	123,705	132,504	142,403	151,489	162,313
Electric Cooperatives	13,902	19,585	22,697	28,464	38,817	46,765	58,923	68,672	76,031	82,948	83,801	94,396	102,127	114,545	126,588	145,808
Totals	44,367	98,000	144,388	238,491	371,856	521,368	648,624	757,772	836,695	909,466	1,022,664	1,157,974	1,291,600	1,476,199	1,695,386	1,950,193



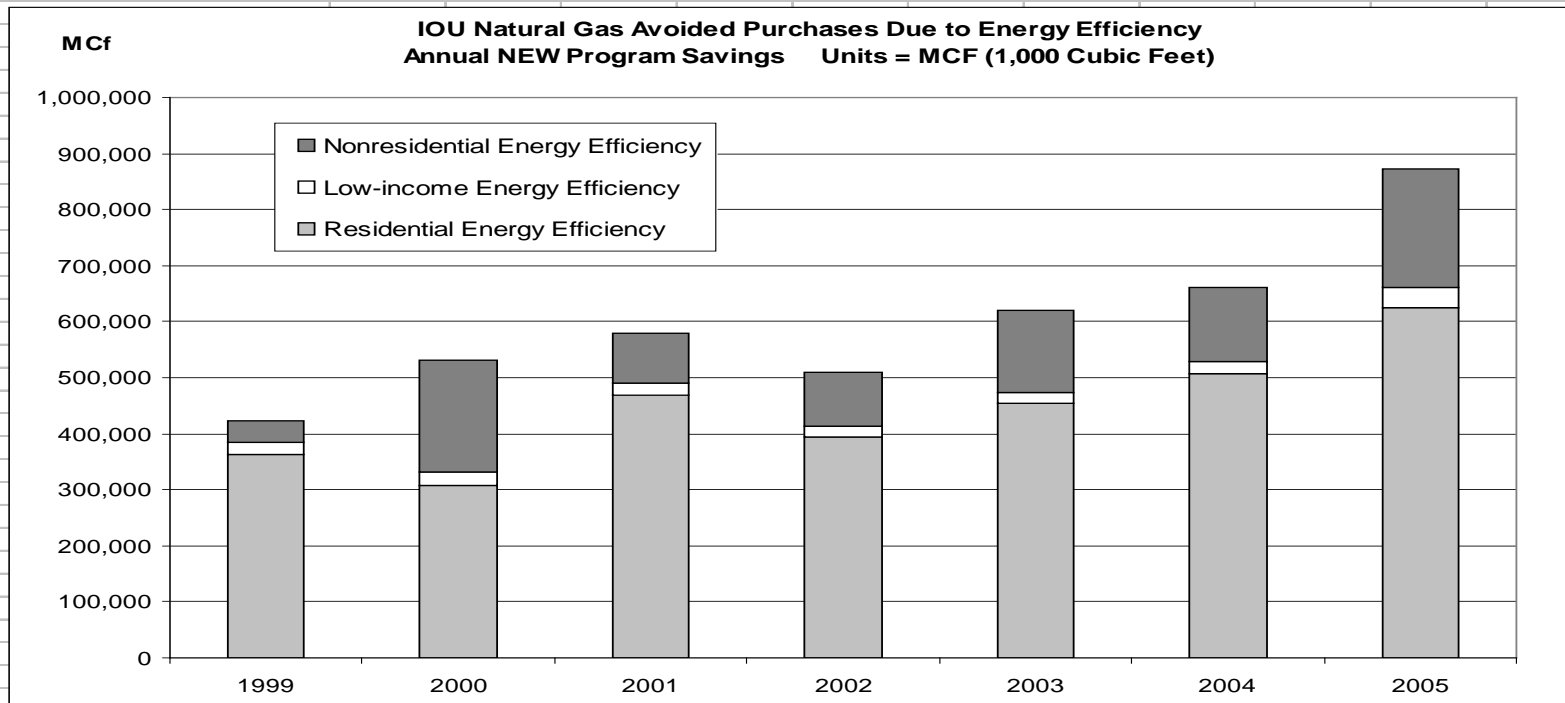
Iowa utilities' energy efficiency programs have included programs to save natural gas from the start in 1990. Most of the savings have been achieved by the Investor-Owned Utilities, consistent with the fact that most retail natural gas in Iowa is sold by IOUs.

IOWA IOU GAS ENERGY SAVINGS				CUMULATIVE GAS SAVINGS												
	Units = Dekatherms (Dth) or MMBTU (1,000,000 British Thermal Units) or MCF (1,000 Cubic Feet)															
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Residential Energy Efficiency	240	1,920	225,296	541,820	888,525	1,277,414	1,663,132	2,006,186	2,343,223	2,706,472	3,013,247	3,481,393	3,875,115	4,328,772	4,835,197	5,459,960
Low-income Energy Efficiency	0	0	9,594	30,512	60,717	78,708	95,933	114,481	134,800	156,433	180,306	201,496	221,888	241,596	264,964	301,501
Nonresidential Energy Efficiency	149	1,079	18,752	82,876	197,144	248,880	298,033	360,280	406,071	443,404	644,968	733,798	828,582	975,418	1,106,510	1,317,352
	389	2,999	253,642	655,208	1,146,386	1,605,002	2,057,098	2,480,946	2,884,094	3,306,309	3,838,520	4,416,687	4,925,586	5,545,786	6,206,671	7,078,813

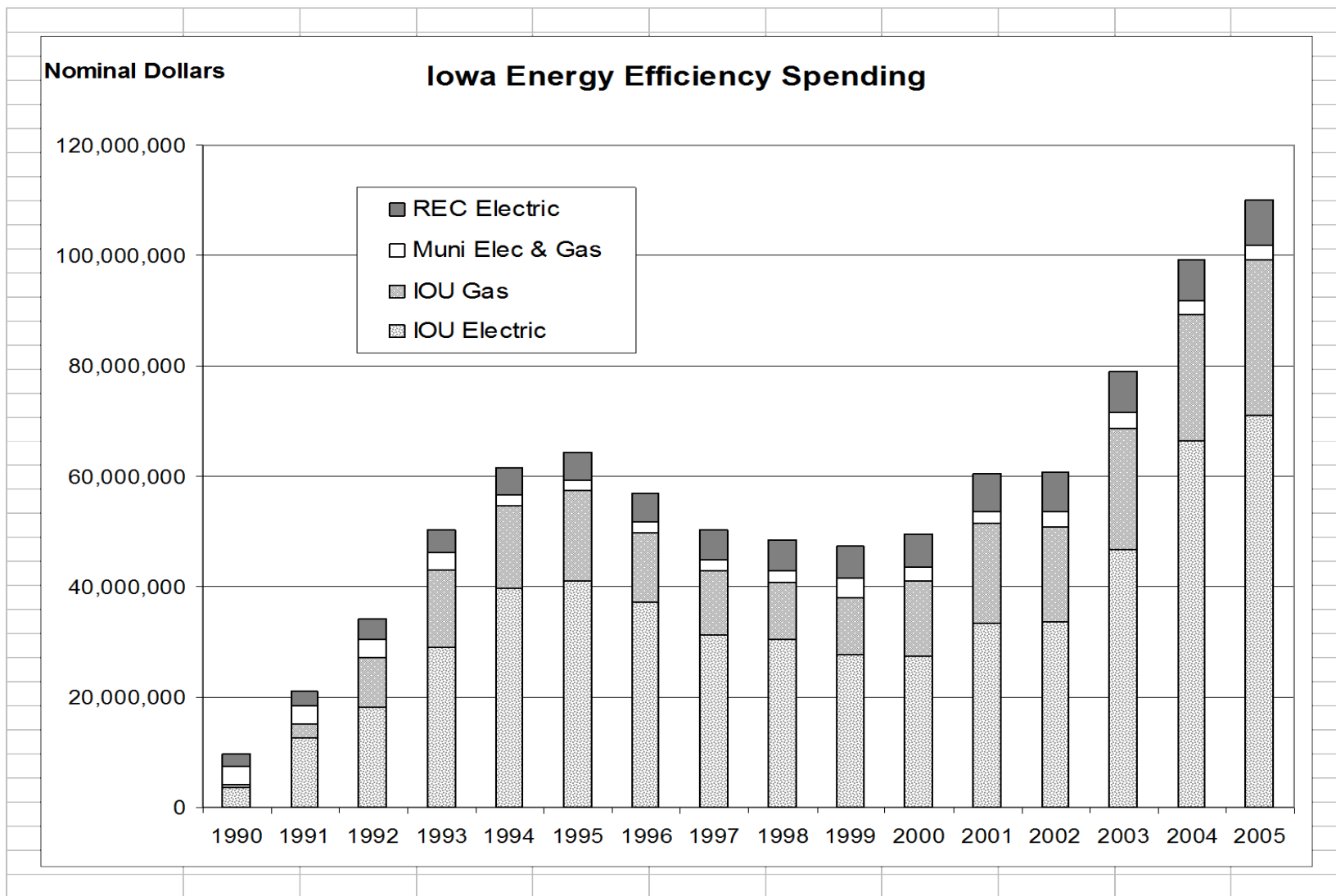


Investor-owned utilities have achieved increased levels of new (incremental) natural gas savings in recent years. Most of the savings have been achieved in the residential sector, but nonresidential gas energy efficiency is increasing as well. The jump in nonresidential savings for 2000 may have been due to completion of several large projects for institutional customers of one utility.

INCREMENTAL GAS SAVINGS	Units = Dekatherms (Dth) or MMBTU (1,000,000 British Thermal Units) or MCF (1,000 Cubic Feet)						
	1999	2000	2001	2002	2003	2004	2005
Residential Energy Efficiency	363,249	306,775	468,146	393,722	453,656	506,425	624,764
Low-income Energy Efficiency	21,633	23,872	21,190	20,392	19,708	23,367	36,537
Nonresidential Energy Efficiency	37,333	201,564	88,830	94,784	146,836	131,092	210,841
Total Incremental (NEW) Savings	422,215	532,211	578,167	508,899	620,201	660,884	872,142



Funding for energy efficiency increased steadily through the middle 1990s, then declined somewhat as the debate over utility restructuring created uncertainty about treatment of funding. In 2001, legislative action ended the controversy and the Iowa Utilities Board directed IOUs to expand energy efficiency programs. New IOU plans were approved in 2003, and IOU funding increased substantially.



The investment by Iowa utilities in energy efficiency has grown substantially over the past 16 years. Funding from the Investor-Owned Utilities (IOUs) has recently increased, due to several factors.

The Iowa Utilities Board has made energy efficiency a high priority, and the IOUs have responded with increased funding for both electric and natural gas energy efficiency. In addition, one IOU received approval to recover costs through its energy efficiency plan for its substantial program of load management for nonresidential customers.

The table below does not include the investments made by utility customers who participate in energy efficiency programs. IOU programs typically provide incentives to customers for only about 50 percent of the extra cost of the energy efficiency features of new, efficient equipment or buildings.

Approximately 80 percent of IOU funding goes to customer incentives.

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
IOU Electric	3,676,984	12,653,750	18,217,191	28,930,343	39,795,543	40,950,794	37,251,153	31,358,794	30,460,508	27,598,264
IOU Gas	470,433	2,466,603	9,061,927	14,105,425	14,894,152	16,424,637	12,557,817	11,342,654	10,236,051	10,428,062
Muni Elec & Gas	3,222,000	3,222,000	3,218,000	3,218,000	2,098,000	1,741,000	2,108,000	2,144,000	2,144,000	3,477,638
REC Electric	2,359,000	2,648,000	3,613,000	3,981,000	4,863,000	5,128,000	4,901,000	5,459,000	5,562,000	5,952,581
IOUs	4,147,417	15,120,353	27,279,118	43,035,767	54,689,695	57,375,432	49,808,970	42,701,448	40,696,560	38,026,326
	2000	2001	2002	2003	2004	2005				
IOU Electric	27,500,209	33,451,732	33,697,482	46,578,055	66,527,777	70,992,471				
IOU Gas	13,473,620	18,010,597	17,136,016	22,236,361	22,687,726	28,298,984				
Muni Elec & Gas	2,505,633	2,205,363	2,770,161	2,631,467	2,564,679	2,560,587				
REC Electric	5,898,848	6,875,994	7,162,989	7,401,530	7,422,615	8,106,643				
IOUs	40,973,829	51,462,328	50,833,498	68,814,416	89,215,502	99,291,455				

IOU electric energy efficiency programs have significantly increased as a percentage of total megawatt-hours, over the past six years.

Incremental or "NEW" electric energy efficiency investments provided between 0.5 and 0.7 percent of the total electricity used by customers of IOUs in 2005.

The cumulative total savings for IOUs increased to 4 percent or 5.3 percent of IOU electricity sales in 2005.

COMPARISONS OF IOU ENERGY EFFICIENCY MWH TO ANNUAL SALES OF MWH							
Investor-Owned Utilities (IOU) Annual Energy Sales - MWh - 2000 - 2005							
	1999	2000	2001	2002	2003	2004	2005
IOU Total MWh Sales	37,356,492	37,284,773	37,793,786	39,717,541	39,868,388	39,497,381	41,102,476
IOU "Retail" MWh Sales	27,828,828	28,375,200	27,905,627	28,503,583	28,629,551	28,854,160	30,634,451
IOU Incremental EE - % of MWh	1999	2000	2001	2002	2003	2004	2005
IOU Incremental Energy Efficiency MWh	61,667	104,775	112,776	117,095	162,281	198,059	224,763
IOU INCR. EE MWh % of Total MWh	0.17%	0.28%	0.30%	0.29%	0.41%	0.50%	0.55%
IOU INCR. EE MWh % of "Retail" MWh	0.22%	0.37%	0.40%	0.41%	0.57%	0.69%	0.73%
IOU Cumulative Annual EE - % of MWh	1999	2000	2001	2002	2003	2004	2005
IOU Cumulative Energy Efficiency MWh	722,322	827,097	939,873	1,056,968	1,219,250	1,417,309	1,642,072
IOU CUM. EE MWh % of Total MWh	1.93%	2.22%	2.49%	2.66%	3.06%	3.59%	4.00%
IOU CUM. EE MWh % of "Retail" MWh	2.60%	2.91%	3.37%	3.71%	4.26%	4.91%	5.36%

IOU natural gas energy efficiency programs have also increased as a percentage of both total gas “throughput”, and as a percentage of retail sales.

Incremental or “NEW” natural gas efficiency investments provided between 0.3 and 0.8 percent of the total natural gas used by customers of IOUs in 2005.

The cumulative total savings natural gas savings increased to between 3 percent and 6 percent of IOU throughput or retail sales in 2005.

COMPARISONS OF IOU ENERGY EFFICIENCY MCF TO ANNUAL SALES OF MCF							
Investor-Owned Utilities (IOU) Annual Natural Gas "Throughput" and Retail Sales - Mcf - 2000 - 2005							
	1999	2000	2001	2002	2003	2004	2005
IOU Total "Throughput" *	214,438,820	215,553,232	255,588,651	243,309,555	239,292,848	235,649,075	241,193,957
IOU "Retail" Mcf Sales	109,426,702	113,630,797	108,531,611	109,023,395	112,593,709	105,281,702	104,513,895
* Throughput for IOUs includes large amounts of gas transported over the IOU gas distribution system to customers buying gas directly from non-utility suppliers, such as well-head producers or gas marketers.							
IOU Incremental EE - % of Mcf	1999	2000	2001	2002	2003	2004	2005
IOU Incremental En Effic Mcf	422,215	532,211	578,167	508,899	620,201	660,884	872,142
IOU EE Mcf % of Total Mcf	0.20%	0.25%	0.23%	0.21%	0.26%	0.28%	0.36%
IOU EE Mcf % of "Retail" Mcf	0.39%	0.47%	0.53%	0.47%	0.55%	0.63%	0.83%
IOU Cumulative EE - % of Mcf	1999	2000	2001	2002	2003	2004	2005
IOU Cumulative En Effic Mcf	3,306,309	3,838,520	4,416,687	4,925,586	5,545,786	6,206,671	7,078,813
IOU CUM. EE Mcf % of Total Mcf	1.54%	1.78%	1.73%	2.02%	2.32%	2.63%	2.93%
IOU CUM. EE Mcf % of "Retail" Mcf	3.02%	3.38%	4.07%	4.52%	4.93%	5.90%	6.77%

Contacts and Sources.

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Sources - IES - 1990-1998:

IES Utilities "Energy Efficiency Program Capacity and Energy Savings Summary" Docket No. EEP--95-1, Energy Efficiency Status Report, filed 9/24/98. Updated by E-Mail Attachment from Steve Mohasci, IES, 9/27/99.

Source - Alliant/IPL 1999-2003: Annual reports for 2002 and 2003, filed in Docket No. EEP-02-38, submitted with revisions, March 25, 2005.

Sources - Alliant/IPL 2004-2005: Annual reports for 2004 and 2005, filed in Docket No. EEP-02-38, May 2, 2005, and May 1, 2006.

Sources – Continued.

Sources: Iowa Power, Iowa Public Service (IPS), Iowa-Illinois Gas and Electric, and successor MidAmerican Energy.

1990-1996, (Iowa Power, IPS, Iowa-Illinois) - From data provided by MidAmerican Energy Company (MEC), November 17, and December 2, 1997.

1997-1998, (MEC) - From MEC responses to IUB staff information requests, received on October 22, October 28, and November 3, 1999, from David Fischer.

1999-2000, (MEC) MEC Monitoring reports, filed in Docket No. EEP-95-3, January 31, 2000 and February 13, 2001.

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2003 (MEC) MEC Annual Report, filed in Docket No. EEP-03-1, May 1, 2004.

2004 MEC Annual Report, filed in Docket No. EEP-03-1, May 1, 2005.

2005 MEC Annual Report, filed in Docket No. EEP-03-1, May 1, 2005.

Sources: Peoples Natural Gas Company 1990-1998, Docket Nos. ECR-93-3, filing of 8/15/94 and ECR-96-2, filing of 11/15/9.

Sources : Aquila, Inc. 1999-2004 Aquila Annual Report including data for 1999-2004, filed May 1, 2005, in Docket No. EEP-03-4.

Aquila 2005 Annual Report, filed May 1, 2006, in Docket No. EEP-03-4.

Sources: United Cities Gas and Atmos Energy: Electronic filing of information by United Cities, 9/22/00.

Atmos Annual Report for 1999-2003, May 3, 2004, Docket No. EEP-03-3.

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