Missouri Public Service Commission

Electric & Natural Gas
Roundtable Discussion Groups

Record of Proceedings

Cold Weather Rule & Possible Hot Weather Rule

November 6, 2002
Capitol Plaza Hotel
Jefferson City, Missouri

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Chair
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MEMORANDUM

TO: Electric & Natural Gas Roundtable Discussion Groups

FROM: Warren Wood WW

SUBJECT: Record of Proceedings

DATE: November 27, 2002

Thank you for attending the Commission's Electric and Natural Gas Roundtable session on the **Cold Weather Rule & Possible Hot Weather Rule** held in Jefferson City, Missouri on November 6, 2002. As promised, please find attached a bound compilation of the materials presented.

Our desire is to make these meetings as informative, beneficial, and effective as possible. Any ideas or suggestions you may have to help us toward that end are always appreciated. Feel free to contact me at (573) 751-2978 or e-mail me at warrenwood@psc.state.mo.us with any comments. We look forward to your attendance and active participation at future roundtable meetings.

Attachment

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Cold Weather Rule & Possible Hot Weather Rule

Electric & Natural Gas Roundtable Discussion Groups

November 6, 2002 - 1:00 to 5:00

Lincoln Room, Capitol Plaza Hotel, Jefferson City, MO

1:00 Opening Remarks & Introductions
Warren Wood, Manager, PSC Energy Department

Cold Weather Rule

1:10 The Cold Weather Rule
Janet Hoerschgen, Manager, PSC Consumer Services Dept.

1:25 Last Winter & The Emergency Cold Weather Rule
Tim Schwarz, Deputy General Counsel, PSC General Counsel

1:40 Concerns With the Current Cold Weather Rule
Jackie Hutchinson, Director, Human Development Corporation
Terry Sanders, Housing Division Director, Ozark Action Inc.
Gentry Trotter, President & Founder, Heat-Up St. Louis, Inc.

2:25 Office of the Public Counsel's Perspective
John Coffman, Acting Director, The Office of the Public Counsel

2:40 Natural Gas Utility Perspective
Michael Pendergast, VP Assoc. General Counsel, Laclede Gas Company

2:55 Open Discussion/Question Period for All Participants

3:20 Break (10 Minutes)

Possible Hot Weather Rule

3:30 Thoughts on Possible Hot Weather Rule
Warren Wood, Manager, PSC Energy Department

3:45 Electric Utility Perspective
Nancy Moore, Vice-President, Customer Services, KCPL

4:00 The Need for a Hot Weather Rule
Ivan Eames, Special Project Coordinator, Central MO Counties HDC

4:15 Public Awareness
Susie Stonner, Public Information Officer, State Emergency Management Agency
Gentry Trotter, President & Founder, Cool-Down St. Louis, Inc.

4:45 Open Discussion/Question Period for All Participants

5:00 Closing Remarks & Adjourn

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COLD WEATHER RULE

November 6, 2002

HISTORY OF THE COLD WEATHER RULE

- The Commission first adopted a Cold Weather Rule in 1977. The initial rule prohibited the termination of gas and electric utility service during certain weather.

WHY DOES MISSOURI HAVE A COLD WEATHER RULE

- First Arab Embargo was in 1974, the second in 1978
- According to the NRRI:
  - During the late 1970s an early 1980s, the incomes of many electric and gas service residential customers did not keep up with their energy costs
  - State commissions developed utility disconnection policies meant to limit the number of utility disconnections, particularly during winter months

WHY DOES MISSOURI HAVE A COLD WEATHER RULE

- The Wisconsin PSC established the first moratorium on winter disconnections in 1973 – about half the states had them by 1985.
- Cold weather disconnection rules spread as a result of standards set out in the Public Utility Regulatory Policies Act of 1978 (PURPA).
- Commissions had to determine if a moratorium on disconnections served the purposes of PURPA
- Was not mandatory, but focused states on this issue

SUMMARY OF PURPA 1978 STANDARD ON DISCONNECTIONS

- Sec. 2625. Special rules for standards (electric)
- Sec. 3204. Special rules for standards (gas)
  - No service to a consumer may be terminated unless reasonable prior notice (including rights and remedies) is given to such consumer and such consumer has a reasonable opportunity to dispute the reasons for such a termination. and

SUMMARY OF PURPA 1978 STANDARD ON DISCONNECTIONS

- During any period when termination of service to a consumer would be especially dangerous to health, as determined by the state regulatory authority (with respect to a utility for which is has ratemaking authority) or nonregulated utility, and such consumer establishes that-
  - » He is unable to pay for such service in accordance with the requirement of the utility's billing, or
  - » He is able to pay for such service but only in installments, such service may not be terminated
  - » Such provisions had to take into account the need to include reasonable provisions for elderly and handicapped consumers

HISTORY OF THE COLD WEATHER RULE

- The Commission's first emergency amendment in 1977 removed the uncertainty regarding temperature readings by substituting a time period, clarified notice procedures and established a registration procedure.

- The Commission's amendment effective January 12, 1980, further clarified provisions and provided assurance that persons who had difficulty paying in full during the cold weather months would not be terminated if they entered into certain payment arrangements and took other steps. It also provided for special notice of terminations for persons who were disabled and the elderly who requested such notice.

- In January 1983, the Commission amended the rule by:
  - Extending the period covered by the rule:
  - Requiring more lenient payment arrangements for customers eligible for energy assistance: and
  - Clarifying some of the responsibilities of the utilities and their customers.
- In January 1984, the Commission promulgated an emergency rule providing for reconnection of heat-related utility service during the period November 15 through March 31. The emergency rule providing for reconnection provisions expired March 31, 1984.

- The Commission considered it imperative that a permanent rule be adopted concerning the reconnection of service and was of the opinion that the discontinuance rule and a permanent reconnection rule should be combined into one rule.

- Effective November 15, 1984, the Commission adopted a Cold Weather Rule containing provisions relating to both the discontinuance and reconnection of heat-related utility service during cold weather.

- Effective October 1, 1985, the Commission established certain reporting requirements for compiling information concerning the use of the Cold Weather Rule. The Commission believed that the record keeping concerning the effect of the Cold Weather Rule were needed.

- Effective October 10, 1993, the Commission amended the Cold Weather Rule which:
  - Allowed customers to maintain service under certain payment terms:
  - Restricted deposits;
  - Ensured customers were given adequate notification of a proposed discontinuance:
  - Encouraged customers who couldn't pay their utility bills to seek financial assistance through available sources:
  - Provided special provisions for the state's elderly and disabled; and
  - Prohibited the disconnection of heat-related service when temperatures were predicted to fall below 30 degrees.

- The Commission updated the reporting requirements for compiling information concerning the use of the Cold Weather Rule effective in January 1996. The reporting requirements were added as a new section of the Cold Weather Rule and the primary differences from the reporting requirements established in 1985 are:
  - Requiring the utility to report the information for each geographical region or district it serves in Missouri, and
  - Requiring the utility to report the information separately for those customers on whose behalf the utility received notice of qualification for assistance from the Low Income Home Energy Assistance Program and/or the Energy Crisis Intervention Program.

- The additional reporting requirement effective in January 1996 relates to the weather provisions contained in the Cold Weather Rule.

November 2001 Emergency Amendment

- Was in effect from November 18, 2001 through March 31, 2002.
- Applied to any natural gas company regulated by the PSC
  - Excluded MGE and Atmos
    - » Both companies challenged the PSC's emergency amendment in circuit court. MGE, effective in late February, notified the Commission that it was offering the provisions of this emergency amendment.

November 2001 Emergency Amendment

- **Reconnection**: An initial payment of 25% of the pre-existing arrears or $250, whichever was less, was required if the gas service had been disconnected for failure to keep a previous cold weather rule payment agreement.
- **Balance on Account**: The balance was to be paid in equal installments over the following 18 months – could be shortened or extended by mutual agreement (reconnection fees could also be deferred.

November 2001 Emergency Amendment

- **Deposits**: No deposit could be required unless the amount owed was due to unauthorized use.
- **Existing Security Deposits**: Gas company was required to apply the customer's existing deposit, plus any accrued interest, toward the delinquent amount to eliminate or reduce the amount required to prevent disconnection.

November 2001 Emergency Amendment

- **Late Payment Charges**: Late payment charges could not be assessed on deferred amounts of any agreement nor could interest be charged on the account balance for the deferral period.

Reporting Requirements May Change

- The Commission may soon be publishing proposed amendments to the Cold Weather Rule Reporting requirements; and
- The proposed amendment would likely include a provision that the reports are to be considered public information.

LIHEAP AND ECIP

- **LIHEAP** – Low Income Home Energy Assistance Program
- **ECIP** – Energy Crisis Intervention Program

LIHEAP AND ECIP

- How do these relate to the Commission's Cold Weather Rule?
  - A pledge of an amount equal to any payment required by the Cold Weather Rule by the agency which administers these programs, or a combination of these, is deemed to be the payment required.

LEVERAGING

- Since FY 1991, LIHEAP grantees have had the opportunity to participate in the LIHEAP Leveraging Incentive Program.
- Under the program, the grantees, such as the State of Missouri, are rewarded for acquiring non-federal home energy resources for low-income households.

LEVERAGING AND AWARD TOTALS

FY	Leveraging	Awards	# Participants
1991	$403,973,635	$24,431,796	42
1992	$493,188,488	$23,663,576	44
1993	$566,771,983	$24,094,720	45
1994	$623,055,518	$28,541,986	44
1995	$638,904,966	$15,961,246	43
1996	$574,618,350	$17,636,917	39
1997	$587,497,146	$17,671,364	39
1998	$534,619,538	$19,606,486	33
1999	$619,689,057	$18,930,270	37
2000	$683,979,362	$19,166,115	37
2001	$1,140,092,380	$19,003,357	39

source:
http: www.ncat.org lih

FY 2001 STATE LEVERAGING SUMMARY AND Compiled by the LIHEAP Clearinghouse April 2002

ALABAMA: Resources: $4,954,010. Award: $150,304.
$2,349,681 -- utility discounts
$2,604,329 -- fuel funds

ALASKA: Resources: $6,501,634. Award: $295,816.
$1,514,870 -- state funds to supplement weatherization program
$4,271,495 -- state funds for State Power Cost Equalization Program that subsidizes electric bills of low-income people in remote areas, 5,191 households
$715,269 -- state funds for Rural Residential Energy Rehabilitation Program

ARIZONA: Resources: $10,627,312. Award: $560,983.
$7,968,020 -- utility discounts
$1,181,465-- state/local funds
$362,322 -- fuel funds
$852,377 -- utility-funded weatherization
$263,128 -- community donations

ARKANSAS: Resources: $349,197. Award: $12,371.
$349,197 -- fuel funds

CALIFORNIA: Resources: $223,127,011. Award: $2,475,000.
$15,856,278 – state funds for weatherization and energy bill assistance
$174,279,022 -- mandated utility rate discount, 10-30%
$15,192,654 -- utility-funded weatherization, including utility appliance programs (energy efficient refrigerators, water heaters, ranges, furnaces), utility weatherization inspections, donated repair of gas appliances and evaporative coolers
$5,306,357 -- state wx rehab program, PVE funds
$4,621,256 -- discounted weatherization materials, equipment, service discount for furnaces
$7,359,080 -- church and community
$78,880 -- firewood discount
$433,484 -- miscellaneous donations

COLORADO: Resources: $21,473,836. Award: $473,901.
$15,218,633 -- state funds (property tax heat rebate and special legislation)
$4,795,858 -- fuel funds, including $4,552,233 from the Colorado Energy Assistance Foundation ($1.5m from Fort St. Vrain nuclear decommission), which raises money from a variety of private sources to supplement LIHEAP
$1,077,195 -- utility-funded weatherization
$382,150 -- utility discount, affordable payment pilot program

CONNECTICUT: Resources: $22,983,326. Award: $457,855.

$1,750,000 -- state funds for energy assistance for elderly/disabled (SAFA)

$12,753,721 -- gas utility arrearage forgiveness

$633,666 -- electric utility arrearage forgiveness

$5,012,108 -- gas and electric utility-funded weatherization (WRAP)

$2,030,993 -- oil purchased under 'Fixed Margin Pricing Program'

$802,838 -- statewide fuel fund

DELAWARE: Resources: $888,304. Award: $57,940.

$555,841 – monthly deposits from Conectiv to state utility fund as designated under the Public Purpose Law of Electric Utility Restructuring Act

$260,263 -- fuel funds

$72,200 – Catholic charities, Inc. – Crisis Alleviation Program

DISTRICT OF COLUMBIA: Resources: $1,461,000. Award: $84,568.

$837,000 -- electric utility discount

$624,000 -- gas utility discount

FLORIDA: Resources: $4,602,435. Award: $113,710.
$1,468,625 -- state funds for weatherization (Low Income Emergency Home Repair Program)
$1,876,914 – cash assistance from local social service agencies
$1,256,896 -- fuel funds

ILLINOIS: Resources: $74,371,237. Award: $1,154,478.
$69,169,432 -- SLIEAP funds through restructuring law
$5,201,805 – arrearage reduction programs from 2 utilities

INDIANA: Resources: $6,676,010. Award: $123,999.
$1,883,328 – township trustee assistance
$2,336,000 -- church and community
$2,252,169 -- fuel funds
$148,878 -- summer bulk fuel discounts
$12,799 -- donations to weatherization from utilities, business, and landlords
$42,836 -- supplier discounts on fans and Acs

IOWA: Resources: $11,368,373. Award: $236,179.

$6,397,330 -- supplemental funding for LIHEAP, sales tax suspension on natural gas

$1,324,800 – State of Iowa utility sales tax suspension – March/April

$2,247,970 -- utility weatherization

$788,329 -- fuel funds

$390,000 -- Oil Overcharge Funds

$87,500 – City of Des Moines franchise fee program

$116,686 -- church and community contributions

$11,330 -- landlord contributions to weatherization

$4,428 – fan donations

KENTUCKY: Resources: $2,698,659. Award: $64,931.

$788,417 – cash benefits for utility bill and arrearages

$981,418 – utility fuel funds

$367,063 – utility fixed percent of income payment and arrearage forgiveness

$364,981 – church and community contributions

$193,980 – Jefferson county DHS funds

$2,800 – utility waiver of reconnect fees

LOUISIANA: Resources: $7,260,921. Award: $217,075.

$6,302,050 – utility fuel funds (includes church and community)

$640,800 – utility rate discount for seniors

$243,454 – utility weatherization audits

$74,617 – utility late fee waivers

MAINE: Resources: $9,552,044. Award: $231,450.

$5,023,450 -- utility discounts, waivers, arrearage forgiveness

$766,771 – utility weatherization (Bundle-Up Tank Wraps)

$1,501,838 -- bulk fuel vendor discounts

$1,451,102 -- donated materials and labor for wx, supplier discounts

$552,337 -- General Assistance State Funds, additional last resort fuel payment

$218,771 – misc. donations (blankets, jackets, sleepers, sweaters etc.)

$37,775 -- church/community donations for emergencies, includes furnace repairs, fuel deliveries

MARYLAND: Resources: $40,091,026. Award: $887,834.
$22,240,693 -- state funds, Electric Universal Service Program
$4,568,082 -- utility fee waivers (includes discounts and arrearage forgiveness)
$1,094,549 – utility weatherization
$6,281,454 -- state funds for adult disabled ($5,196,480); state funds for emergency assistance ($1,084,974)
$2,927,507 -- misc. donations from charities and service organizations; church/community/state funds for shelters who serve MEAP eligible ($215,514);
$2,333,080 -- utility fuel funds
$317,504 -- local energy tax rebate
$328,157-- 3 percent-per-gallon discount from oil, propane, and kerosene vendors

MASSACHUSETTS: Resources: $50,129,813. Award: $826,884.
$32,889,645 -- utility rate discounts
$11,408,624 -- weatherization leveraging (including utilities, landlords and suppliers)
$4,795,703 -- bulk fuel discounts - statewide Margin-Over-Rack ($4,662,309) and oil bid program ($133,394)
$1,035,841 -- fuel funds

MICHIGAN: Resources: $6,163,111. Award: $96,439.
$3,965,175 -- fuel funds of 8 utilities
$1,883,255 -- utility late fee and deposit waivers
$227,133 -- utility arrearage forgiveness
$68,812 -- state funds for heat and electrical allowances for state assistance recipients
$18,736 -- utility weatherization

MINNESOTA: Resources: $42,780,327. Award: $714,4440.
$3,777,235 -- state and local funds for energy assistance
$28,825,547 -- state funds for weatherization and energy related repairs
$4,205,484 -- utility discounts and fee waivers
$3,148,667 -- utility-funded weatherization
$44,472 -- bulk fuel discounts
$1,040,694 -- fuel funds
$537,028 -- church and community contributions
$1,201,200 -- miscellaneous donations

MISSISSIPPI: Resources: $1,019,788. Award: $33,718.
$486,500 -- church and community contributions
$204,688 -- fuel funds
$198,973 -- miscellaneous donations
$129,627 -- supplier discounts

MONTANA: Resources: $3,544,745. Award: $130,477.
$1,585,117 -- utility discounts
$1,231,000 -- utility-funded weatherization
$580,228 -- fuel fund
$65,000 -- landlord weatherization contributions
$21,000 -- weatherization materials suppliers discount
$54,000 -- deliverable fuel discounts
$8,400 -- utility monthly service charge waiver for seniors and disabled LIHEAP eligible

NEVADA: Resources: $1,850,264. Award: $168,143.
$1,713,816 -- fuel funds
$115,400 -- utility-funded weatherization
$17,900 -- utility fee or deposit waivers
$3,148 -- local funds

NEW HAMPSHIRE: Resources: $4,636,601. Award: $145,343.
$2,224,728 -- assistance from towns to supplement LIHEAP (state law mandates that town governments fund assistance programs)
$1,136,940 -- utility discount
$701,103 -- bulk fuel discounts, primarily oil
$317,346 -- statewide fuel fund
$73,420 -- utility-funded weatherization
$183,064 -- church and community contributions

NEW JERSEY: Resources: $89,681,990. Award: $1,499,922.
$71,573,850 -- Lifeline, a state-funded program (general fund) that supplements elderly/handicapped energy bills
$9,534,849 -- utility funded weatherization
$8,292,860 -- utility deposit/fee waivers
$280,431 -- fuel funds

NEW YORK: Resources: $66,563,749. Award: $943,845.
$35,155,315 -- state and local funds for Safety Net ($33,085,705), state and local funds for arrearage payments to public assistance households ($2,069,610)
$12,407,853 – utility rate assistance
$8,090,886 -- landlord contributions to weatherization
$2,239,276 -- utility/fuel bill sales tax exemption for public assistance households
$3,670,245 -- utility company fuel funds
$3,192,048 -- utility security deposit waivers
$630,409 -- utility arrearage forgiveness
$1,177,717 -- Public Assistance Co-op for Energy (PACE), customers of National Fuel in 2 counties are pooled for discounted gas and transportation costs

NORTH CAROLINA: Resources: $2,540,147. Award: $53,623.
$568,668 -- city/county funds
$1,115,287 -- fuel funds
$853,136 -- church and community contributions
$3,056 – fuel oil donations

OHIO: Resources: $171,785,568. Award $2,475,000.
$156,268,197 -- utility rate discounts (PIPP)
$8,150,121 -- utility-funded weatherization
$6,954,500 -- state funded Energy Credit for elderly and disabled
$412,750 -- supplier discount (air conditioners, Project Air Care)

OKLAHOMA: Resources: $1,886,642. Award: $62,411.
$1,886,642 -- utility rate discount

OREGON: Resources: $10,001,181. Award: $257,603.
$1,968,189 -- utility-funded weatherization
$7,089,532 -- fuel funds
$299,901 -- discounts on weatherization supplies
$501,852 -- donations of heating fuels, blankets, coats, weatherization products and services
$141,707 -- utility discounts, waivers and fuel oil discounts

PENNSYLVANIA: Resources: $168,060,426. Award: $2,475,000.
$119,924,238 -- utility arrearage forgiveness, discounts, affordable pay plans
$20,061,256 -- utility late payment, disconnect, reconnect fee waivers
$21,574,208 -- utility-funded weatherization
$6,500,724 -- utility and charitable organization fuel funds

RHODE ISLAND: Resources: $5,135,676. Award: $173,394.
$4,791,558 -- utility discounts, 2 utilities match 30% - 35 % of LIHEAP grant
$344,118 -- arrearage forgiveness for participants in statewide Percentage of Income Payment Plan

SOUTH DAKOTA: Resources: $1,020,272. Award: $41,277.
$619,378 -- county funds and legislative transfer funds from gross receipts tax
$39,601 -- landlord contributions to weatherization
$220,245 -- propane prepay contract, summer fill, discount for LIHEAP customers
$54,291 -- church, community
$86,757 -- fuel funds

TEXAS: Resources: $5,649,077. Award: $110,777.
$5,649,077-- utility weatherization piggyback programs

UTAH: Resources: $992,043. Award: $32,467.
$992,043 – utility discount, Home Electric Lifeline Program

VERMONT: Resources: $4,702,550. Award: $177,137.
$3,883,522 -- state funds from weatherization trust fund through gross receipts tax on energy
$239,897 -- fuel funds
$282,426 -- state general assistance funds
$284,000 -- bulk fuel discount
$12,705 – donated labor to cut and split firewood

VIRGINIA: Resources: $2,986,651. Award: $62,026.
$1,537,364 -- fuel funds
$1,008,814 -- states funds for weatherization
$420,677 -- state sales tax waiver on deliverable fuels
$19,796 -- waived security deposits

WASHINGTON: Resources: $17,676,062. Award: $373,019.
$7,507,803 -- utility discounts
$3,765,862 -- state funds for weatherization (Energy Matchmaker)
$1,597,209 -- fuel funds
$4,147,806 -- utility-funded weatherization, Energy Matchmaker ($1,913,967)
$629,289 -- community/charitable contributions
$28,093 -- landlord contributions to weatherization

WISCONSIN: Resources: $32,299,362. Award: $552,018.
$20,912,971-- Wisconsin Public Benefits Heat Assistance Program ($12,900,000) and Wisconsin Public Benefits Weatherization Program ($7,988,388); Foundation for Rural Housing
$5,687,540-- utility-funded weatherization
$5,455,103 -- utility arrearage forgiveness and waiver of late fees associated with arrearages
$198,970 -- fuel funds
$44,778 -- landlord contributions to weatherization

OPPORTUNITY AND NEED FOR MISSOURI TO LEVERAGE

- Missouri Energy Policy Task Force Report dated October 16, 2001, to Governor Bob Holden recommends the Division of Family Services resume its participation in the LIHEAP leveraging incentive program.
- WHY: Provide additional funds to needy families in Missouri

LEVERAGING OPPORTUNITIES FOR MISSOURI

- Utility Sponsored Energy Aid Programs
  - AmerenUE – Dollar More
  - Aquila – Aquila Cares
  - Empire District Electric – Project Help and E.A.S.E. (Empire's Action to Support the Elderly)
  - Kansas City Power & Light – Dollar-Aide
  - Laclede Gas – Dollar Help
  - Missouri Gas Energy – Neighbors Helping Neighbors

ADDITIONAL OPPORTUNITIES FOR LEVERAGING

- Other Assistance
  - Catholic Charities
  - Salvation Army
  - Energy Care
  - New Life Evangelistic Center
  - Lutheran Family & Children Services
  - Loving Hearts Outreach
  - St. Vincent DePaul Society

ADDITIONAL OPPORTUNITIES FOR LEVERAGING

- Other Assistance
  - United Way
  - Urban League
  - Samaritan Center
  - Jackson County Energy Assistance Program
  - Warmth & Light

ADDITIONAL OPPORTUNITIES FOR LEVERAGING

- Utility funded weatherization
- Utility security deposit waivers
- Utility late fee waivers
- Utility experimental low-income assistance programs

EFFECTIVENESS OF COLD WEATHER RULE

- Analysis of Cold Weather Rule reports submitted by three of our largest electric and natural gas companies for the period of October 2001 through September 2002.
- These 3 electric and natural gas utilities serve approximately 2.1 million residential customers (Calendar year 2001)
- During this period, 95,301 residential customers served by these utilities entered into Cold Weather Rule payment agreements

EFFECTIVENESS OF COLD WEATHER RULE

- 59,257 or 62% maintained service during this period under the Cold Weather Rule pay agreements.
- During the period October 2001 through September 2002, 129,048 residential customers had their electric and/or gas service discontinued for nonpayment representing $34,374,745 owed these 3 utilities.
- The average customer owed approximately $266 at the time of discontinuance.

EFFECTIVENESS OF COLD WEATHER RULE

- Those disconnected represent approximately 6% of the total number of residential customers served by these 3 utilities.

EFFECTIVENESS OF COLD WEATHER RULE

- Majority of the disconnections or 97,167 occurred during the months of October 2001 and April 2002 through September 2002.
- 31, 881 of the disconnections occurred during the period of the Cold Weather Rule (November 1, 2001 through March 2002)
- Of the 31, 881 disconnected during the period of the Cold Weather Rule, approximately 40% or 12, 602 were as a result of defaults in CWR payment agreements.

EFFECTIVENESS OF COLD WEATHER RULE

- Of those disconnected during the CWR period for defaults in CWR payment agreements, 2,879 or 23% were energy assistance recipients.
- Disconnections due to CWR payment agreement defaults outside the CWR period totaled 23, 442 or 24% of the total disconnections.
- Customers who were disconnected due to defaulted CWR agreements owed $14,488,512 for an average owed of $402.

EFFECTIVENESS OF COLD WEATHER RULE

- In comparison, an average of $214 was owed by a customer not under a CWR payment agreement at the time of disconnection

October 2001 Through September 2002	Customers Whose Service Was Discontinued for Failure to Keep CWR Pay Agreement		Customers Whose Service Was Discontinued and were not Participants in a CWR Pay Agreement	
	Energy Assistance	Others	Energy Assistance	Others
# of Customers	9,308	26,736	6,749	86,255
Amount Owed	$5,657,192	$8,831,320	$1,813,474	$18,072,759
Average Owed	$608	$330	$269	$209

SUMMARY

- Cold Weather Rule is not viewed as "The Total Solution"
- The availability and level of energy assistance, weatherization and conservation education as well as other factors will impact the success of maintaining essential utility services
- Leveraging will make additional funding available for low-income households

2.b

The Human Development Corporation of Metropolitan St. Louis

Poverty, Energy Burden, and the Need for Cold Weather Rule Protections

Presented to
Public Service Commission
CWR Roundtable
by
Jacqueline Hutchinson

November 6, 2002

Overview

- Poverty in Missouri
- Energy Burden Implications
- Current Funding Scenario
- Current Challenges
- Conclusions

Poverty in Missouri

Missourians below poverty level:

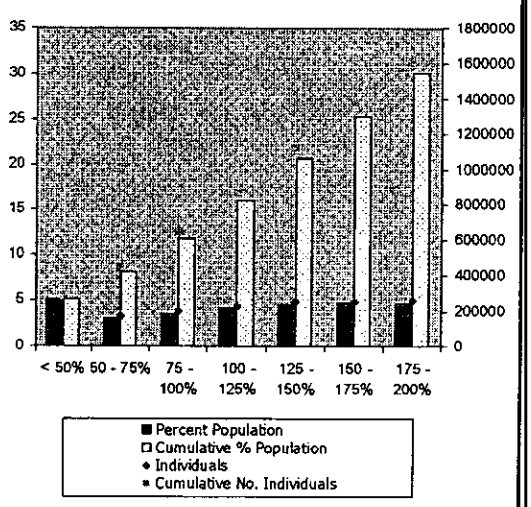
- 637, 891 (11.7%) Individuals
- 258,419 (12.5%) Households

Persons between 125 & 200% of poverty level:

- 764,141 (14%) Individuals

Persons with incomes between 125 & 200% of poverty level are ineligible for energy assistance programs:

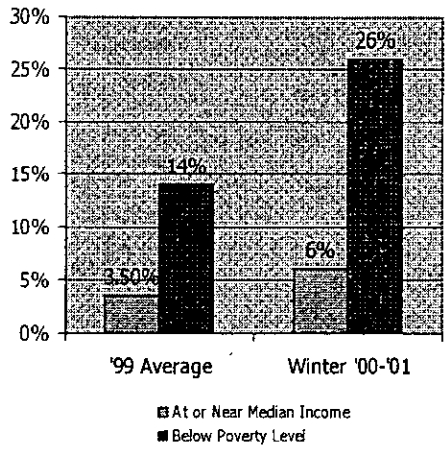
- The "un-served poor"



Energy Burden in Missouri

Energy Burden: Household energy expenditure as a percent of total income.

- Consumer Energy Burden can nearly double during extreme winters.
- Increased Energy Burden during extreme years can become unmanageable for households below the poverty level.
- Arrears accrued during extreme winters are often carried for several years, increasing "real" energy burden and making maintenance of payment arrangements impossible.



Impact of High Energy Burden

A number of studies have causally linked high energy burden with the following conditions

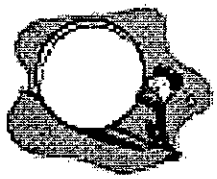
- Homelessness and forced mobility
- Food insecurity: "Heat or Eat"
- Increased health risk from pneumonia, heart disease and malnutrition
- Increased foster care placement
- Low educational attainment

Inadequate LIHEAP Funding

FY-02 LIHEAP Profile

Total Applications Taken: 117,159
Total Eligible Households: 101,818 } Under 50% of Total Households Below Poverty
Total Ineligible Households: 15,341

Elderly/disabled Households: 48,722
Average Household Size: 2
Average Annual Income: $8,123
Average Monthly Income $677



TOTAL SUPPLIER PAYMENTS: $18,452,940
Average $185

Other Utility Fuel fund, Utility sponsored and private donation assistance programs—including community action agency programs—provide approximately $14,000,000 statewide, but cannot fill the gap between available federal funds and the need.

What are the Problems with the Current Cold Weather Rule?

- No provision for protection after previous default
- No protection in colder than normal October
- No coordination with heat grant programs prior to November 1
- No requirement that utilities provide cold weather rule information prior to November 1, or individually notify customers who have been cut prior to November 1.
- Payment arrangements often exceed customer's ability to pay

Conclusions

- Current Federal, State and private energy assistance programs will not resolve the energy problems of low-income Missourians.
- Adequate PSC cold weather rule protection is a necessary part of the safety net to protect the health and safety of low-income Missourians.

Resources

- Missouri Census Data Center 2000 Demographic Profile
- The Division of Family Services LIHEAP program – LIHEAP profile 2001/2002
- Low Income Consumer Utility Issues: A National Perspective, Jerrold Oppenheim, Esq & Theo MacGregor, MacGregor Energy Consultancy Oct 2000
- Energy and the Poor – The Forgotten Crisis, National Consumer Law Center 1989

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COLD WEATHER RULE

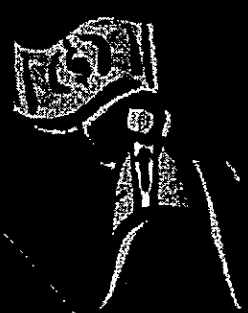
Terry Sanders
Ozark Action, Inc.

Missouri Association for Community Action

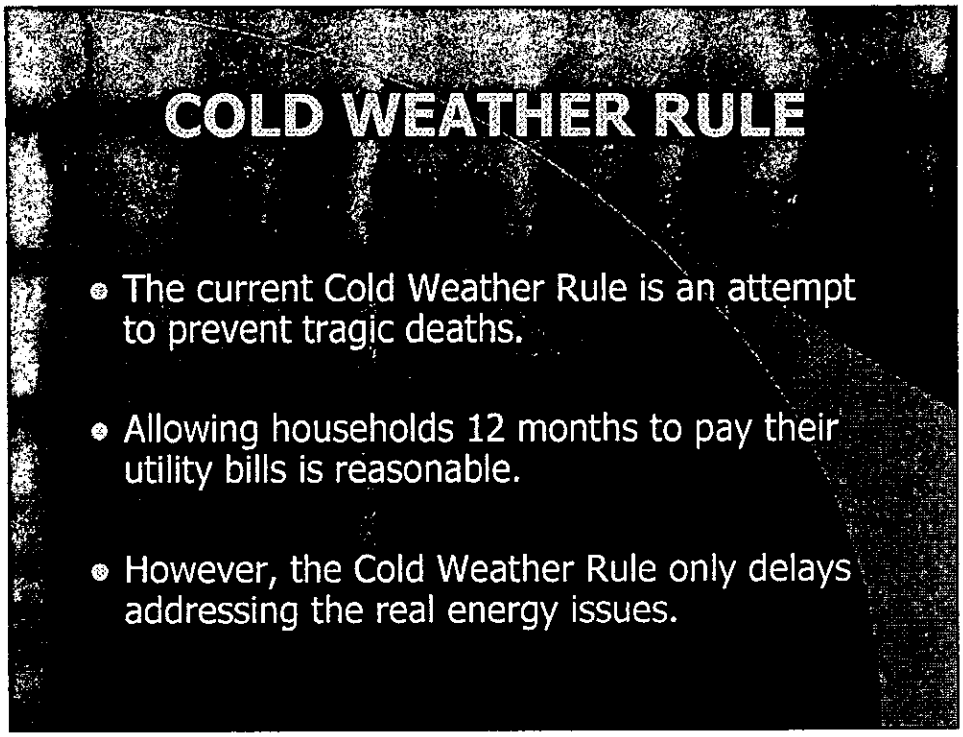
Energy Issues

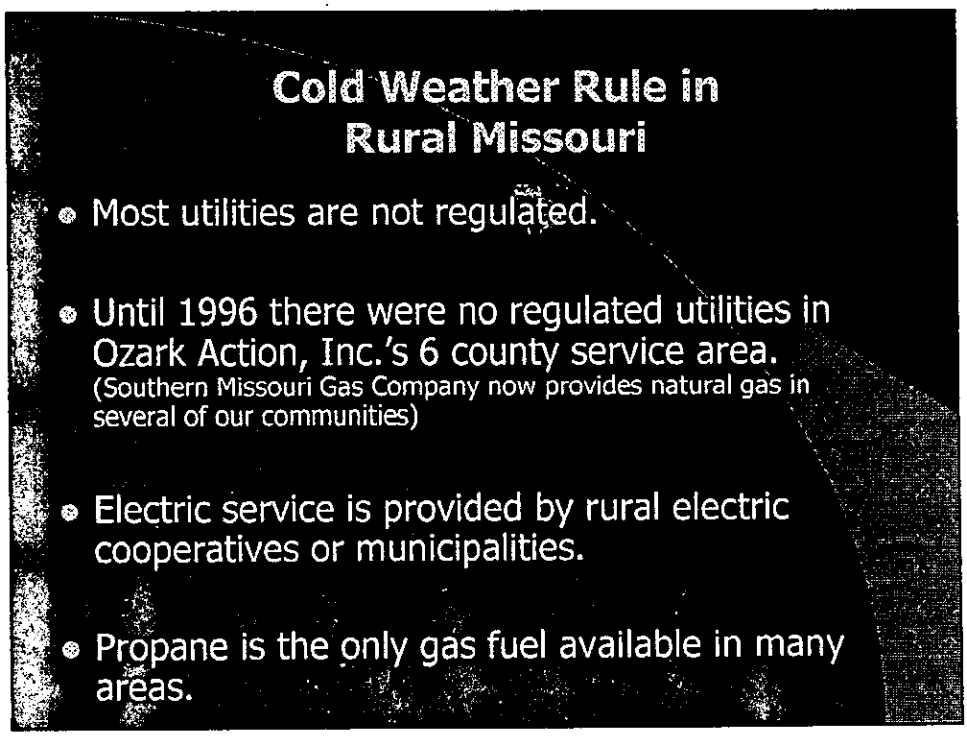
- The majority of low-income families live in houses that are NOT energy efficient.
- Low-Income Families often spend 14% (or more) of their income on energy – compared to other households, which spend about 3.5% (U.S. Department of Energy)

- Their heating systems are often inefficient, inadequate, or unsafe.
- Low-income families often resort to unsafe heating methods, such as kitchen ranges and un-vented heaters.
- Excessive energy costs for this population causes them to choose between basic needs such as: food, rent, healthcare or paying their utility bills.



- Most of these families have little or no savings or assets making it difficult to budget their money.
- "Cash Advance" loan companies with exorbitant interest rates contribute to the financial problems of low-income individuals and families.


COLD WEATHER RULE
• The current Cold Weather Rule is an attempt to prevent tragic deaths.
• Allowing households 12 months to pay their utility bills is reasonable.
• However, the Cold Weather Rule only delays addressing the real energy issues.


Cold Weather Rule in Rural Missouri
• Most utilities are not regulated.
• Until 1996 there were no regulated utilities in Ozark Action, Inc.'s 6 county service area.
(Southern Missouri Gas Company now provides natural gas in several of our communities)
• Electric service is provided by rural electric cooperatives or municipalities.
• Propane is the only gas fuel available in many areas.

Cold Weather Rule in Rural Missouri

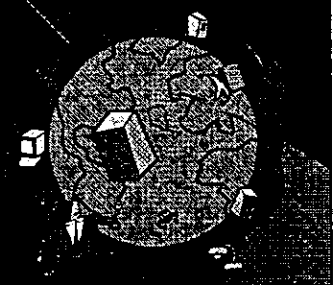
- Many families are not aware of the Cold Weather Rule.
- In most cases, even if natural gas service remains available, if electric service is disconnected the heating system will not function.

Real Solutions to Energy Issues

- Require participation in budget and energy efficient courses.
- Provide more funds for energy efficiency Weatherization measures.
- Long term reductions in energy consumption are much more effective than band-aid approaches to high energy bills.

Global Recommendations

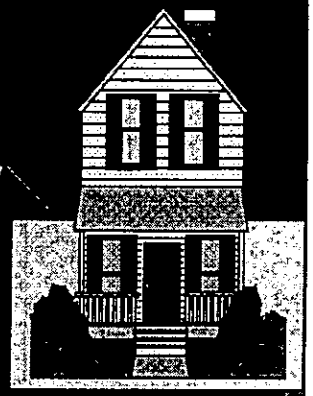
- The Public Service Commission and utility companies cannot solve this problem alone, nor should we expect them to.
- Permanent solutions to the problem will require collaboration of multiple partners.



PERMANENT SOLUTIONS

- Homeowners and landlords must improve the energy efficiency of their housing.
- Homeowners and landlords must clean, service and properly maintain their heating and cooling systems.

PERMANENT SOLUTIONS



- Existing housing must be made more energy efficient.
  - ***Attics, walls and floors should be insulated.***
  - Air infiltration should be reduced and controlled.
  - ***HVAC systems should be serviced, repaired or replaced where needed.***
  - HVAC distribution systems should be tested, sealed, and/or redesigned and replaced.

PERMANENT SOLUTIONS

- Builders and developers must design and construct energy efficient homes, with all components working as a system.
- A statewide Building and Energy Codes should be implemented and enforced.
- All current and future research into energy efficiency should be implemented in a realistic manner.

PERMANENT SOLUTIONS

- Customer training and education should be ongoing and available to all families. The associated expenses should be considered an investment into our state's future, not as a expense.

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DRAFT

Opening Statement - Gentry W. Trotter
President and Founder of Heat-Up St. Louis, Inc.
Roundtable on Cold Weather Rule
Sponsored by the Missouri Public Service Commission
Wednesday, November 6, 2002 - 1:40 P.M. Approximately
Lincoln Room, Capitol Plaza Hotel - Jefferson City

First, let me say that we are pleased to have an opportunity today to speak before this distinguished group, as well as to share our thoughts on several essential rules and regulations that have been mandated by the Missouri Public Service Commission.

Heat-Up St. Louis would like to thank PSC Chairman Kelvin Simmons for extending us an invitation. Our presence will hopefully add another voice to the very critical discussion, and debate, if necessary, of ensuring that ratepayers, in particular the seniors, disabled, needy families with small children, the unemployed and many other residents living from pay check to pay check, can be treated equitable in a very un-equal environment, which often favors the utility industry.

The Cold Weather Rule is 25 years old. Some on one side of the debate might believe that if ain't broke don't fix it, and others might be compelled to search for new methods of ensuring that we reduce the chances of the elderly and disabled potentially from freezing to death; that we reduce the chances in Missouri of having firefighters to risk their lives in an effort to keep families safe each winter; that we reduce the possibilities in Missouri of young children's inabilities to concentrate on their education in school and at home because they have no heat.

that we reduce the chances of the elderly and disabled from further worsening a health condition due to the fact that they do not have a heating source. That we reduce the chances of many of our neighbors' high anxieties when they receive a shut-off notice and when they are shut off during a "spring-like" thaw occurring during the winter months.

For the record, the Cold Weather Rule is outdated, and it does not speak to the issues of an economically deprived community, or even someone in a middle-class family who has temporarily fallen on hard times. I hope today that we can talk and fix the challenges, and make the Cold Weather Rule and the Emergency amendment work for all ratepayers, particularly the less fortunate.

Right now, some of the rules and regulations surrounding the Cold Weather Rule do a great job of filling the coffers of our gas and electric utilities. We need to be thinking out of the box; we need to form a partnership with profitability and affordability, not just for the sake of the poor, but all of the ratepayers, many whose income rolls up and down like a roller coaster, due in part to high electric and gas bills.

Here are several specific proposed changes: The Cold Weather Rule is talked about in the media with a 20 second sound bit, and some utilities will do a few token broad brush advertisements. However, as a proponent of good consumer education, the Missouri Public Service Commission should mandate that all utility companies publish, in detailed form, an insert or stuffer in every October bill describing the ratepayer's rights and how the program actually works.

It is essential that the public clearly understands all of the particulars with the Cold Weather Rule. They assume that from November 1 through March 30 that they can not be cut off.

At face value, the Cold Weather Rule works with ratepayers who do not have any issues. However, the bulk of these high utility bills are related to issues, i.e., un-authorized use, and the elderly, disabled and needy families with children under five, who all have negative variances within their fixed incomes.

This brings us to the second issue: There is a definite requirement in all future proposed changes to let the Missouri Public Service Commission mandate the actual amount that is required to reconnect a needy ratepayer. The Commission is inconsistent. It has mandated under the previously expired emergency amendment for example, that the customer must a pay specific amount. It was $250.00 or 25% which ever was the lesser on their utility bill, with the arrears rolling over 18 months.

The current Cold Weather Rule leaves it up to each utility company in the state of Missouri to establish its own policy on the amount of payment. This is unfair. Currently the rule states, that the utility will only give the ratepayers 12 months.

Those on fixed-incomes: seniors, the disabled, families with children under five years of age, require additional time. Under the current Cold Weather Rule, the utility takes the arrears, along with their current winter heating bills, making the amount too large to pay in a short period of time. This is a set-up for failure, and the system becomes conducive to being in a pit, -- digging deeper and

steeper into a financial hell.

We also need to figure out a more sensitive way to discontinue to further penalize those who are suspicious of being involved in the use of unauthorized gas and electric. The key word is suspicious. The real culprits also are the ones who may often endanger other neighbors.

We need to spread these high payments over a longer period of time which aids in a better chance for the utility bills to be paid within the agreement, if the payment is expanded between 18 and 24 months. At some point, the utilities must respect the integrity of their customer base, and the third concern to be addressed is the true and honest definition of a Cold Weather Rule. It is imperative that the Missouri Public Service Commission remove the temperature ceiling.

It is currently too easy to execute utility shut-offs, especially as the temperature rises. If you read the actual rules and regulations they appear to have been concocted by a bunch of lawyers to protect the bottomline of the utility companies, instead of working in a cooperative utility-friendly environment with ratepayers.

Cold Weather is cold weather -- it's winter weather, and a consistent temperature slightly above 32 degrees for many seniors, disabled and families with small children is still cold and often may require the same level of home heat to maintain a comfortable and healthy home. The current definition of Cold Weather Rule is misleading.

The needy who do not often have access to the fine print, assume that they are safe during the entire winter period, and that is far from the truth.

Ladies and gentlemen the needy still run a risk of getting their services disconnected. So, they are forced back onto the same circle of disgust and disappointment.

Heat-Up St. Louis certainly believe that our efforts in providing financial assistance to area social service and community action agencies, who qualify the needy for heat grants, is making a difference. However, the public awareness and advocacy side of our energy assistance charity plays a crucial role in many counties in eastern Missouri, as well as in parts of Illinois, in raising challenges and seeking solutions to those challenges. We have a passion in aiding our needy neighbors.

Heat Up St. Louis is a not-for-profit, 501 (c) (3) energy assistance and advocacy, non-utility charity. Our 32 member board is all volunteer, where administrative costs is underwritten by various board members to ensure that every cent collected goes to the needy. Our goals are to assist at-risk elderly and disabled people and low-income families with supplementary heat grants for electric, gas, propane, coal, wood and home heating oil bills; provide public awareness campaigns and help families seeking advice and referrals. Being without heat during the winter has become a public health and safety issue throughout the entire St. Louis region.

The utility charities where applicable, state and federal funding

often is not enough to turn someone's heat back on, especially when they have huge bills. So, Heat-Up St. Louis is committed to being that last hope at the end of the funding rainbow.

During the winter people have actually died attempting to stay warm in their homes or apartments. When battling fires, fire fighters often discovered that the flames were caused by unsafe methods of heating homes and apartments. In the past several winters, needy families have also suffered carbon monoxide poisoning and died.

We are also gravely concerned that the Missouri Public Service Commission refuses at this time to invoke the emergency amendment to the Cold Weather Rule. Our concern is that natural gas prices are to increase this winter anywhere between 17-20%. Within the past three weeks more than 350 needy families have called our resource hotline, 98% of the callers from Missouri, ***all urgent pleas*** for energy assistance, and looking for an Emergency type Cold Weather Rule to whittle down those outrageously high winter bills.

Many of these families have left-over gas bills of more than $800, and some informed us that their past due gas bills are about $1,000-1,200. The only way to pay these bills down for now is by invoking the Commission's Emergency Cold Weather Rule, which has expired. The 25% down or $250 which ever is the least, with the ability to spread the arrears over 18 months, is an excellent idea and is needed now.

Many area ratepayers also have huge left-over summer energy

bills. The utility charities and government funds are not enough to restore a home heating source. Heat-Up St. Louis often serves as the financial safety net. In thinking out of the box, we believe the legal minds within the Commission are not able to focus on the bottomline premise that a utility bill is a utility bill, is a utility bill, summer or winter. And that in fact a very hot summer, as we experienced this year, does impact ratepayers' monthly cash flows.

So there is a need based on our calls and those comments from many social service and community action agencies, that the expired emergency rule amendment could in fact lift many ratepayers out of the jaws of old man winter and give them a healthier, safer and warmer winter.

Now that winter is lurking around the corner, and we continue to get these cold snaps, look at the big picture, and take in account the ratepayers' summer cooling bills. Not that there was necessarily an increase in electric; but by virtue that it was hot, the air-conditioner ran longer and harder, and the bills increased based on high usage. On behalf of the needy ratepayers at this time, we believe that the Missouri Public Service Commission should turn up its compassion and address the immediate needs of those ratepayers – needy people who possibly could make it, if in fact you act soon.

Also, as part of the thinking out of the box concept, a proposed Cold Weather Rule should encompass the ability of needy ratepayers to have as an alternative the opportunity to pay a percentage of their arrears and be able to roll over the huge balance over a lengthy period of time. In our open discussions maybe we

can cement ideas that will be solid enough to sculpture a workable and equitable Cold Weather Rule.

One can only assume that as the usage of natural gas and electric rises during the winter months – it aids in skyrocketing profits for the state's utility companies, so why delude those profits by spreading out payment any longer? Long term, as it relates to winter heating bills, it has come down to the issue of affordability and the ability to pay on time.

We can talk about a new Cold Weather Rule to include an alternative choice similar to the emergency amendment, but we also need to look at a larger picture.

Many of our needy households are also the newly unemployed, who have temporarily fallen on hard times. They are faced with an immediate choice of heating or eating. Year around they continue to wrestle with other life essentials like prescription drugs, rent or mortgage payments.

We need to save lives this winter, and keep the Missouri ratepayers warm, safe and healthy. We must keep them from the ravishes of the cold. A new proposed Cold Weather Rule must keep needy ratepayers from making choices between purchasing their high prescription bills or heating; between putting food on their tables or heating; between unknowingly igniting a flame and burning down a room, a house, an apartment or heating; between giving small children an opportunity to grow mentally and physically in a safe environment or heating; a choice between paying a gas and electric bill or having to resort to stealing energy, which is

unacceptable - or heating.

Each winter your neighbors, our neighbors, my neighbors in the rural, suburban and urban areas of Missouri have to make many of those choices. The needy should no longer have to, if we come together in partnership and let human compassion tower above profitability. There has to be a more equitable way of accepting financial obligation in the current environment where lobbyists, and lawyers have wielded a system together to make sure that "They" the utilities get theirs. We can devise a program which includes a spirit of cooperation to ensure that we have healthy, safe and warm Missourians each and every day of the cold winter, whatever the level of his or her income.

Heat-Up St. Louis is willing to help. The reason I continue to be involved after 20 years as a former paid consultant for a gas utility is that the need for energy assistance gets greater each and every winter. The needy must have voices to speak up for them. And they do not have enough voices.

Thank you for this awesome opportunity.

Gentry W. Trotter
President, Board of Directors
Heat-Up St. Louis, Inc.

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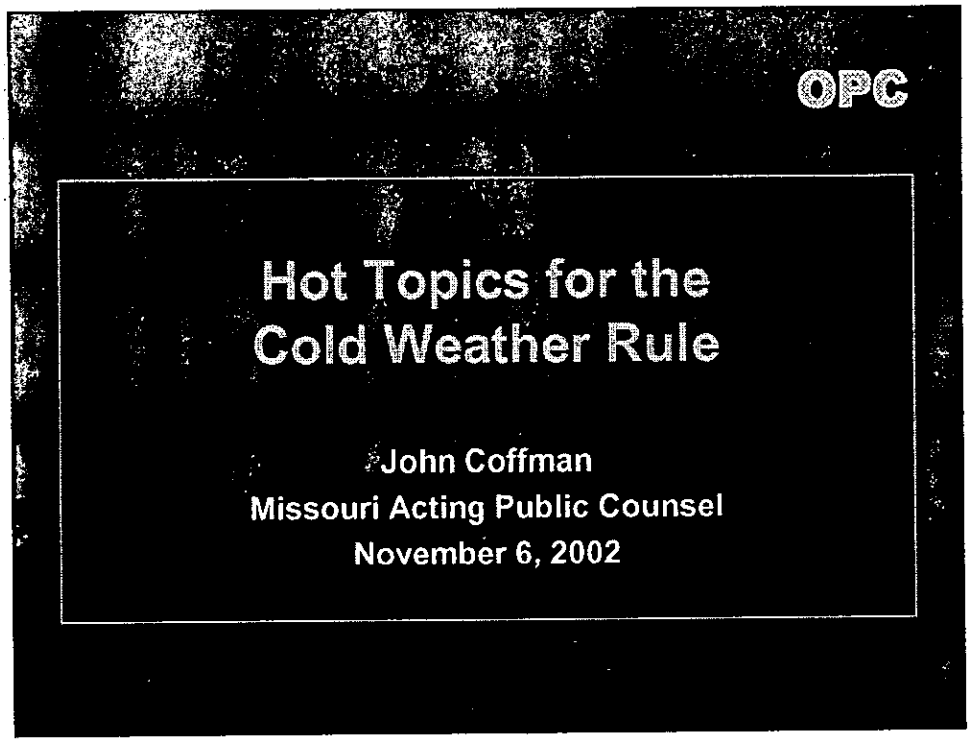
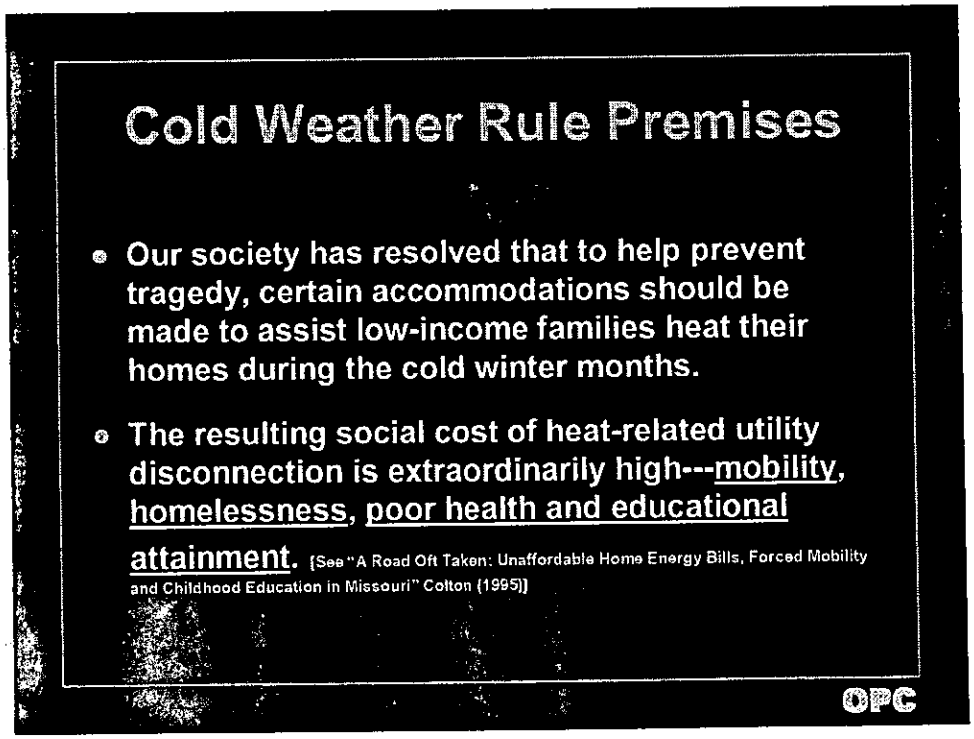

OPC
Hot Topics for the
Cold Weather Rule
John Coffman
Missouri Acting Public Counsel
November 6, 2002


Cold Weather Rule Premises
• Our society has resolved that to help prevent tragedy, certain accommodations should be made to assist low-income families heat their homes during the cold winter months.
• The resulting social cost of heat-related utility disconnection is extraordinarily high---mobility, homelessness, poor health and educational attainment. [See "A Road Oft Taken: Unaffordable Home Energy Bills, Forced Mobility and Childhood Education in Missouri" Colton (1995)]
OPC

PSC's crucial role in protecting health and safety

- Many low-income Missourians live in homes equipped for heat-related service (natural gas or electric) that can only be provided by an investor-owned monopoly.
- Missouri Law tasks the PSC with adopting reasonable rules regarding disconnection or service and the refusal to reconnect service. *Section 386.250(6) RSMo. 2000.*

OPC

Sobering Reality

- Payment agreements often set customers up to fail because the monthly payment is not affordable.
- Energy assistance funding is not likely to ever meet the need in a typical year.
- Extreme variability in winter weather and in natural gas prices from year to year can create an unexpected crisis.
- Although low-income customers generally use less energy, poorly weatherized and energy inefficient homes create large bills.

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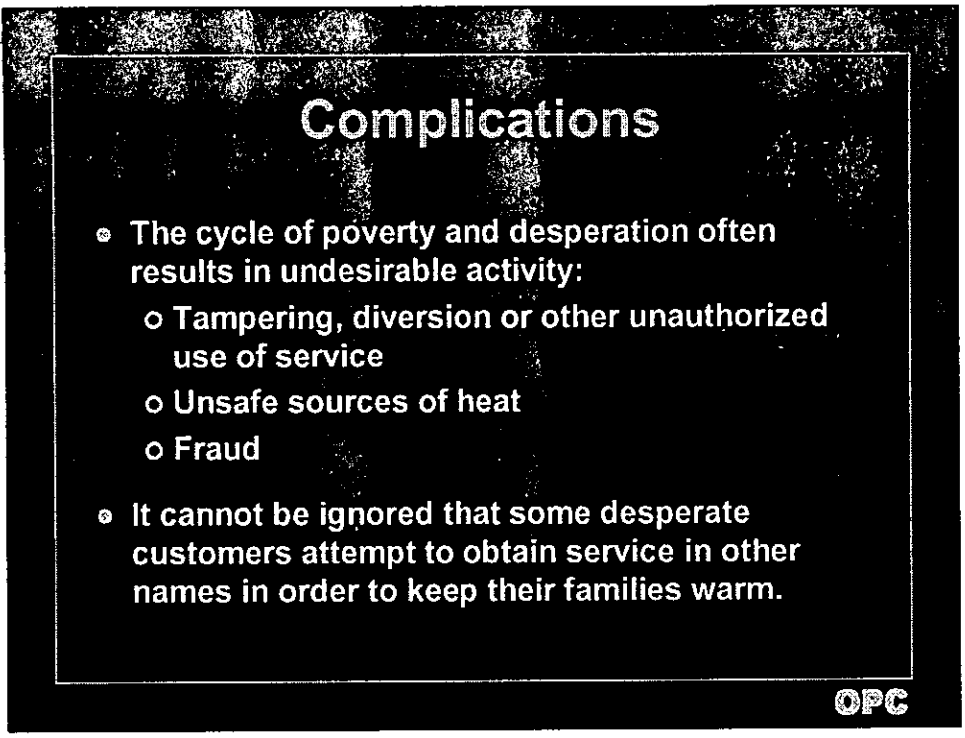
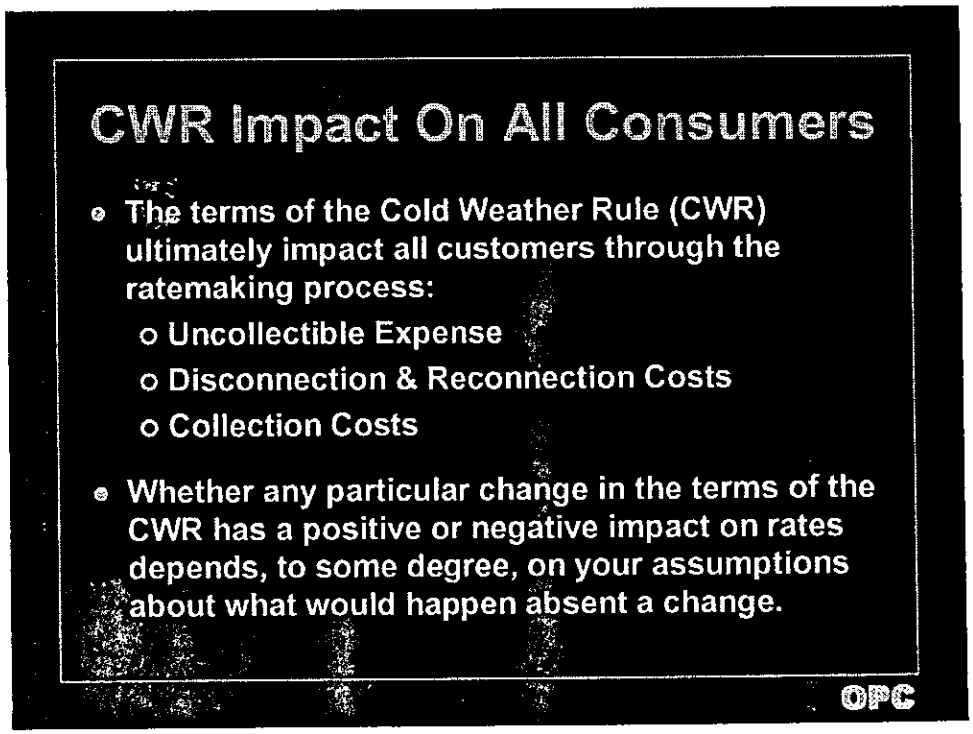

Complications
The cycle of poverty and desperation often results in undesirable activity:
Tampering, diversion or other unauthorized use of service
Unsafe sources of heat
Fraud
It cannot be ignored that some desperate customers attempt to obtain service in other names in order to keep their families warm.
OPC


CWR Impact On All Consumers
The terms of the Cold Weather Rule (CWR) ultimately impact all customers through the ratemaking process:
Uncollectible Expense
Disconnection & Reconnection Costs
Collection Costs
Whether any particular change in the terms of the CWR has a positive or negative impact on rates depends, to some degree, on your assumptions about what would happen absent a change.
OPC

The Tough Issues

- Moratoriums on Disconnection
- Terms for Reconnection w/ Arrears
- Second Chances
- Other issues:
  - Notification about CWR to the public.
  - Waiving Deposits
  - Terms of payment agreements

OPC

Moratoriums on Disconnection

- Biggest area of public misconception about the Missouri CWR.
- Missouri's day-to-day moratorium based on a forecast below 30 degrees is lowest temperature
- Practice varies among the states:
  - Vague prohibitions (health & safety) during winter
  - Vague temperature moratoriums
  - Restrictions for special classes of vulnerable customers (e.g., elderly, customers w/ disabilities, small children)

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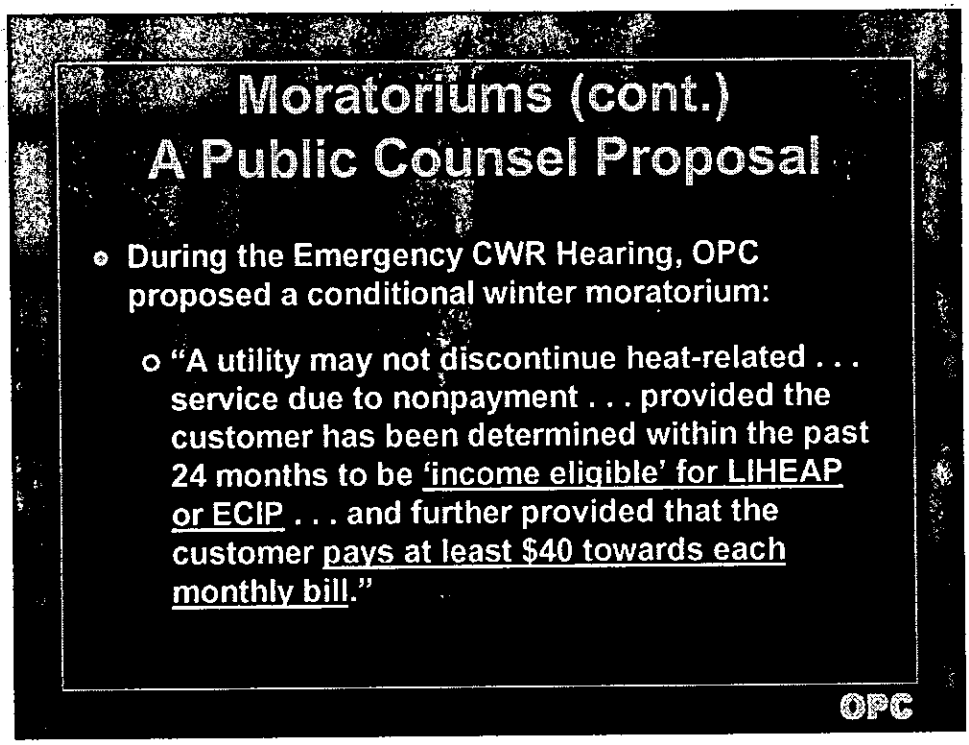
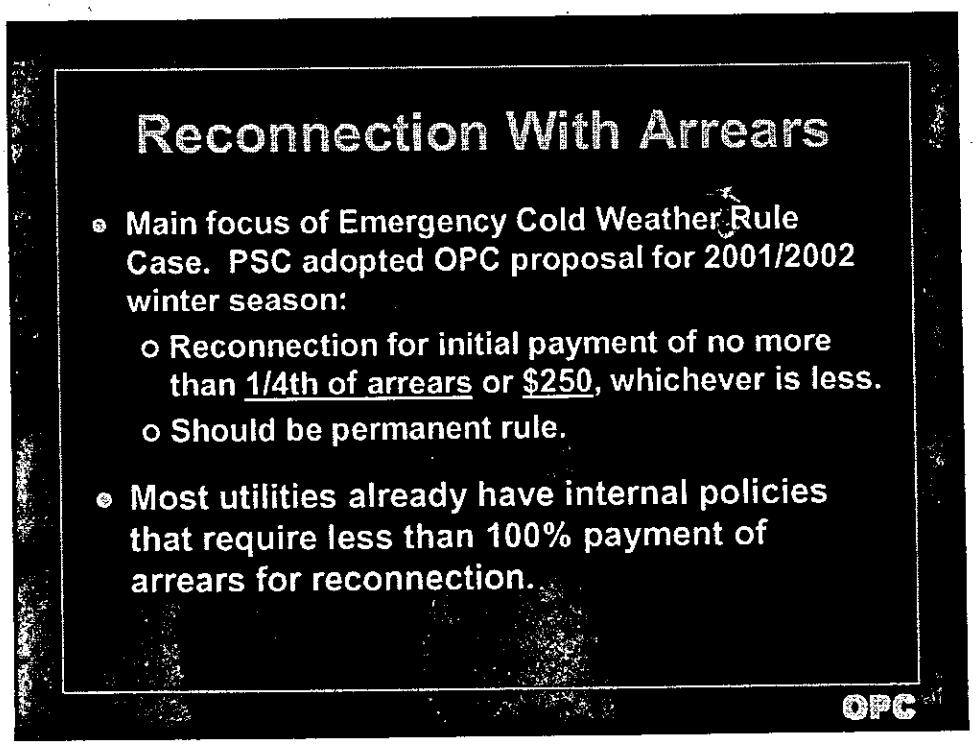

Moratoriums (cont.)
A Public Counsel Proposal
• During the Emergency CWR Hearing, OPC proposed a conditional winter moratorium:
o "A utility may not discontinue heat-related . . . service due to nonpayment . . . provided the customer has been determined within the past 24 months to be 'income eligible' for LIHEAP or ECIP . . . and further provided that the customer pays at least $40 towards each monthly bill."
OPC


Reconnection With Arrears
• Main focus of Emergency Cold Weather Rule Case. PSC adopted OPC proposal for 2001/2002 winter season:
o Reconnection for initial payment of no more than 1/4th of arrears or $250, whichever is less.
o Should be permanent rule.
• Most utilities already have internal policies that require less than 100% payment of arrears for reconnection.
OPC

How many chances should a customer get?

- Many states struggle mightily with the issue of how many times a low-income customer should be permitted to enter a payment agreement or obtain reconnection on favorable terms.
- Missouri offers *No Second Chances* regarding payment agreements state.
- Kansas allows *multiple chances.*
- OPC: Best policy is probably in between.

OPC

Cold Weather Reporting

- Data that must be reported by utilities pursuant to 4 CSR 240-13.055(12):
  - number of payment agreements
  - involuntary disconnections (on and off agreements)
  - arrears (on and off agreements)
- Other data that could be reported
- Should be <u>public information</u> (filed publicly with the PSC).

OPC

Conclusions

- Attempts to improve the CWR raise complex life-and-death issues that overlap social, economic, and health related policy.
- However, it is important that the PSC does attempt to improve it, *after public hearings*, because of CWR's critical importance to our state's public safety and economic health.

OPC

Conclusions (cont.)

- The PSC should codify public expectations into the CWR (as opposed to encouraging utilities to go above and beyond the law in protecting vulnerable customers).
- A variety of protections applied in other states can provide some guidance. No clear consensus on tough issues, but plenty of ideas.
- Some new changes adopted by law and by PUC order since winter of 2000/2001.

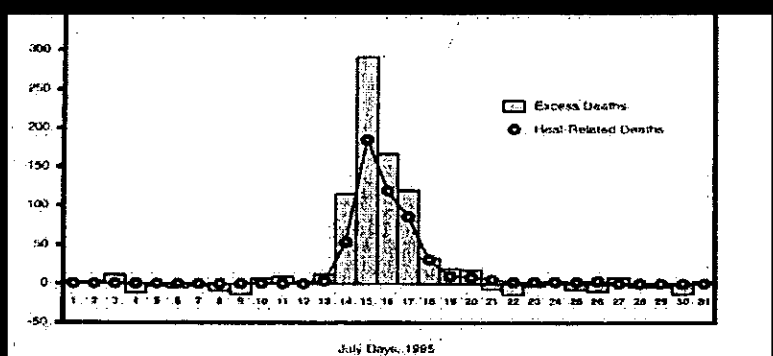
OPC

The Committee to Keep Missourians Warm

- A collaborative, consisting of utility providers, low-income advocates, various gov't agencies, and others who meet every third Thursday of the month in Jefferson City, can provides a unique forum.
- "The goal and mission of the Committee to Keep Missourians Warm (CKMW or Warm Committee) is to bring together all parties interested in seeking solutions to the problems faced by low-income Missouri consumers who are unable to afford the energy necessary to heat their homes (or to cool their homes, if medically necessary)."
  – Bylaws (originally adopted February 1989)

OPC

Hot Weather Related Charts from Heat Wave (2002) by Eric Klinenberg



gure 7. Excess and heat-related mortality in Chicago, July 1995. Source: ty of Chicago, Department of Public Health.

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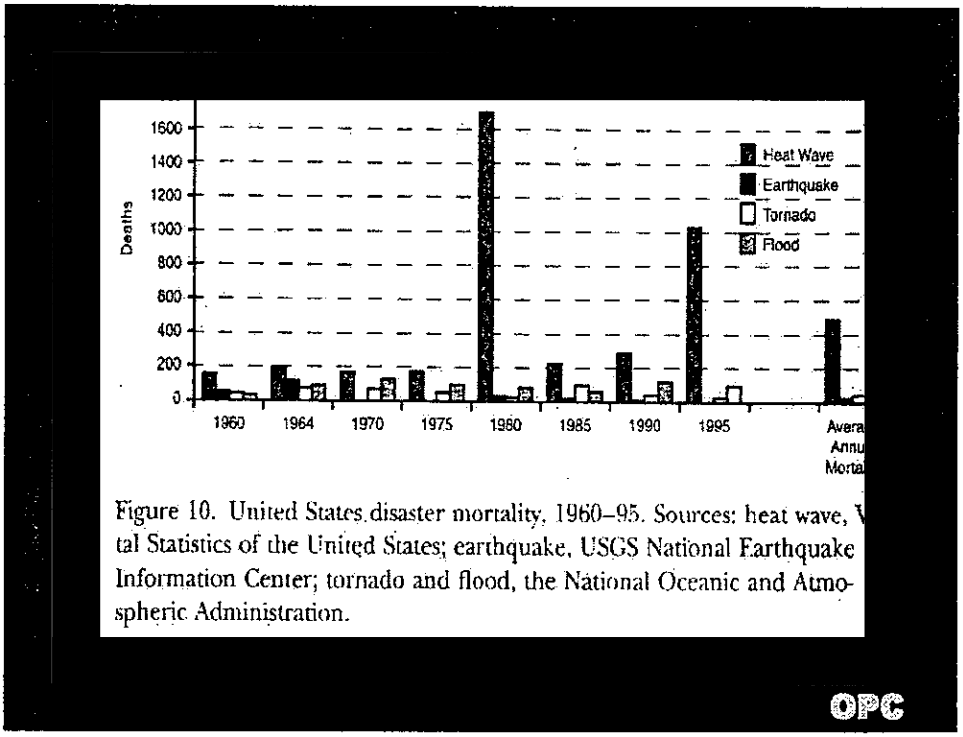

Figure 10. United States disaster mortality, 1960–95. Sources: heat wave, V tal Statistics of the United States; earthquake, USGS National Earthquake Information Center; tornado and flood, the National Oceanic and Atmospheric Administration.

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Outline of Presentation
of
Michael C. Pendergast
Vice President and Associate General Counsel
Laclede Gas Company
for the
Missouri Public Service Commission
Roundtable on Cold Weather Rule
And Possible Hot Weather Rule

November 6, 2002

I. Introduction

- *Basic Facts about Laclede Gas Company*
- *Customer Base and Demographics*

II. The Missouri Cold Weather Rule: What is it and what does it do?

- *When Effective*
- *Special Notice Requirements*
- *Temperature Based Prohibition on Discontinuing Service*
- *Special Credit Arrangements for Maintaining and Restoring Service*
- *Recovery of Reasonable Operating Expenses*

III. Why do we have one?

- *Customers' Ability to Afford Service*
- *Essential Nature of Service Provided*
- *Regulated Status of Entity Providing Service*

IV. How does Missouri Cold Weather Rule compare to those in other jurisdictions?

- *Temperature Based Prohibition on Discontinuing Service*
- *Special Credit Arrangements for Maintaining and Restoring Service*

V. **How has the Cold Weather Rule operated? - One LDC's experience.**

- *Customer Use of the Cold Weather Rule*
- *Impact on Laclede*

VI. **Possible Revisions**

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Missouri Public Service Commission

Electric & Natural Gas Roundtable Discussion Groups

Cold Weather Rule & Possible Hot Weather Rule

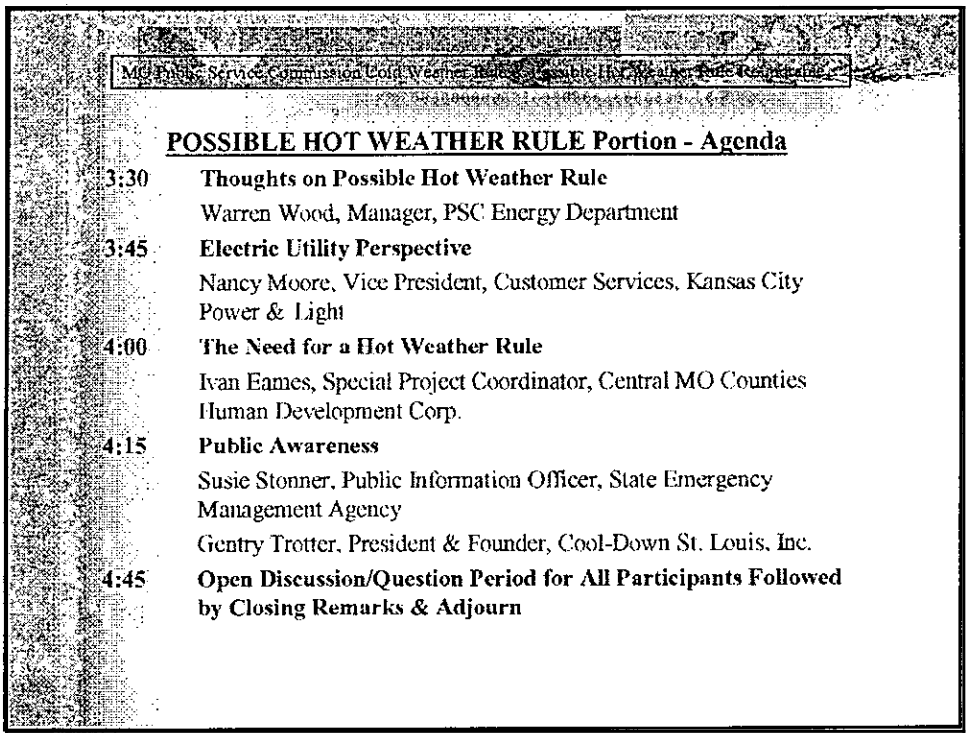
November 6, 2002 – 1:00 to 5:00

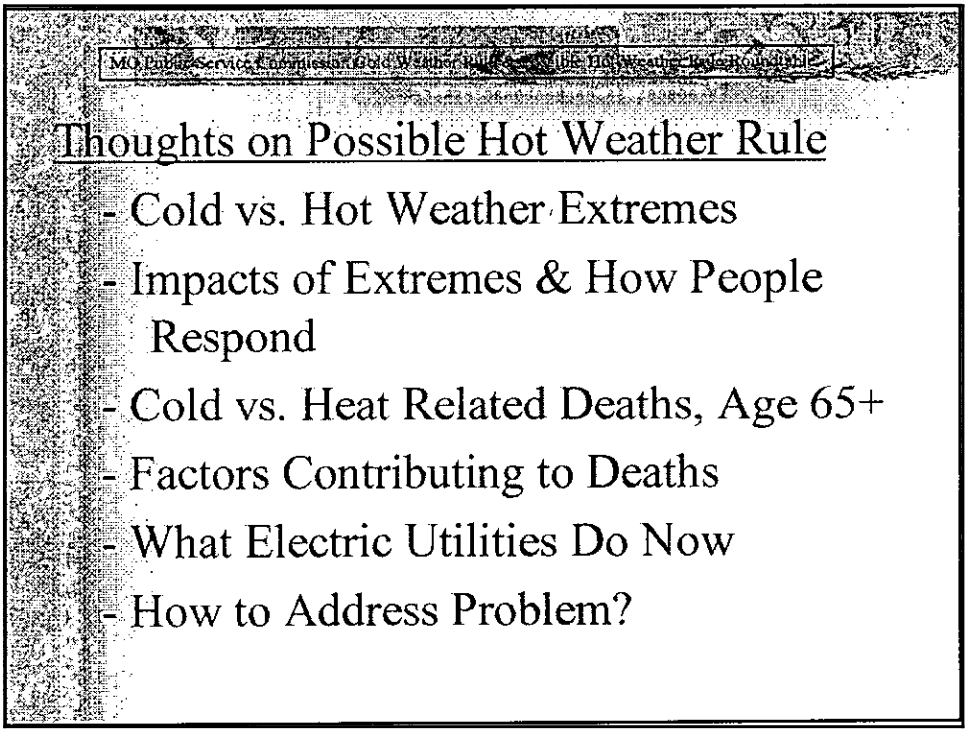
Lincoln Room, Capitol Plaza Hotel, Jefferson City, MO

MO Public Service Commission Cold Weather Rule & Possible Hot Weather Rule Roundtable

COLD WEATHER RULE Portion - Agenda

1:10	**The Cold Weather Rule**
	Janet Hoerschgen, Manager, PSC Consumer Services Dept.
1:25	**Last Winter & The Emergency Cold Weather Rule**
	Tim Schwarz, Deputy General Counsel, PSC General Counsel
1:40	**Concerns With the Current Cold Weather Rule**
	Jackie Hutchinson, Director, Human Development Corporation
	Terry Sanders, Housing Division Director, Ozark Action Inc.
	Gentry Trotter, President & Founder, Heat-Up St. Louis, Inc.
2:25	**Office of the Public Counsel's Perspective**
	John Coffman, Acting Director, The Office of the Public Counsel
2:40	**Natural Gas Utility Perspective**
	Michael Pendergast, Vice President Associate General Counsel, Laclede Gas Company
2:55	**Open Discussion/Question Period for All Participants**
	Followed by 10 Minute Break


MO Public Service Commission Cold Weather Rules - Possible Hot Weather Rule Roundtable
POSSIBLE HOT WEATHER RULE Portion - Agenda
3:30 Thoughts on Possible Hot Weather Rule
Warren Wood, Manager, PSC Energy Department
3:45 Electric Utility Perspective
Nancy Moore, Vice President, Customer Services, Kansas City Power & Light
4:00 The Need for a Hot Weather Rule
Ivan Eames, Special Project Coordinator, Central MO Counties Human Development Corp.
4:15 Public Awareness
Susie Stonner, Public Information Officer, State Emergency Management Agency
Gentry Trotter, President & Founder, Cool-Down St. Louis, Inc.
4:45 Open Discussion/Question Period for All Participants Followed by Closing Remarks & Adjourn

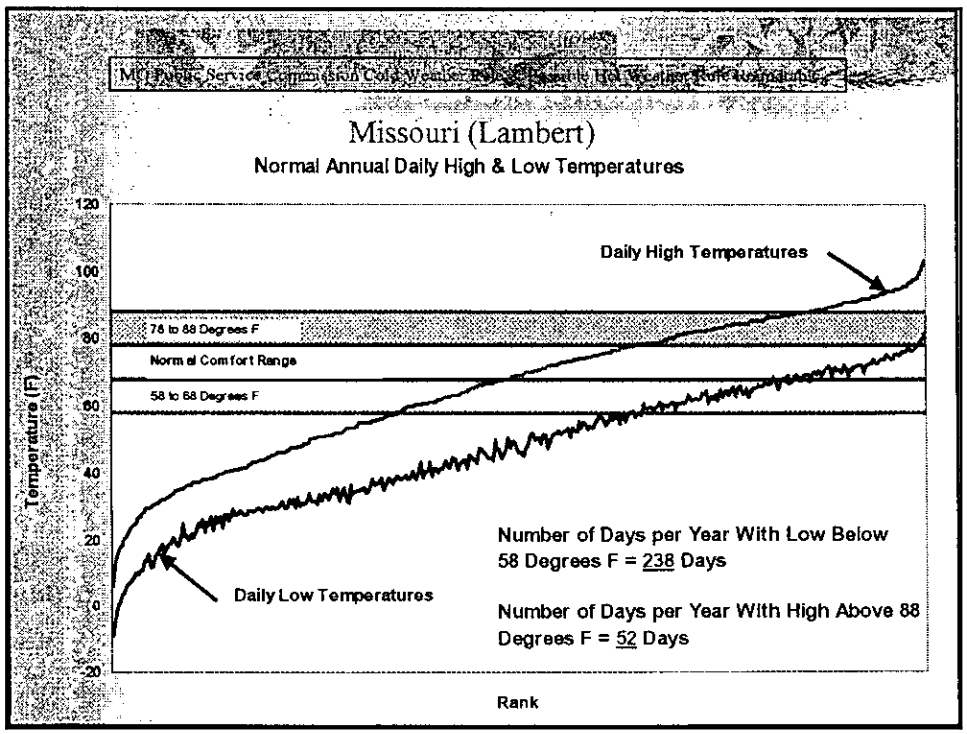

MO Public Service Commission Cold Weather Rules - Possible Hot Weather Rule Roundtable
Thoughts on Possible Hot Weather Rule
- Cold vs. Hot Weather Extremes
- Impacts of Extremes & How People Respond
- Cold vs. Heat Related Deaths, Age 65+
- Factors Contributing to Deaths
- What Electric Utilities Do Now
- How to Address Problem?

Cold vs. Hot Weather Extremes

- People are "Comfortable" at approx. 68 to 78 degrees F. The comfortable range of temperatures differs between individuals but this is a good average.

- Missouri averages about 52 days with a high above 88 degrees F per year.

- Missouri averages about 238 days with a low below 58 degrees F per year.



Impacts of Extremes & How People Respond (Cold):

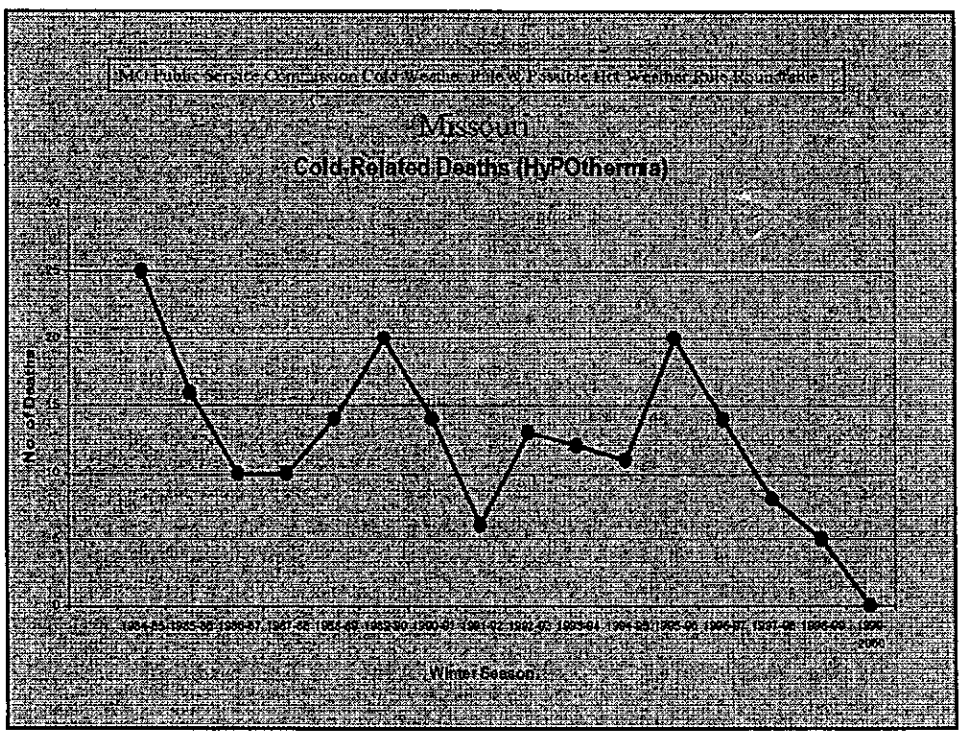
- Quickly recognized as intolerable.
- People will typically make other arrangements for heat and/or shelter and do everything possible to keep heat on – including some dangerous means.
- Those who can't afford to heat often face increased health problems, cycle of indebtedness, possible homelessness, and possible removal of children from family.
- Without heat, extensive property damage can occur due to broken water pipes.

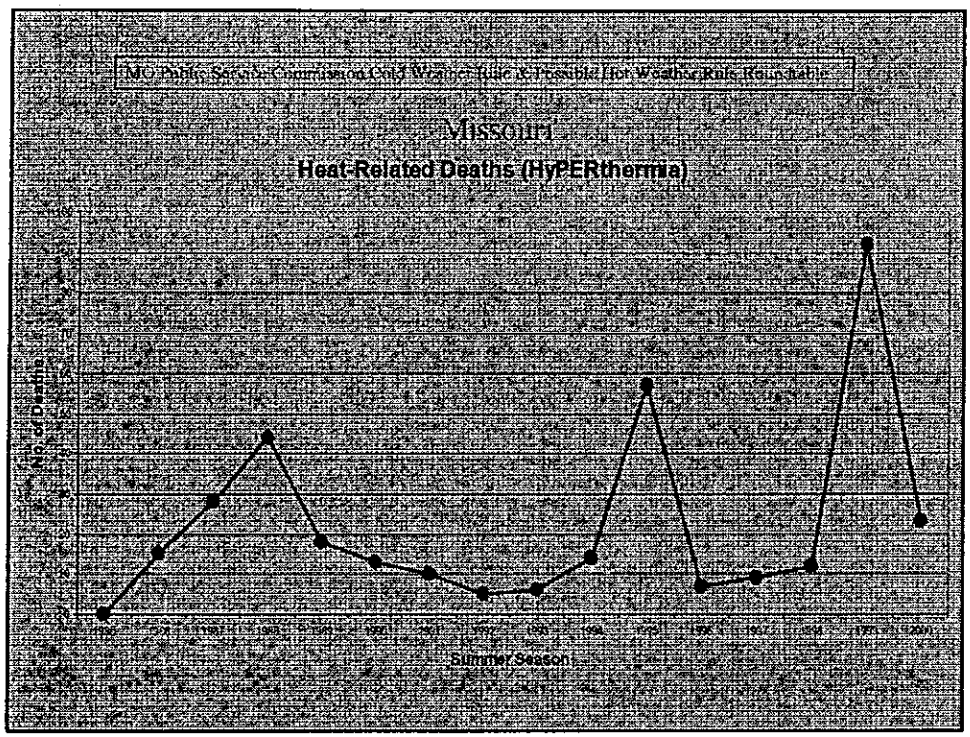
Impacts of Extremes & How People Respond (Hot):

- Unfortunately, often perceived as "tolerable" until too late.
- Dangerous weather periods tend to be relatively short but extreme.
- Unfortunately, even relatively "mild" extremes can be be deadly (see chart next slide).
- For both cold and heat-related deaths, the elderly have a higher mortality rate than other age groups.

MO Public Service Commission Cold Weather Rule – Possible Hot Weather Rule Replacement?

Relative Humidity	Air Temperature (F°) 70°	75°	80°	85°	90°	95°	100°	105°	110°	115°
	Apparent Temperature									
10%	65°	70°	75°	80°	85°	90°	95°	100°	105°	111°
20%	66°	72°	77°	82°	87°	93°	99°	105°	112°	120°
30%	67°	73°	78°	84°	90°	96°	104°	113°	123°	135°
40%	68°	74°	79°	86°	93°	101°	110°	123°	137°	
50%	69°	75°	81°	88°	96°	107°	120°	135°	150°	
60%	70°	76°	82°	90°	100°	114°	132°	149°		
70%	70°	77°	85°	93°	106°	124°	144°			
80%	71°	78°	86°	97°	113°	136°	157°			
90%	71°	79°	88°	102°	122°	150°	170°			
100%	72°	80°	91°	108°	133°	166°				





MO Public Service Commission Cold Weather Rule is Possible Hot Weather Rule Request

Factors Contributing to Deaths (Cold), Age 65+:

Most caused by outside exposure to frigid temperatures.

Outside deaths influenced by poor mobility, impaired mental states and alcohol intoxication (wandering, falling asleep, falls).

Deaths in buildings have been attributed to insufficient home heat or loss of heat source; falling in cold buildings or basements; and physical and mental conditions (including intoxication) that impaired ability to judge temperatures or take appropriate actions.

(Missouri Epidemiologist, September-October 1999)

Factors Contributing to Deaths (Hot), Age 65+:

For the summer of 2000, 85% of elderly deaths were inside.

Some persons had no air conditioning; some did; some relied on electric fans; some were taking medicines that impaired their bodies' natural defenses to adjust to heat.

(Heat Surveillance Summary – 2000, Mo. Dept. of Health and Senior Services)

Staff is not aware of any deaths associated with the lack of electric utility service during the hot weather period. Some deaths among the elderly occur when they do not open windows in their homes (fear of intruders) or when they do not run fans or air conditioners (fear of high energy costs).

What Electric Utilities Do Now

Although not advertised and not required by current Commission rules, all PSC-regulated utilities have either implemented procedures or policies during the hot weather periods which suspend discontinuance of service for nonpayment during certain weather conditions.

Utility provisions during hot weather can include provisions on when heat warnings or emergencies are declared, consideration for daily running averages, consideration for peak day temperatures above a certain level, and/or the predicted "heat index" for the next day.

How to Address Problem?

How do we better educate the public of the risks?

How do we notify those most at risks and change their behaviors during hot weather periods?

Can we improve the notifications that are now provided?

What would the form and function be of a "Hot Weather Rule"?

Just a thought:

Have provisions for advance notification of available funds to help during hot weather periods (for customers who are concerned they can't afford energy)? How would fund be established and maintained?

3.b

Kansas City Power & Light®

PERSPECTIVE ON HOT WEATHER RULES

Presented by
Nancy J. Moore
Vice President -Customer Services
November 6, 2002

- **EXISTING COLD WEATHER RULES**
- **ELDERLY & HANDICAPPED REGISTRATION**
- **NOTIFICATION TO CUSTOMERS**

- NETWORK OF ASSISTANCE
- DOLLAR-AIDE PROGRAM
- INTERNAL REFERRAL PROGRAM
- COMFORT AIDE

- GATEKEEPER
- INTERNAL HOT WEATHER DISCONNECTION POLICY
- AVERAGE PAY PLANS
- 21 DAY RULE

- **REASONS FOR A CW RULE**
  - **Danger to Life**
  - **Damage to Life Sustaining Equipment**
  - **Inability or Extreme Difficulty in Leaving Residence (elderly and/or handicapped)**
- **DO WE NEED A HOT WEATHER RULE?**

3.c

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November 6, 2002

THE NEED FOR A WEATHER PROTECTION RULE

We need to discuss this subject in the context that there is no longer a safety net in this country or state. Of the people who become unemployed only 38% will qualify for unemployment insurance. Only 24% of the eligible households receive section VIII rental assistance.

The Missouri Association for Social Welfare through a contract with the Missouri Housing Development Commission has conducted five censuses of homeless service providers. The most recent census in 2001 showed a substantial growth in the numbers of homeless people from the 1998 census. " a 40% increase for the coldest day of the year (January 2) and a 44% increase in early summer. (June 25)" The report noted that the fastest growing homeless population were families with children.

In 1980 St. Louis had 612 heat-related illnesses and 128 deaths. More people die from the heat than the cold in winter. Moreover, According to Eric Klineberg in his book " HEAT WAVE in the United States heat waves kill more people during a typical year than all other natural disasters combined." His book is a social analysis of the heat emergency in Chicago in 1995 where between July 14 and July 20, 485 people died directly from heat related causes. The victims were primarily elderly (73 % 65 or older) . The major factor according to Klineberg is "literal social isolation of poor senior citizens."

He points out that in Chicago the number of one-person households went from 7% in 1930 to 25% in 1995 and of those one person households 40% are 65 or older. There is good reason to believe that the trend in our communities are similar.

Eric Klineberg states in his book " The combination of cuts to the budget of the federally funded LIEAP and a market-model managerial strategy for punishing consumers who are delinquent on their bills has placed the poor elderly in a permanent energy crisis."

When the state of Missouri announces a heat emergency it would be prudent for the Public Service Commission to require regulated utilities to prohibit involuntary disconnections.

Finally, there is every indication that these matters will get worse in the future. Klineberg quotes the Intergovernmental Panel on Climate Change. " There is a 90 to 99% probability that there will be higher maximum temperatures, more hot days and heat waves over nearly all land areas in the 21st century."

Ivan Lee Eames
Special Projects Coordinator

ATTACHMENT 1

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May 24, 2002

RECEIVED
MAY 2 8 2002
Executive Director
MO PSC

Robert Quinn, Executive Director
Missouri Public Service Commission
Governor Office Building
200 Madison Street
P. O. Box 360
Jefferson City, MO 65102-0360

Dear Director Quinn,

Our agency assists low income people by operating the Energy Crisis Intervention Program (ECIP). The purpose of the program is to prevent disconnection of heat related utility service in the winter by providing payments to the utility on behalf of income eligible people.

I would like to take this opportunity to thank you for adopting an emergency amendment to the Cold Weather Rule effective November 18, 2001. While two natural gas companies choose to legally challenge the amendment, most utilities choose to respect the provisions. Even though we had more funds than ever before, even with the provision that required restored service with an initial payment of 25% of pre-existing arrears or $250 whichever is less, we were out of funds the second week of March. Without that provision not only would we have been out of funds sooner but we would have served far fewer people. The fact that this provision applied to people who had previously defaulted on a cold weather rule payment plan was an important protection.

With some concern I read the Commission's " Consumer Notice-Natural Gas Prices for 2002-2003 Winter Heating Season." Since there is the possibility that a repeat of the drastic price increases that gave rise to the emergency amendment we would request that the Missouri Public Service Commission hold Public Hearings and bring the parties together to address on a permanent basis the lack of protections under the current cold weather rule and how we may improve them.

Each spring, regulated utilities in Missouri disconnect thousands of low income households after the cold weather rule expires on March 31st. Then in the fall the agencies that serve low income people have to scramble to get them assistance to restore service before it gets really cold. Other states have programs that are more rational, humane and cost effective. In his research paper " Models of Low-Income Utility Rates" Roger Colton states " the preferred model is the model promulgated by the Pennsylvania Public Utility Commission: the income based percentage of bill model. This model takes affordability into consideration, allows a customer to increase consumption given that rates are finally affordable, but does not permit a consumer to indiscriminately waste energy without having to bear some portion of the responsibility."

On September 11, 1997 I attended a Natural Gas Roundtable conducted by the Missouri Public Service Commission. Dr. Wayne Williams, Director of the Bureau of Consumer Services of the Pennsylvania Public Utility Commission made a presentation called "Innovative Consumer Usage Reduction and Payment Programs." Dr. Williams pointed out that the long-term costs to a utility associated with not receiving full timely payments of bills are finance charges to carry arrearages, cost of collection activity, and uncollectibles (bad debt write offs). He then outlined his states percent of bill payment plan and arrearage forgiveness provisions. He pointed out that an independent evaluation of the program showed that 80% of the low income consumers enrolled in the program made timely payments of their bills. Dr. Williams stated " Usage reduction and affordable payment programs that are carefully designed, targeted and operated can have the effect of minimizing long term costs and maximizing customer payments." Indeed, depending on the state Roger Colton suggests that such a program may be revenue neutral. It should be noted that all people participating in the program were required to apply for energy assistance. Dr. Williams also noted that this program began as a pilot project and it was the regulated utilities that requested the program be adopted statewide.

Over the past five years 70% of the people we serve with ECIP have annual incomes of less than $8,000. At the hearing on the emergency amendment the staff of the office of Public Counsel proposed a conditional moratorium on involuntary disconnections for the poorest customers. The proposal stated " A utility may not discontinue heat-related residential utility service due to nonpayment of a delinquent bill or account provided the customer has been determined within the past twelve months to be ' income eligible' for LIHEAP or ECIP by the Division of Family Services, or its agents that are qualified to make such a determination, and further provided the customer pays at least $40 towards each monthly bill." I would hope The Commission would give serious consideration to adopt on a permanent basis something like this proposal.

There are other problems with the current rule such as the " one strike and your out" provision, that is, once you've defaulted on a cold weather rule payment plan you can never be protected by its provisions in the future. But unless the Commission addresses the inability of low-income people to pay high winter bills other changes will have a minor effect. I have enclosed with this letter a study done by Roger Colton prepared for the Iowa Department of Human Rights titled "WINTER WEATHER PAYMENTS: The impact of Iowa's Utility Shutoff Moratorium On Utility Bill Payments by Low-Income Customers." I hope you will take into consideration his conclusions in relation to low-income consumers in Missouri.

I appreciate your consideration of these issues and I hope you will support Public Hearings to make changes in the current cold weather rule that will offer better protections to low income people.

Sincerely,

Ivan Lee Eames
Special Projects Coordinator

Cc: John Coffman, Acting Public Counsel

WINTER WEATHER PAYMENTS:
The Impact of Iowa's Winter Utility Shutoff Moratorium On Utility Bill Payments by Low-Income Customers

February 2002

PREPARED BY:

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Prepared for:
Iowa Department of Human Rights
Des Moines, Iowa

February 2002

The conclusions and opinions presented in this analysis are those of the authors and do not necessarily represent the views and opinions of the Iowa Department of Human Rights.

This study looks at whether Iowa utility customers protected by a winter shutoff moratorium respond by stopping or substantially reducing the payments which they would otherwise make toward their winter utility bills. The study is based on utility payment records from roughly 3,000 recipients of Low-Income Home Energy Assistance Program (LIHEAP) benefits for 38 months (April 1998 through May 2001). The LIHEAP recipients were served by three separate Community Action Agencies (CAAs) in central and northwest Iowa.[1] The recipients were gas and/or electric customers of Alliant Energy or IES Industries.

THE UNAFFORDABILITY OF IOWA'S WINTER HOME ENERGY BILLS

The observation that Iowa winters present high and unaffordable home energy bills to low-income households comes as no surprise. "Affordability" in this regard is measured by customer home energy burdens. A home energy burden is simply the household's home energy bill divided by household income. A household with an annual home energy bill of $1,500 and an annual income of $6,000 would therefore have a home energy burden of 25% ($1,500 / $6,000 = 0.25).

Data from the U.S. Department of Energy's Residential Energy Consumption Survey (RECS) shows that in the Midwest, while non-low-income residential consumers have home energy burdens of between 2.7% and 3.5%, recipients of benefits from the Low-Income Home Energy Assistance Program (LIHEAP) have home energy burdens from four to five times higher (between 11.7% and 12.3%).

TABLE 1
RESIDENTIAL ENERGY: AVERAGE ANNUAL EXPENDITURES, BY AMOUNT (DOLLARS) AND MEDIAN INDIVIDUAL BURDEN (PERCENT) FOR MIDWEST CENSUS REGION (1999)

	All Fuels		Natural Gas		Electricity	
	Dollars	Percent	Dollars	Percent	Dollars	Percent
All households	$1,286	3.5%	$1,310	3.4%	$1,079	3.4%
Non-low-income households	$1,354	2.7%	$1,373	2.7%	$1,192	2.2%
Low-income households	$1,125	8.0%	$1,151	8.1%	$893	7.4%
LIHEAP recipient households	$1,125	11.9%	$1,236	12.3%	$856	11.7%

These, of course, are *average annual* burdens. Many households at lower income levels have burdens in the 40+% range. Moreover, winter home bills as a percent of winter income impose much higher burdens as well.

One impact of the unaffordability of home energy service is the nonpayment of bills. Previous research by the Iowa Department of Human Rights (DHR), however, which is the agency administering LIHEAP in Iowa, found that bill nonpayment is perhaps not

[1] Accordingly, subsequent references in this analysis to "Iowa LIHEAP recipients" are to the recipients served by these three CAAs.

even the most significant of the adverse impacts of unaffordable winter home energy bills. A DHR study of Iowa LIHEAP recipients found that:[2]

- Over 12 percent of Iowa LIHEAP recipients went without food to pay their home heating bill. Projected to the total participating LIHEAP population, that meant that about 7,600 low-income households (representing 20,000 Iowa citizens) went without food at times as a result of unaffordable home heating bills.

- More than one-in-five went without medical care to pay for heating bills. This included not seeking medical assistance when it was needed, not filling prescriptions for medicine when a doctor had prescribed it, and/or not taking prescription medicines in the dosage ordered by the doctor.

- Almost 30 percent reported that they did not pay other bills, but did not elaborate as to which bills were not paid. In addition to not paying other bills, many low-income households incurred debt in order to pay both their home heating bills and other basic necessities. They borrowed from friends and/or neighbors, used credit cards to pay for food and other necessities, or did not pay the heating bill.

Recognizing the dangers of the lack of home energy during cold weather months, Iowa legislators mandated adoption of a winter shutoff moratorium. Section 476.20 of the Iowa Code provides that a household certified to be eligible for benefits from either the federal Low-Income Home Energy Assistance Program (LIHEAP) or the federal Weatherization Assistance Program (WAP) shall not be subject to the disconnection of service between the dates of November 1 and April 1 of each winter heating season.[3]

From the inception of the Iowa winter shutoff moratorium, as well as in discussions regarding winter shutoff protections in other states, arguments have been raised that the blanket prohibition on the termination of service during the winter season would result in customers deciding to stop making payments toward their home utility bills. In the absence of the potential use of service termination as a collection tool, the reasoning goes, customers will stop paying their bills in order to, in effect, take a "loan" from the utility throughout the moratorium period. The "loan" would be paid when Spring weather brought an end to the prohibition on service terminations.

---

2 Joyce Mercier, Cletus Mercier and Susan Collins (June 2000). ***Iowa's Cold Winters: LIHEAP Recipient Perspective***, Iowa Department of Human Rights: Des Moines (IA).

3 The Iowa Utilities Board has incorporated this winter shutoff moratorium into its administrative rules. 199 IAC §19.4(17) and 199 IAC § 20.4(17). In response to the high gas costs and cold weather during the 2000/2001 winter heating season, the Iowa Utilities Board administratively extended the winter shutoff moratorium to May 1, 2001.

The purpose of the analysis below is to empirically examine one large group of LIHEAP recipients protected by the Iowa winter moratorium to determine whether the concerns over winter bill nonpayment have any empirical basis.

THE DATA ANALYSIS

An examination of the monthly arrears of Iowa's LIHEAP recipients might at first blush appear to support the conclusion that these low-income customers substantially curtail their payments during winter months when utilities are constrained by the state's winter shutoff moratorium. Table 1 compares, in three different years, the arrears of LIHEAP customers[4] in the four month period representing the winter heating seasons with the four month period immediately preceding the heating season. The winter months of January 1999 through April 1999, for example, were compared to the months of September through December 1998.[5] Average arrears were calculated by dividing the sum of all arrears appearing on bills by the total number of bills rendered.

TABLE 1
ARREARS FROM FOUR WINTER HEATING MONTHS
COMPARED TO ARREARS IN FOUR MONTHS IMMEDIATELY PRECEDING WINTER

	1998 - 1999		1999 - 2000		2000 – 2001	
Non-Htg/Htg Months	Preceding Months	Heating Months	Preceding Months	Heating Months	Preceding Months	Heating Months
Sep/Jan	$58	$69	$89	$17	$65	$46
Oct/Feb	$50	$71	$86	$44	$75	$121
Nov/Mar	$61	$95	$53	$70	$73	$117
Dec/Apr	$92	$118	$34	$77	$36	$58
4-Month Average	$65.25	$88.25	$65.50	$52.00	$62.25	$85.50

Heating months are January – April
Preceding months are September – December preceding the winter heating season.

This data would at first make it appear that customers pay less during the winter months than they do during the months immediately preceding the winter. The average arrears for the four-month winter period is higher than the corresponding non-winter months in two of the three years.[6] The average arrears for the four-month winter period January – April 1999 was 33% higher than the corresponding four-month non-winter period ($65.25 vs. $88.25). The average arrears for the four-month winter period January – April 2001 was 37% higher than the corresponding four-month non-winter period ($62.25 vs.

4 The arrears were calculated by taking the balance on the account at the time of a monthly bill and subtracting the monthly bill rendered for current usage. The monthly bill for current usage is subtracted because, while "due" at the time it is rendered, the bill is not "overdue" until some point in the future.

5 Because the study considers arrears, bills are lagged by one month. The arrears appearing on a bill in April, in other words, represent unpaid bills from March. The arrears appearing on a bill in December represent unpaid bills from November.

6 The substantial influx of LIHEAP dollars during December 1999 reduced the January 2000 arrears and somewhat skewed the four month average.

$85.50). In eight of the 12 winter heating months over three years, the arrears appearing on the bill during the month were higher than the average arrears for the four month period immediately preceding the winter period.

A closer examination of the Iowa data, however, reveals that this conclusion as to increased payment trouble during the winter moratorium months is in error.

PAYMENT OUTCOMES

The analysis of the payment impacts of the Iowa winter moratorium considers a range of metrics testing whether utility bill payments are made in a full and timely fashion. This section of the moratorium evaluation examines billing and payment data to determine the extent to which full and timely payments have been made. Payment outcomes have been measured using the following metrics:

- **Complete payment:** If the customer is billed $100, the company wants to collect $100.
- **Prompt payment:** If the customer receives a bill that is due on the 20th of the month, the company wants its payment no later than the 20th of the month.
- **Regular payment:** If the customer receives 12 bills in a year, the company wants 12 payments in a year, one in response to each bill.

Metrics have been developed to measure each of these payment outcomes.

Weighted Arrears

The use of "weighted arrears" as a mechanism to assess payment outcomes is based on a foundation first provided by the Bureau of Consumer Services (BCS) of the Pennsylvania Public Utilities Commission. According to a 1983 BCS analysis, contrary to the argument by that state's utility companies, the Pennsylvania winter shutoff moratorium did not result in an increase in the number of unpaid bills, or the amount of unpaid bills, that would have existed in the absence of a moratorium. The BCS study reported that:

> Average overdue bills are at a low in November and rise to a high point in March or April. The apparent relationship of this pattern to Public Utility Commission regulations is obvious. That is, arrears are greatest at the end of the Commission's winter termination restrictions (December 1 to March 31 of the following year) and have been reduced to their lowest point immediately prior to the introduction of those restrictions for the following year. This pattern is consistent with the assertion put forward by utilities

> that they would be able to control arrearages if there were no winter termination restraints. However, the seasonal fluctuations are substantial only for heating accounts. Arrearages for non-heating accounts show only minor seasonal fluctuations. A comparison of [the data] suggests a simple explanation for this difference, that is, that the size of arrearages is related to the size of monthly bills. Heating customers' bills grow radically in the winter and so do their arrearages. Non-heating customers' bills change very little seasonally and their arrearages follow suit. In other words, if the assertion that winter termination restraints invite nonpayment were correct, then non-heating arrearages should show the same seasonal pattern of variations as do heating arrearages. That they do not casts substantial doubt on the assertion that PUC winter termination restraints are responsible for willful non-payment and consequent collection problems.[7]

This Pennsylvania report introduces the notion that any assessment of arrears must control for the impact of monthly bills. The BCS report is consistent with the BCS recommendation, often stated, to use a "weighted arrears" or "bills behind" statistic to factor out the impact of increased arrears caused by factors other than nonpayment.

BCS explains that its "bills behind" statistic "permits comparisons to be drawn between companies by eliminating the effects of different customer bills on arrearages." Without such a measure, "the interpretation of average arrearages, either over time or in comparison between companies, presents some difficulties."[8]

A similar analysis was performed for this Iowa evaluation. Figure 1 shows the number of average "bills behind" by month starting with June of a year and continuing through May of the following year. The time periods studied, therefore, included the following: (1) June 1998 through May 1999; (2) June 1999 through May 2000; and (3) June 2000 through May 2001. These periods were selected to ensure that the winter heating season, the four months immediately preceding the winter heating season, and the two months immediately succeeding the winter heating season were in the same data set.

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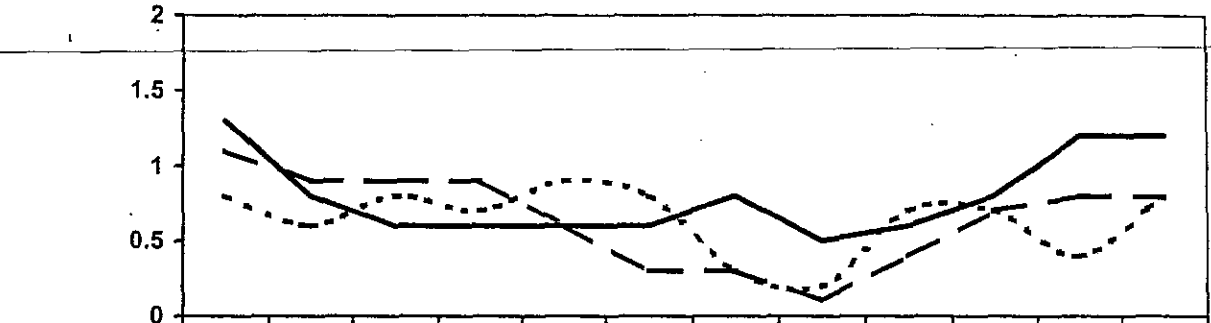
7 Joseph Farrell (1983). ***Utility Payment Problems: The Measurement and Evaluation of Responses to Customer Nonpayment***, at 19, Pennsylvania Public Utility Commission: Harrisburg, PA

8 *Id.*

"Bills Behind" by Month for Iowa LIHEAP Recipients



	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
98-99	1.3	0.8	0.6	0.6	0.6	0.6	0.8	0.5	0.6	0.8	1.2	1.2
99-00	1.1	0.9	0.9	0.9	0.6	0.3	0.3	0.1	0.4	0.7	0.8	0.8
00-01	0.8	0.6	0.8	0.7	0.9	0.8	0.3	0.2	0.7	0.7	0.4	0.8

Figure 1

As this data shows, the number of bills behind that Iowa LIHEAP recipients incur fluctuates within a very narrow band over the course of the year. While arrears unquestionably go up during the high cost winter months, the increase is not substantial. In the June 1998 – May 1999 period, the "bills behind" in January through March were virtually identical to the "bills behind" in July through October. During the June 1999 - May 2000 and the June 2000 – May 2001 periods, the "bills behind" during the winter months were actually *lower* than the bills behind for the corresponding non-heating/non-moratorium months.

No-one suggests, however, that low-income arrears do not increase in the high cost winter months. Instead, the most significant observation in Figure 1 is that rather than experiencing a *dramatic* increase in the number of bills behind during the winter moratorium months, resulting from a decrease in the amount and/or frequency of payments, the normalized weighted arrears for Iowa LIHEAP customers fluctuates within a very narrow band.

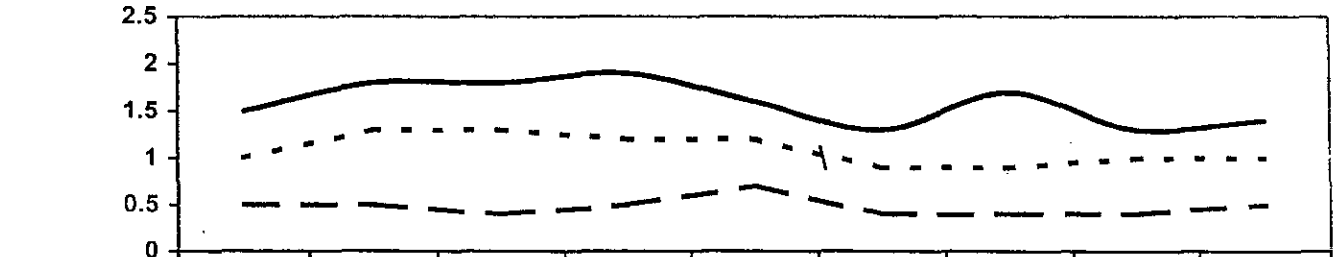
Just as found by the Pennsylvania BCS in 1983, in Iowa, while the dollar level of arrears tends to be higher during the winter moratorium months, this results from the fact that bills are higher, not from the fact that a greater number of bills remain unpaid.

Payments Resulting in $0 Balances to Total Number of Payments

Despite the contribution of LIHEAP benefits to help pay winter home energy bills, a relatively small number of LIHEAP recipients were consistently able to make monthly

payments that reduced their account balance to zero dollars, even when monthly payments were made. Figure 2 shows an index of the number of accounts on which monthly payments were made to the number of accounts on which such payments reduced the account balance to $0. If the index is 1.0, 100% of the payments reduced the balance to $0. If the index is 0.5, 50% of the payments reduced the account balance to $0. Accounts on which no payments were made in a month are not included in this analysis. A $0 balance includes those accounts having credit balances.

Index: Payments Yielding $0 Balance to Total Payments



	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
00-01	0.5	0.5	0.5	0.7	0.4	0.4	0.8	0.3	0.4
99-00	0.5	0.8	0.9	0.7	0.5	0.5	0.5	0.6	0.5
98-99	0.5	0.5	0.4	0.5	0.7	0.4	0.4	0.4	0.5

Figure 2

Several important observations march forward from Figure 2. First, the data clearly indicate that the winter moratorium does not result in a substantial change in winter payment patterns by low-income customers. The numbers of payments in January through April which reduce the account balance to $0 do not substantively differ from the numbers of such payments reducing account balances to $0 in the non-moratorium months.

In addition, Figure 2 shows that the failure of LIHEAP recipients to bring their accounts current through a monthly payment in a particular month is not even necessarily bad news from the perspective of a utility. The Iowa LIHEAP recipients demonstrate that they will make "some" payment on their accounts, even if the payment is only in partial satisfaction of their total outstanding arrears.

If the index of payments resulting in a $0 balance is 0.4, in other words, what this means is that while 40% of the payments made reduced account balances to $0, 60% of the households making payments made their payments even though the account still had a

balance remaining after the payment.[9] The *total* number of payments made is discussed separately below.

Finally, it is interesting to see how the LIHEAP benefits flow through this data. The jump in payments resulting in a $0 balance in December and January might at first seem counter-intuitive. It would not be immediately evident, in other words, why the number of customer payments resulting in a $0 balance would actually *increase* when the higher-cost cold weather months came around. The explanation lies with LIHEAP. LIHEAP payments made in November and December reduce total balances for recipients to the point where an increased number of those recipients can zero out their account balance in that month or in the ensuing month.

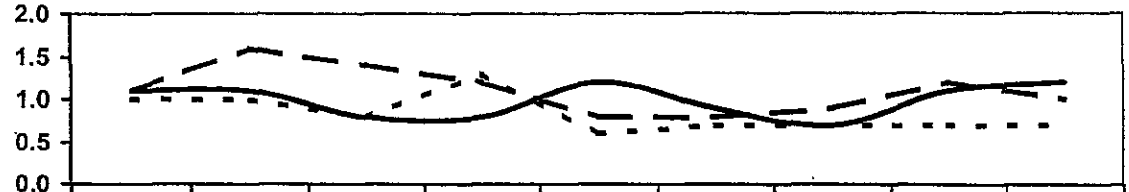
Dollars of Monthly Payments to Dollars of Monthly Bills for Current Usage

If a LIHEAP recipient is not generating a $0 balance in a particular month, the next logical question is whether the customer is at least "catching up," or whether that customer is falling further behind. In order to maintain the status quo relative to outstanding arrears, the customer must at least make payments equal to the total bill for current usage. Irrespective of whether a customer makes a payment towards his or her arrears, if the January bill for current usage is paid in January, the customer, at the least, has fallen no further behind.

In Figure 3 below, customer bills for current usage are indexed to customer payments. If the index is 1.0, the total dollars in payments exactly equaled the total dollars in bills for current usage. If the index is 0.5, the payments equaled 50% of the bills, while if the index is 1.2, the payments equaled 120% of the bills for current usage. A payment of more than 100% of the bill indicates that the customer not only paid the entire current bill, but made some payment towards arrears as well.

[9] The amount due for budget billing customers is the budget billing amount, not the bill for current usage.

Total Dollars of Payments in Month to Total Dollars of Bills for Current Usage in Month



	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
98-99	1.1	1.1	0.8	0.8	1.2	0.9	0.7	1.1	1.2
99-00	1.1	1.6	1.4	1.2	0.8	0.8	0.9	1.2	1.0
00-01	1.0	1.0	0.8	1.3	0.6	0.7	0.7	0.7	0.7

Figure 3

The Iowa LIHEAP recipients as a group consistently made their payments throughout both the winter moratorium season and the non-heating season as shown in Figure 3. While payments did not equal current bills in the winter heating season, the dip in payments in relation to current bills does not support the conclusion that low-income customers protected by the winter moratorium consistently, let alone systematically, substantively reduced the payments being made.

Indeed, the apparent dip in payments made during the period January through March can, in part, be attributed to the receipt of LIHEAP assistance in the preceding month. In December 2000, for example, payment of LIHEAP benefits resulted in a ratio of 1.3, to be followed by a ratio of only 0.6 in January. The cause for the January dip is, however, in substantial part, attributable to the fact that part of the January bill had been *pre*paid by the December LIHEAP payment.

That this, in fact, is the case can be seen by comparing the aggregate dollars of payments to the aggregate dollars of bills for current use. In the aggregate, Iowa LIHEAP recipients were billed $1,718,872 in the four months of the 1999/2000 winter heating season and made $1,554,780 in payments. Iowa utilities collected 90% of the revenue billed during the winter months through winter month payments. Even in the high cost 2000/2001 winter heating season, Iowa LIHEAP recipients were billed $2,739,608 and made $2,407,071 in payments (87.9% of billed heating season revenue paid through heating season month payments). While a substantial part of those payments clearly represented the LIHEAP benefits provided, nonetheless, this data does not support the conclusion that Iowa's low-income customers stop making their winter bill payments when protected by the winter shutoff moratorium.

TABLE 2
BILLS AND PAYMENTS BY IOWA LIHEAP RECIPIENTS IN 4-MONTH WINTER HEATING SEASON[10]

	Bills			Payments			Percentage Payments of Bills		
	98-99	99-00	00-01	98-99	99-00	00-01	98-99	99-00	00-01
Jan	$411,328	$481,374	$898,275	$509,812	$383,076	$520,103			
Feb	$333,945	$478,432	$665,278	$300,209	$404,739	$492,136			
Mar	$340,969	$426,826	$590,502	$251,082	$380,488	$985,000			
Apr	$280,440	$332,240	$585,553	$294,841	$386,477	$409,832			
4-Month Total	$1,366,682	$1,718,872	$2,739,608	$1,355,944	$1,554,780	$2,407,071	99.2%	90.5%	87.9%

Total Number of Payments vs. Total Number of Bills

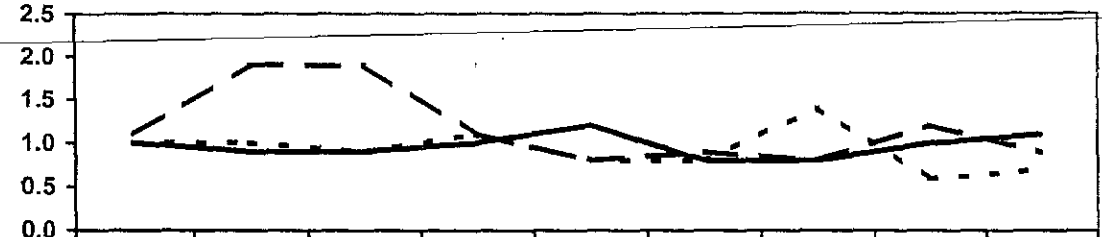
The regularity of payments can be measured by indexing the total number payments to the total number of bills rendered each month. If "some" payment is made on an account in any given month, there is an increased likelihood that the customer will be able to make a future payment sufficient to reduce the account balance to $0. The July bill is easier to pay in full, in other words, if the customer has made *some* payment toward the June bill, even if the June payment is only a partial payment.

Figure 3 shows that Iowa LIHEAP recipients tend to make almost one payment for each bill they receive for home energy service. These payments may not reduce the total balance to $0. Neither may the payments cover the entire bill for current usage. The winter moratorium, however, does not result in LIHEAP recipients deciding to *stop* making payments on a widespread, let alone universal, basis. While the number of payments is reduced during the winter heating season, Iowa utilities tend to receive roughly eight payments for every ten bills tendered during these months.

Taking out the seemingly anomalous number of payments in October and November of 1999 (a time when supplemental LIHEAP payments were made which were small relative to the typical annual benefit and were insufficient to pay entire bills), the index of payments made to bills rendered tends to fluctuate in a narrow band of between 0.8 and 1.1 each month.

[10] The four months presented are January through April. January bills and payments are for December usage, while April bills and payments are for March usage.

Index: Total Number of Payments in Month to Total Number of Payments in Same Month



	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
98-99	1.0	0.9	0.9	1.0	1.2	0.8	0.8	1.0	1.1
99-00	1.1	1.9	1.9	1.1	0.8	0.9	0.8	1.2	0.9
00-01	1.0	1.0	0.9	1.1	0.8	0.8	1.4	0.6	0.7

Figure 4

The annual dips in the number of payments made by LIHEAP recipients in January and February do not necessarily reflect nonpayment toward outstanding accounts. Instead, as discussed elsewhere, the annual LIHEAP payments that are made in December and January often leave credit balances on customer accounts. These credit balances do not call for a customer payment in order for the customer to remain current on his or her account.

While a LIHEAP recipient may be well-served (as a matter of sound money management) to make a payment of *any* amount even in those winter months when LIHEAP has left a credit balance on the account –this means that a lower dollar payment will be required on some future bill when there is no LIHEAP offset—this rarely occurs. Accordingly, the LIHEAP payment has the impact of completely paying one month's bill for winter heating consumption while leaving future bills to be absorbed completely out of the recipient's monthly income at that time.

SUMMARY AND CONCLUSIONS

It is often taken as "conventional wisdom" that adoption of a winter moratorium on the termination of utility service will result in a wholesale increase in winter nonpayment. Under this reasoning, consumers who are not subject to the disconnection of service in response to their nonpayment have no incentive to make their payments. Implicit within this argument is the assertion that the *only* incentive for making full and timely payments on a household utility bill is the threat that service will be disconnected in the face of nonpayment.

A review of the payment patterns of Iowa LIHEAP recipients served by three Community Action Agencies in central and northwest Iowa, as well as a review of payment outcomes for those same LIHEAP recipients,[11] does not support the conclusion that the existence of a winter utility shutoff moratorium results in a substantive change in payment practices. The review of this Iowa data finds that:

- Iowa's LIHEAP recipients do not experience an increase in the number of weighted "bills behind" they incur during the winter shutoff moratorium period. While average arrears increase during the winter, this increase is a reflection of the fact that winter bills are higher, not of the fact that LIHEAP recipients are a larger number of months behind in their payments.

- Iowa's LIHEAP recipients do not reduce the number of payments made each month resulting in a $0 balance during the shutoff moratorium period.

- Iowa's LIHEAP recipients continue to make payments each month during the winter moratorium period even when such payments do not reduce the account balance to $0. Partial payments continue to be made both toward bills for current usage and toward arrears.

- Iowa's LIHEAP recipients do not reduce the total dollars paid each month relative to the total bills for current usage rendered each month during the shutoff moratorium period.

- Iowa's LIHEAP recipients continue to make winter month payments equal to 90+% of the winter month bills despite the presence of the winter shutoff moratorium.

- Iowa's LIHEAP recipients do not reduce the number of total payments they make relative to the number of bills they receive during the shutoff moratorium period.

Iowa's winter shutoff moratorium is an important health and safety protection for Iowa's low-income customers who frequently find that they face high home energy bills that are simply not affordable. The moratorium has been implemented without creating substantive nonpayment problems for Iowa's utilities.

[11] Iowa's winter shutoff moratorium extends only to households certified to be eligible for LIHEAP and/or WAP.

3.d

Heat Stress Terms & Information

If there is a heat wave this summer, SEMA will be working closely with the Missouri Department of Health and Senior Services (MDH&SS). The Missouri Community Action Agencies usually loans fans to low-income families. The MDH&SS Division of Senior Services maintains a list of senior cooling centers.

The Department of Health will announce a statewide **Hot Weather Health Alert** when afternoon heat indexes of 105 degrees in a large proportion of the state are first reached (or predicted). This advisory will be upgraded to a statewide **Hot Weather Health Warning** when the afternoon heat index has been at least 105 degrees or more for two days in a large proportion of the state. Or when weather forecasts call for continued heat stress conditions for at least 24-48 hours over a large portion of the state.

A statewide **Hot Weather Health Emergency** will be issued when extensive areas of the state met the following three criterias. The criteria are 1) high-sustained levels of heat stress (105 degrees for three days), 2) increased numbers of heat-related illness and death statewide, and 3) the National Weather Service (NWS) predicts hot, humid temperatures will continue for several days in a large proportion of the state. During a statewide Hot Weather Health Emergency, SEMA becomes the state-level coordinating agency for all participating state and federal agencies and other private and volunteer organizations.

During the summer, the elderly are at greatest risk from a heat wave. In addition to the elderly, infants, young children, and people with chronic health problems (especially pre-existing heart disease) or disabilities are more vulnerable to the effects of heat waves. People who are not acclimated to hot weather, overexert themselves, are overweight, or use alcohol or drugs (including drugs such as antipsychotics, tranquilizers, antidepressants, certain types of sleeping pills, and drugs for Parkinson's disease) are at great risk. (Source: Centers for Disease Control and Prevention-Morbidity and Mortality Weekly Report)

Heat Disorder	Symptoms	First Aid
Heat Cramps	Painful spasms usually in muscles of legs and abdomen due to heavy exertion. Heavy sweating.	Stop activity and rest in a cool place. Lightly stretch or gently massage muscle to relieve spasms. Give sips of cool water.
Heat exhaustion	Heavy sweating. Skin cool, pale, and clammy. Pulse fast and weak. Breathing fast and shallow. Fainting, dizziness, vomiting, and nausea.	Get victim to a cool place. Have him/her lie down and loosen clothing. Apply cool, moist cloths. Give sips of cool water.
Heat stroke (sun stroke)	Temperature 103 or higher. No sweating, rapid pulse, fast and shallow breathing. Hot, red, dry skin. Nausea, dizziness, headache, confusion.	HEAT STROKE IS A SEVERE MEDICAL EMERGENCY. SUMMON EMERGENCY ASSISTANCE OR GET THE VICTIM TO THE HOSPITAL. DELAY CAN BE FATAL. Move the victim to a cooler environment. Use cool baths or sponging to reduce body temperature.

Table 1: A list of common heat-induced health problems and their suggested treatment (Reference: The American Red Cross)

Preventing Heat-Related Illness

Seek Air Conditioning! The most efficient way to beat the heat is to spend time in an air-conditioned area. If you do not have air conditioning in your home, consider spending some time in a shopping mall, public library or other air-conditioned location. Electric fans may be useful to increase comfort or to draw cool air into your home at night, but do not rely on a fan as your primary cooling device during a heat wave. As the air temperature rises, airflow is increasingly ineffective in cooling the body until finally, at temperatures above about 100° F (the exact number varies with the humidity) increasing air movement actually increases heat stress. For example, at 100° F a fan may be delivering overheated air to the skin faster than the body can get rid of this heat with sweating. The net effect is to add heat rather than to cool the body.

Be aware of the warning signs of heat-related illness, such as light-headedness, mild nausea or confusion, sleepiness or profuse sweating.

While outdoors, rest frequently in a shady area so that your body's thermostat has a chance to recover.

Schedule outdoor activities carefully, preferably before noon or in the evening,

If unaccustomed to working or exercising in a hot environment, start slowly, pick up the pace gradually and limit your exercise or work time.

Wear sunscreen to protect skin from the sun's harmful rays. Sunburn affects your body's ability to cool itself and causes a loss of body fluids.

Wear lightweight, light-colored, loose-fitting clothing.

When working in the heat, **monitor the condition of your co-worker**s and have someone do the same for you. If you are 65 years of age or older, have a friend or relative call to check on you twice a day when hot weather health advisories have been issued.

Stay indoors and in an air-conditioned environment. If air conditioning is not available, consider a visit to a shopping mall, public library, theater, supermarket or other air-conditioned location for a few hours.

Increase your fluid intake—regardless of your activity level. Don't wait until you feel thirsty to drink fluids. Ensure infants and children drink adequate amounts of liquids.

Avoid drinks containing caffeine, alcohol, or large amounts of sugar because they will actually cause you to lose more fluid. Also, avoid very cold beverages because they can cause stomach cramps.

Electric fans may be useful to increase comfort and to draw cool air into your home at night, but do not rely on a fan as your primary cooling device during a heat wave. When the temperature is in the upper 90s or higher, a fan will not prevent heat-related illness. A cool shower or bath is a more effective way to cool off.

Who has the greatest risk of heat-related illness?

1. Infants and children up to 4 years of age;
2. Anyone 65 years of age or older;
3. Anyone who is overweight;
4. Anyone who overexerts during work or exercise;
5. Anyone who is ill or on certain medications;
6. Avoid hot foods and heavy meals;
7. Ask your doctor whether medications you take affect your body's response to the heat;
8. Do not leave infants, children or pets unattended in a parked car.

Six Common Lightning Myths

1.) **Lightning never strikes twice.** It strikes the Empire State Building in New York City between 22-25 times each year.

2.) **Rubber tires or foam pad will insulate me from lightning.** It takes about 10,000 volts to create a one-inch spark. Lightning has millions of volts and easily can jump 10-12 feet.

3.) **Lightning rods will protect my house or outdoor festivities.** Lightning rods are "preferential attachment points" for lightning. You do not want to "draw" lightning to any area with people nearby.

4.) **We should get off the water when boating, canoeing or sailing.** Tall trees and rocky outcrops along the shore and on nearby land may be a more dangerous place.

5.) **A cave is a safe place in a thunderstorm.** If it is a shallow cave or old mine with metallic filings nearby, it can be a deadly location during lightning.

6.) **Injured persons carry an electrical charge.** Injured persons do not carry an electrical charge and can be handled safely. Apply First Aid including CPR (if you are qualified) procedures to a lightning victim. Call 911 and send for help immediately.

Did You Know?

The National Weather Service reports that 85% of lightning victims are children and young men between the ages of 10-35 engaged in recreational activities. The NWS reports that 25% of the strike victims die.

Approximately 40% of the strike locations are unreported. Of those reported, about 27% are open fields and recreational areas, other than golf courses. In those reported locations (other than golf courses), approximately 14% of the people stand under trees. Golf courses account for about 5% of the lightning strike locations. Other common locations are heavy equipment, telephone, radio transmitter or antenna related.

Research shows that sequential lightning strikes can be 6-8 miles apart.

Safety Tips

If outdoors avoid water, high ground or open spaces.

If indoors avoid water, doors and windows, take head sets off and do not use telephones.

Suspend outdoor activities for 30 minutes after the last observed lightning strike.

Caught outside – crouch down, put your feet together and place your hands over your ears to minimize hearing damage from thunder. Seek clumps of scrubs or trees of uniform height or seek ditches, trenches or low ground. Just be aware that if there is rain, a ditch may quickly fill with water.

Thunderstorm Awareness

Thunderstorms are dangerous because they bring the dangers of lightening, high winds, floods and flash floods from extremely heavy rainfall. By definition, a **thunderstorm** is a cloud that contains lightening and thunder. A typical storm is usually 15 miles in diameter lasting an average of 30 minutes. Every thunderstorm produces lightening, which kills more people each year than tornadoes.

Lightening often strikes outside of heavy rainfall and may occur as far as 10 miles from the rain. If you are outside during a lightening storm, seek inside shelter immediately and stay off the telephone. Debunking a myth, rubber-soled shoes and/or rubber tires provide NO protection from lightening. However if lightening hits the car you are in, the steel frame of a hard topped vehicle will provide increased protection provided you are not touching metal when your car is hit by lightening.

A **severe thunderstorm** is a thunderstorm that contains large hail (3/4 inch in diameter or larger), damaging or straight-line winds (58 mph or greater) and/or a tornado. A downburst is a strong outrush of wind formed by rain cooled air. Strong downbursts, which produce extensive damage, are often mistaken for tornadoes. A downburst can easily overturn a mobile home; tears roofs off houses and topple trees. The National Weather Service considers a thunderstorm severe if it produces hail at least 3/4 inches in diameter, winds of at least 58 mph and/or

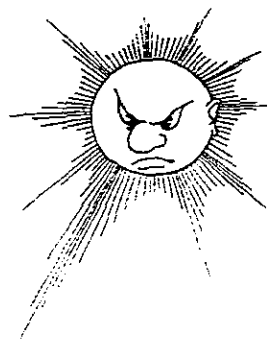
Heavy rain from thunderstorms can lead to **flash flooding**. The power of flowing water can easily sweep away trees, buildings, automobiles and people. Missourians needlessly die when they drive their cars into **low water crossings** and drown when the car is swept off the road.

On an average, it takes about two feet of water for a car to float downstream. However, it takes less than one foot of water for a smaller car to stall. Once a car stalls, the driver normally gets out to walk to safety. If the driver is not careful, he could be swept into deeper water beneath the low water crossing.

NEVER drive into a flooded area. NEVER drive around road barricades. NEVER assume the water isn't deep. Looks can be deceiving. How many times have television crews captured dramatic footage of rescue workers plucking victims out of flooded water downstream from low water crossings? While the water may only look two feet deep, it might be closer to five or six feet deep.

Be proactive. If you are camping near a small stream, be prepared to move quickly if flooding occurs. Heavy rain upstream may lead to serious flooding near your campsite with little or no warning. Avoid camping near streams, if rain is forecast.

Missouri Summer Weather Safety Week June 3 - 7, 2002



Two of the biggest weather hazards that affect the United States typically occur during the summer months: Lightning and Excessive Heat. The following table illustrates that pretty well.

United States Average Deaths

HEAT	LIGHTNING	TORNADO	FLOOD	HURRICANE
*350	73	68	135	16

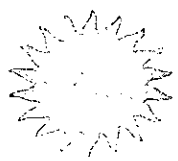
Table 1. Average number of fatalities per year due to weather phenomena over a 30 year period. The heat figure, 350, covers the period from 1979 to 1995.

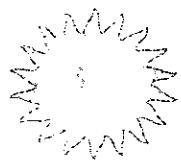
Missouri Heat Related Deaths*

Year	2001	2000	1999	1998	1997	1996	1995	1994
Deaths	47	23	92	12	9	7	57	14

* Source: Missouri Department of Health and Senior Services (DHSS). For additional statistics and information visit the following DHSS site on the World Wide Web: **www.health.state.mo.us**

The National Weather Service, the Missouri Department of Health and Senior Services, and the State Emergency Management Agency have joined together to promote Missouri Summer Weather Safety Week. The following pages include important safety information that can save peoples lives. Please help spread the word about Lightning and Heat Safety so we can have a safe summer.





Lightning Overview

At any given moment, there are 1,800 thunderstorms in progress somewhere on Earth. This amounts to 16 million storms a year! In the United States, there are an estimated 25 million cloud-to-ground lightning flashes each year. While lightning can be fascinating to watch, it is also extremely dangerous.

Underrated Problem

According to statistics kept by the National Weather Service, the 30 year average for lightning fatalities across the country is 73. Lightning usually claims only one or two victims at a time, and because lightning does not cause mas destruction, such as from a tornado event or a hurricane, lightning generally receives much less attention than the more destructive storm-related events. Due to under reporting, it is estimated that, more realistically, about 100 - 120 deaths per year occur because of lightning. Documented lightning injuries in the United States average about 300 per year; however undocumented lightning injuries are likely much higher.

In Missouri there have been **81** deaths attributed to lightning from 1959 - 2001, an average of 2 deaths per year. This is right behind the average of 3 deaths per year caused by tornadoes. Missouri ranks 17th nationally in lightning deaths per state.

The last documented lightning death im Missouri according to National Weather Service statistics occurred on June 16, 1996. A 78 year old woman was killed in Joplin when lightning struck a tree about 50 feet from where she was standing.

Excessive Heat: Another Underrated Problem

Many people do not realize how deadly a heat wave can be. In contrast to the visible, destructive, and violent nature of floods, hurricanes, and tornadoes, a heat wave is a "silent killer". In 1995 alone, 1021 Americans perished in heat waves, including 633 in Illinois and 57 in Missouri. The Centers for Disease Control and Prevention reports that an average of 350 people perish each year due to the effects of heat.

What is a Heat Wave?

A heat wave is a period of excessive heat lasting two days or more that leads to illnesses and other stresses on people with prolonged exposure to these conditions. High humidity, which often accompanies heat in Missouri, can make the effects of heat even more harmful. While heat related illness and death can occur due to exposure to intense heat in just one afternoon, heat stress on the body has a cumulative effect. Consequently, persistence of a heat wave increases the threat to public health.

The Urban Heat Problem

Most heat-related deaths occur in cities. **Brick and mortar buildings, asphalt streets, and tar roofs** absorb daytime heat and slowly release it at night. Consequently, temperatures in urban areas can be warmer than rural areas by several degrees both day and night. This is commonly called the urban "heat island" effect. In addition to the burden of heat, stagnant conditions often develop during heat waves, with pollutants increasing in concentration near the ground and contributing further to public health problems during heat waves.

Socioeconomic factors also place urban residents under extra risk. Some people in cities do not have air conditioning, while people in high crime areas may be afraid to open their windows or venture out to cooler public buildings.

The Science of Lightning

Lighting has been seen in volcanic eruptions, extremely intense forest fires, surface nuclear detonations, heavy snowstorms, and in large hurricanes. However it is most often seen in individual thunderstorms. We know the cloud conditions necessary to produce lightning, but cannot forecast the location or time of the next stroke of lightning from a storm.

Ice is critical to the Lightning Process

The formation of ice in a cloud appears to be a very important element in the development of lightning in a storm. The collision of ice and water particles causes separation of the positive and negative electric charges in the particles. Positive charged ice particles tend to collect in the upper parts of the storm, with negative charged particles in the middle and lower parts of the storm. These opposite charges attract, thus "in-cloud" lightning is often produced.

Lightning to the Ground

As the negative particles gather at the bottom of the storm cloud, a pool of positively charged particles gather along the ground and travel with the storm. As the differences in charges increase, positively charged particles rise up taller objects such as trees, houses, and even people. If you are near a storm, and your hair stands on end, the particles are moving up you! The negative charged particles extend down from the cloud in "steps" and form a step leader. When it gets close enough to the ground or a tall object filled with positive particles, a channel is formed and an electrical transfer takes place. There can be several "strokes" which you see as flickering light. The channel heats to about **50,000 degrees Fahrenheit**, which is about 5 times hotter than the surface of he sun!. The rapid expansion of the heated air around the channel breaks the sound barrier, and you hear thunder.

One lighting stroke can generate between **100 million and 1 billion volts of electricity!**

Who Is Most Vulnerable During a Heat Wave?

The elderly population segment is the most vulnerable to the dangers of heat. Of the 522 deaths that occurred in Chicago during the July 12-16, 1995 heat wave, 371 (73 percent) were age 65 or older. The elderly suffer due to the diminished ability to perspire. Since the function of perspiration is to provide evaporation, which in turn provides cooling, the elderly have a reduced capacity to release heat from the body.

In addition to the elderly, infants, young children, and people with chronic health problems (especially pre-existing heart disease) or disabilities are more vulnerable to the effects of heat waves. People who are not acclimated to hot weather, overexert themselves, are obese, or use alcohol or drugs (including drugs such as antipsychotics, tranquilizers, antidepressants, certain types of sleeping pills, and drugs for Parkinson's disease) are at great risk. (Source- Centers for Disease Control and Prevention-Morbidity and Mortality Weekly Report)

Measuring the Combined Effects of Heat and Humidity

The National Weather Service uses the **Heat Index (HI)** to compute the "apparent temperature," which is a measure of how hot it feels to people at a certain combination of temperature and humidity. The heat index values used in forecasts, advisories, and warnings assume an average size adult, with light clothing, in the shade, with a 5 mile per hour wind. Being in full sun, or in an area with little air movement, can increase the apparent temperature, and thus increase the risk for adverse effects from the heat and humidity. Winds greater than 5 miles per hour usually enhance evaporative cooling and decrease the apparent temperature and the health threat from the heat. As noted, the impacts of heat are cumulative over time. The greatest number of heat-induced illnesses and fatalities usually peak two days after the maximum heat index values occurred.

The National Weather Service in St. Louis will issue **Heat Advisories** when a HI of 105 F will be reached for at least 3 hours. A **Heat Warning** will be issued if the HI will reach 105 for at least 3 days or more, or if the HI will reach 115 F on a day.

Lightning Safety Awareness - An Educational Problem

While many people think they are aware of the dangers of lightning, the vast majority are not. Lightning can strike as much as 10 miles away from the rain area of a thunderstorm; that's about the distance that you are able to hear the thunder from the storm. While virtually all people take some protective actions during the most dangerous part of thunderstorms, many leave themselves vulnerable to being struck by lightning as thunderstorms approach, depart, or are nearby. Although some victims are struck directly by the lightning discharge, many victims are struck as the current moves in and along the ground.

A 1997 study by the National Oceanic and Atmospheric Administration (NOAA) of 35 years of USA lighting statistics showed the following:

1. **Location of lightning incident**: 40% Not reported, 27% Open field. 14% Under trees, 8% Water related, 5% Golf related, 3% Heavy equipment, 2.4% telephone related, 0.7% Radio, transmitter and antenna related

2. **Gender of Victims**: 84% Male, 16% Female

3. **Months of Most Incidents**: July 30%, August 22%, June 21%

A study co-sponsored by the National Center of Atmospheric Research and NOAA for the years 1959-1994 listed the top states for deaths and injuries.

Deaths: Top 5 States: Florida, North Carolina, Texas, New York, and Tennessee (Missouri ranks 17th)

Injuries: Top 5 States: Florida, Michigan, Pennsylvania, North Carolina, and New York (Missouri ranks 31st)

Common Heat Related Disorders

Heat Disorder	Symptoms	First Aid
Heat Cramps	Painful spasms usually in muscles of legs and abdomen due to heavy exertion. Heavy sweating.	Stop activity and rest in a cool place. Lightly stretch or gently massage muscle to relieve spasms. Give sips of cool water.
Heat exhaustion	Heavy sweating. Skin cool, pale, and clammy. Pulse fast and weak. Breathing fast and shallow. Fainting, dizziness, vomiting, and nausea.	Get victim to a cool place. Have him/her lie down and loosen clothing. Apply cool, moist cloths. Give sips of cool water.
Heat stroke (sun stroke)	Temperature 103 or higher. No sweating, rapid pulse, fast and shallow breathing. Hot, red, dry skin. Nausea, dizziness, headache, confusion.	HEAT STROKE IS A SEVERE MEDICAL EMERGENCY. SUMMON EMERGENCY ASSISTANCE OR GET THE VICTIM TO THE HOSPITAL. DELAY CAN BE FATAL. Move the victim to a cooler environment. Use cool baths or sponging to reduce body temperature.

Table 2: A list of common heat-induced health problems and their suggested treatment (Reference: The American Red Cross)

Lightning Safety

Outdoors

* Remember, lightning can strike up to 10 miles from the rain area. Go quickly inside a completely enclosed building before the storm arrives. Do not go to a carport, open garage, covered patio or open window. A hard topped all metal vehicle also provide good protection

* If no shelter is available, do not take shelter under a tree. Avoid being the tallest object in the area. If only isolated trees are nearby, crouch down on the balls of your feet in the open, keeping twice as far away from a tree as it is tall.

* Get out of the water, off the beach, and out of small boats or canoes. Avoid standing in puddles of water even if wearing rubber boots.

* Do not use metal objects such as golf clubs, metal bats, fishing rods, or metal tools.

* Stop tractor work and heavy construction equipment, especially when pulling metal equipment.

Indoors

* Stay there! The best protection from lightning is a house or other substantial building. However, stay away from windows, doors, and metal pipes.

* Do not use electric appliances during the storm. Turn off sensitive equipment such as televisions, VCR's, and computers.

* Telephone use is the leading cause of indoor lightning injuries in the United States. Do not make a call unless it is an emergency.

Excessive Heat Safety

* Drink plenty of water and natural fruit juices, even if you're not thirsty. Avoid alcoholic beverages and drinks with caffeine, such as coffee, tea, and colas.

* Wear loose-fitting, lightweight, light-colored clothing. If you must go out, use sunscreen and wear a wide-brimmed hat. Remember that sunburn reduces the skin's ability to provide cooling.

* Avoid going out during the hottest times of the day. Take frequent breaks if working during the heat of the day.

* Using a buddy system between co-workers in high heat-stress jobs can help ensure that signs of heat stress do not go unnoticed.

* Inside during the day, keep shades drawn and blinds closed. Use air conditioning whenever available. Even just two hours per day in air conditioning can significantly reduce the risk of heat-related illness.

* Fans should only be used in a ventilated room. Blow hot air out a window with a fan during the day, and blow in cooler air at night.

* Take cool (not icy cold) baths or showers. Eat frequent, small meals. Avoid high protein foods, which increase metabolic heat. Fruits, vegetables, and salads constitute low protein meals.

* Do not leave children or pets in a closed vehicle with the windows up. Temperatures inside a closed vehicle can reach over 140 degrees within minutes.

* Provide extra water and access to a cool environment for pets.

* Listen to NOAA Weather Radio or media sources to keep up with the latest heat watches, warnings, and advisories.

Relative Humidity (%)													
T	40	45	50	55	60	65	70	75	80	85	90	95	100
110	136												
108	130	137											
106	124	130	137										
104	119	124	131	137									
102	114	119	124	130	137								
100	109	114	118	124	129	136							
98	105	109	113	117	123	128	134						
96	101	104	108	112	116	121	126	132					
94	97	100	103	106	110	114	119	124	129	135			
92	94	96	99	101	105	108	112	116	121	126	131		
90	91	93	95	97	100	103	106	109	113	117	122	127	132
88	88	89	91	93	95	98	100	103	106	110	113	117	121
86	85	87	88	89	91	93	95	97	100	102	105	108	112
84	83	84	85	86	88	89	90	92	94	96	98	100	103
82	81	82	83	84	84	85	86	88	89	90	91	93	95
80	80	81	81	82	82	82	83	83	84	85	86	86	87

The Heat Index (Apparent Temperature) can be found by taking the temperature (number on the left) and relative humidity value (number at the top) and matching them on this table. For example, a temperature of 90 degrees Fahrenheit and a relative humidity of 45 percent gives you a heat index of 93 degrees.

National Weather Service
12 Missouri Research Park Drive
St. Charles, Missouri 63304-5686

Visit Missouri National Weather Service Offices on the World Wide Web
http://www.crh.noaa.gov/lsx/
http://www.lightningsafety.noaa.gov

For Immediate Release
Contact: (your name and telephone number)

Winter Awareness Day Set for November 20

The National Weather Service, the State Emergency Management Agency and your local Emergency Management Agency set Wednesday, November 20, 2002, as Winter Awareness Day. "Since we are approaching the winter season, this is the perfect time for our citizens to begin getting prepared for winter snow, blizzards, and freezing weather," said_____ , Emergency Management Director.

The winter awareness campaign encourages citizens to prepare for the winter season and reminds them how to protect themselves during a severe winter storm, _____ said. A winter storm may range from moderate snow over a few hours to blizzard conditions with blinding, wind driven snow or freezing rain that lasts for several days. Remember the January ice storm? Many communities were impacted for days and weeks. Some rural residents were without electricity for weeks.

Preparing For Winter Weather...

Monitor weather reports from the National Weather Service. The two most important terms are Winter Storm Watch and Winter Storm Warning. **A Winter Storm Watch** indicates that severe winter weather may affect your area. A **Winter Storm Warning** indicates severe weather conditions are definitely on the way and to take precautions.

Citizens may have the following items: a generator, a radio with fresh batteries, rock salt to melt snow on sidewalks or driveways, secure an alternate fuel source, insulate attics and windows, winterize the family car and keep a winter car kit in the trunk of the car.

During a cold snap, wear several layers of loose-fitting, lightweight warm clothing rather than one layer of heavy clothing. Mittens protect your fingers from the cold better than gloves. Wearing a hat will prevent body heat loss through the top of the head. Avoid overexertion, such as shoveling the snow from the driveway. The cold taxes your body, _____ said.

Check on your elderly neighbors and watch children playing outside for signs of frostbite or hypothermia. Frostbite is a severe reaction to the cold. Frostbite symptoms include loss of feeling and a white or pale appearance in fingers, toes, nose or earlobes. Hypothermia results when the body's core temperature is less than 35 degrees centigrade. Symptoms include uncontrollable

shivering, slow speech, memory loss, stumbling, drowsiness and exhaustion. Seek immediate medical attention if your elderly neighbors or children show signs of frostbite or hypothermia, _____said.

If you go out in a storm, drive defensively and allow more time to get to your destination. Let someone know your travel route and a time to expect you. If you are stranded, remain in your car and wait for help, _____ said.

During a winter storm, read your newspaper, watch the television or listen to the radio. Your local emergency management agency provides the media with emergency sheltering or alternate travel information.

-30-

For Immediate Release
Contact: (Your Name and telephone number)

Prepare before the first Winter Snow Storm....

Your Family Disaster Plan Can Keep You Snug and Safe!

If you knew a disaster was coming, wouldn't't you make preparations to protect yourself and your family? While we may not know when the first ice storm is coming, you can take steps to keep your family safe now. The first step is updating your family's disaster plan, learn and follow some simple winter safety rules, **(put your name and title here)** of the **(your community)** Emergency Management Agency advises.

Family Disaster Plan

During a year, there are a lot of potential disasters that could impact your family: a Hazardous Material accident could force your family to evacuate your home; a winter storm, an earthquake or tornado could cut off basic services such as gas, water, electricity or phone service.

There are six basic types of supplies you should have packed in a special container (such as a large trash container, a backpack or a duffle bag) in case of a natural or man-made disaster. Those supplies include:

* Water - store one gallon per person per day

* Ready to eat canned food, canned juices, high-energy foods, vitamins, comfort foods and of course special foods for infants or family members on a special diet

* First aid supplies including bandages, antiseptic, soap, latex gloves, non-prescription drugs such as aspirin, antacid, anti-diarrhea medication, etc.

* Clothing and bedding to include sturdy shoes, rain gear, blankets, hats, gloves, thermal underwear and sunglasses

* Tools and emergency supplies such as: battery operated radio, flashlights, fire extinguisher, pliers, shut off wrench, matches in a water proof container, liquid soap, personal items, household chlorine bleach

* and special items for an infant, medication for family members, books and games for entertainment and important family documents.

* Always keep your gas tank full!

- more -

Winter Storm Preparations

One of the key rules is to keep ahead of the weather this winter by listening to the latest weather reports on local radio and television. In preparing for a severe storm or blizzard, you should have the following items readily on hand at home:

*Several days supply of non-perishable food and drinking water.

*Extra blankets.

*A battery operated radio.

*A flashlight and fresh supply of batteries.

*An emergency or backup heating system.

Be sure to check for an adequate supply of heating fuel and be aware of the fire hazards posed by the prolonged use of stoves, fireplaces and space heaters.

The safest place to be during a winter storm or cold snap is indoors. Dress properly before venturing outdoors. Wear several layers of loose fitting, lightweight clothing. Outer garments should be tightly woven, water repellent, and hooded.

Avoid overexertion when outdoors, including when snow shoveling. Be aware that cold weather itself, without any physical exertion, puts an extra strain on the heart.

Safety Checks for Your Vehicle

Before severe storms and cold arrive, all vehicles should be winterized with particular attention to the engine, fuel, ignition and exhaust systems. Make sure that tires and brakes are in good condition and that the heater, windshield wipers and lights are working properly. Also check the antifreeze level and **always keep the gas tank filled**.

Each vehicle should be equipped with an emergency winter storm kit which should include: non-perishable foods, extra clothes, blankets, a flashlight, fresh batteries, a shovel, booster cables, flares, and bags of sand.

Motorists who become stranded in their vehicles should never try to walk to safety. Conserve fuel and heat by running the heater and engine sparingly. To prevent carbon monoxide poisoning, open a car window slightly and periodically clear the snow away from the exhaust pipe.

By following the safety measures and staying prepared during cold weather and storm, you can avoid the fatal effects of winter during the next few months.

-30-

For Immediate Release
Contact: (write your name and phone number!)

Christmas Gifts To Supplement Your Family Disaster Plan

The following Christmas gift suggestions are not just for campers and outdoor enthusiasts. These suggestions can help you get started on supplies you will need to supplement your family's disaster plan. Your family disaster plan and supplies can help you and your family cope with natural disasters such as winter storms, tornadoes or flooding. Thinking ahead and being prepared can do much to reduce or prevent the tremendous heartache and financial hardships of these disasters. While not your traditional Christmas gifts, these items can make a huge difference in the year ahead.

Suggested disaster ready gifts include:

* A smoke detector with extra batteries

* Household fire extinguishers for kitchen and all bedrooms (a 5 pound A-B-C type is the best)

* A foldable ladder for evacuation of a second story in a fire

* A heavy duty flashlight with extra batteries and a battery powered lamp

* A first aid kit

* A battery powered radio with extra batteries

* A NOAA Weather Radio with battery backup and tone-alert feature to receive weather and other emergency alerts

* A sturdy plastic tub filled with bottled water and non-perishable, high energy food and canned goods

* A camp stove or canned heat stove with extra fuel

* A year-long policy for Flood Insurance, available from your insurance agent and backed by the federal government

* A winter car kit that includes emergency flares, shovel, windshield scraper, battery-powered radio, flashlight, water, snacks, tow chain or rope, tire chains and flourescent distress flag

* During a drought, the gift of a gardener to cut back combustible plants and vegetation from around the house

Power Outages – What to Do When the Lights Go Out

Everyone experiences power interruptions from time to time. Unfortunately, many of these outages come at times of weather extremes or accompany various disasters. When the power is out we lose our primary source of artificial light and many lose our source of heat and water as well. When the power is out, safety becomes a major concern.

The following information will help you get prepared when the lights go out said _____, Emergency Management Director.

- **Register life-sustaining equipment** in you home with your utility company -- you can be put on a priority list to establish electricity. Lifesaving equipment might include ventilators, home dialysis machines, neonatal monitors, etc.
- **Consider purchasing a small generator** for your home or know where to rent one if you use life-sustaining equipment that requires electrical power.
- **Post the telephone numbers** of new construction, repairs and power outage listings of your local utility.
- **If you own an electric garage door opener**, learn how to open the door without power.
- **Prepare a power outage kit.** For short duration outages, consider having glow light sticks, flashlights, a battery-powered radio, extra batteries and a wind-up clock on hand.
- Make sure you have an **alternate heat source** and a supply of fuel.
- **Have a corded telephone available.**
- Remember that cordless phones do not work when the power is out.
- **When installing generators** follow the manufacturer's instructions and have it inspected by the utility company and the local code enforcement department.
- **If your house is the only one without power**, check your fuse box or circuit breaker panel. Turn off large appliances before replacing fuses or resetting circuits.
- **If power is out in the neighborhood**, disconnect all electrical heaters and appliances to reduce the initial demand and protect motors from possible low voltage damage.
- **If you leave your home**, turn off or unplug heat-producing appliances.
- **Unplug computers and other voltage sensitive equipment** to protect them against possible surges when the power is restored.
- **Conserve water, especially if you are on a well.**
- **Keep doors, windows and draperies closed** to retain heat in your home.
- **Keep refrigerator and freezer doors closed.** If the door remains closed, a fully loaded freezer can keep foods frozen for two days.
- **Be careful of fire hazards** caused by candles or other flammable light sources.
- **When using kerosene heaters,** gas lanterns or stoves inside the house, maintain ventilation to avoid a build-up of toxic fumes.
- **Connect lights and appliances directly to a generator,** not to an existing electrical system.

NOTE: Leave one light switch in the ON position to alert you when the service is restored.

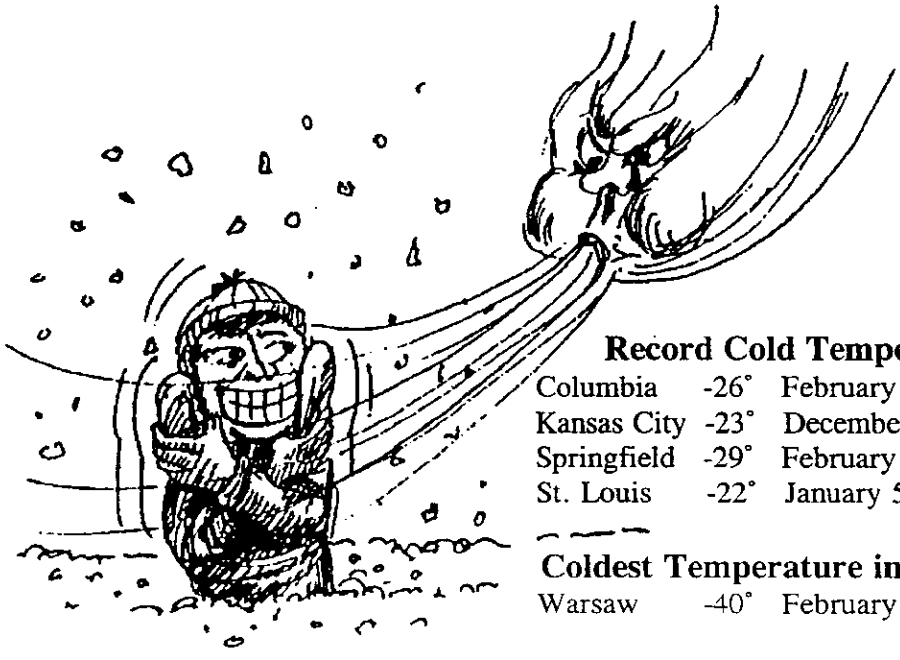
Missouri Winter Weather Awareness Day November 20, 2002

The National Weather Service (NWS), along with the Missouri State Emergency Management Agency (SEMA), the State Department of Elementary and Secondary Education, and the Missouri Highway Patrol, has designated November 20, 2002 as Missouri Winter Weather Awareness Day. Winter storms and cold temperatures can be extremely dangerous. We urge people to use this day to review the hazards and safety rules of winter weather so they are prepared for the upcoming winter season.

The Holiday traveling season is just around the corner. Now is the time to make preparations and plan ahead. A little planning can make your travels much safer and more enjoyable. Do some research and learn what kind of weather you can expect along your journey. The United States is a big country, and the weather can vary greatly and change quickly from place to place. So don't be caught by surprise! Always be prepared.

The National Weather Service will transmit winter weather safety information on the National Weather Service Weather Wire and over NOAA Weather Radio during this day, and during the week. SEMA will send out information to local emergency managers, public safety directors and the media. **The media is urged to use this information to help spread the word about winter weather safety!** For more information, contact the National Weather Service in St. Louis. (If you are in Clark or Scotland County, contact the NWS office in Davenport, IA, or if in Dunklin or Pemiscott County, contact the NWS office in Memphis, TN.) These numbers are for use by the general public.

St. Louis	(314) 441-8467	http://www.crh.noaa.gov/lsx
Davenport, IA	(319) 386-3976	http://www.crh.noaa.gov/dvn
Memphis, TN	(901) 544-0399	http://www.srh.noaa.gov/meg



Record Cold Temperatures

Columbia	-26°	February 12, 1899
Kansas City	-23°	December 22,23, 1989
Springfield	-29°	February 12, 1899
St. Louis	-22°	January 5, 1894

Coldest Temperature in Missouri

Warsaw	-40°	February 13, 1905

EXTREME COLD

Extreme cold temperatures are a big danger during winter months in Missouri. Prolonged exposure to the cold can cause frostbite, hypothermia, or in extreme cases death. **In fact, excessive cold is one of the leading weather-related causes of death in the state.** Infants and the elderly are most susceptible to extreme cold. Freezing temperatures can also cause damage to crops and property.

Deaths in Missouri: Extreme Cold by Winter Season *										
	1991-92	1992-92	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01
Deaths	6	12	13	11	20	14	7	7	12	19

*Source: Missouri Department of Health, Office of Epidemiology

- **Frostbite** occurs when the skin becomes cold enough to actually freeze. A loss of feeling and a white or pale appearance in extremities, such as fingers, toes, ear lobes, or the nose are symptoms of frostbite.

- **Hypothermia** (Low Body Temperature) can occur during longer periods of exposure when the body temperature drops below 95°F. A person will become disorientated, confused, and shiver uncontrollably, eventually leading to drowsiness and apparent exhaustion. In severe cases, death is possible.

WIND CHILL

Wind Chill is the term used to describe the rate of heat loss on the human body resulting from the combined effect of low temperature and wind. As winds increase, heat is carried away from the body at a faster rate, driving down both the skin temperature and eventually the internal body temperature. While exposure to low wind chills can be life threatening to both humans and animals alike, the only effect that wind chill has on inanimate objects, such as vehicles, is that is shortens the time it takes the object to cool to the actual air temperature (it cannot cool the object below that temperature). For example, water freezes at 32 degrees, regardless of what the wind chill temperature is.

Last year, the NWS implemented a NEW WIND CHILL TEMPERATURE INDEX (WCT) that gives a more accurate information of the "wind chill" terminology. Read more about the WCT on the following page.

Wind Chill Temperatue (WCT)

For the 2001/2002 winter season, the NWS implemented a new WCT. The new formula made use of advances in science, technology, and computer modeling to provide a more accurate, understandable, and useful formula for calculating the dangers from winter winds and freezing temperatures. In addition, clinical trials Have been conducted and the results of those trials have been used to verify and improve the accuracy of the formula. The WCT incorporates the following factors:

- Use wind speed calculated at the average height (5 feet) of the human body's face instead of 33 feet (the standard anemometer height);
- Is based on a human face model;
- Incorporates modern heat transfer theory (heat loss from the body to its surroundings, during cold and breezy/windy days);
- Lowers the calm wind threshold to 3 mph;
- Uses a consistent standard for skin tissue resistance; and
- Assumes the worst case scenario for solar radiation (clear night sky).

As with any other tool, or index used, it is important to know how to use the WCT. For example, there is some work that has to be done outside. For example, the temperatures is 0 F, with a wind of 15 miles an hour. How long would it be safe to be outside before you would have to worry about frostbite. According to the chart below, about 30 minutes. This could have an impact on your work, and on how to dress. You would want to make sure and get the ears, nose, fingers and feet covered properly since these areas are usually subject to frostbite first.

WIND CHILL CHART

Wind	Temperature (°F)										
Calm	35	30	25	20	15	10	5	0	-5	-10	-15
5	31	25	19	13	7	1	-5	-11	-16	-22	-28
10	27	21	15	9	3	-4	-10	-16	-22	-28	-35
15	25	19	13	6	0	-7	-13	-19	-26	-32	-39
20	24	17	11	4	-2	-9	-15	-22	-29	-35	-42
25	23	16	9	3	-4	-11	-17	-24	-31	-37	-44
30	22	15	8	1	-5	-12	-19	-26	-33	-39	-46
35	21	14	7	0	-7	-14	-21	-27	-34	-41	-48

Light Shading: Frostbite can occur in 30 minutes
Dark Shading: Frostbite can occur in 15 minutes or less

Winter Weather Safety

Whatever your location, plans, or circumstances, planning ahead for severe winter weather can save your life.

On the road...

* Plan you trip ahead of time. Check what kind of weather is typical of the area and check the latest forecast before you leave. Learn the names of some of the counties you will be traveling through. County names are used to identify areas at risk. Let other people know your itinerary and how to reach you.

* Winterize your vehicle for the winter. Check your wipers, tires, lights and fluid levels (radiator, windshield washer, power steering, oil and breaks) regularly. Make sure the heater is working properly. Check the exhaust system for leaks. Deadly carbon monoxide can enter the vehicle from exhaust leaks. Lubricate the door and trunk locks with lock lubricant to prevent them from freezing.

* Prepare a winter storm survival kit. Some items to include: blankets/sleeping bags, flashlight with extra batteries, first-aid kit, knife or scissors, high calorie, non-perishable food, water container and a small can to melt snow for drinking water, extra clothing to keep dry, sand or kitty litter, shovel, tool kit, rope, windshield scraper, booster cables, and compass.

At home...

* Winteriże your home. Make sure the attic and walls are insulated properly. Calk and weatherstrip doors and windows. Istall storm windows or cover windows with plastic. Locate and insulate pipes most susceptible to freezing-typically those near outer walls, in crawl spaces or attics. Make sure you and your family know how to shut off the water in case pipes burst.

* Have your furnace checked before winter arrives. Have some type of emergency heating equipment (fireplace, wood burning stove, space heater) in case you lose you primary heat source. Make sure any such equipment is properly maintained and use it according to the manufacturers directions. Deadly gases are often given off from such equipment is not used properly. Have a fully charged fire extinguisher on hand. The fire department may have trouble reaching you in severe winter conditions.

* Have emergency supplies on hand in case you become isolated. Have a battery powered radio and extra batteries. Have extra food that does not require cooking or refrigeration. Make sure you have extra medications or special items for babies, the disabled or the elderly. Keep a supply of extra water. Have a supply of salt to melt ice on walkways and sand to improve traction.

* Cold weather puts a strain on your heart. Take your time working outside, shoveling snow, or pushing a car. Regardless of you age or condition, avoid overexertion in winter weather.

3.e

Gentry W. Trotter
President/Founder
Cool Down St. Louis

A Need for a Hot Weather Rule

It is certainly a pleasure to be here with you today. Cool Down St. Louis, is a not-for-profit, 501 (c) (3) advocacy, non-utility charity. It goals are to provide advice, financial resources, and referrals to at-risk elderly and disabled people and low-income families with small children during the summer months. Cool Down St. Louis developed "Be A Good Neighbor - Check on You Neighbor," a community awareness and outreach program.

The public service campaign was followed by a massive mailing of Cooling Assistance Cards to more than 1,100 congregations of all faiths through the sponsorship of the St. Louis Metropolitan Clergy Coalition. The cards provided health and safety tips for the summer, and how the needy families could find resources including free air-conditioners and cooling grants for paying outstanding electric bills.

During the past summer, Cool Down St. Louis accepted new and used air-conditioners with social service and community action organizations in Missouri and Illinois. The agencies qualify at-risk families in need of cooling and electric restoration.

We strengthen our public awareness efforts through strong electronic public service announcements, in an effort to save lives during the summer.

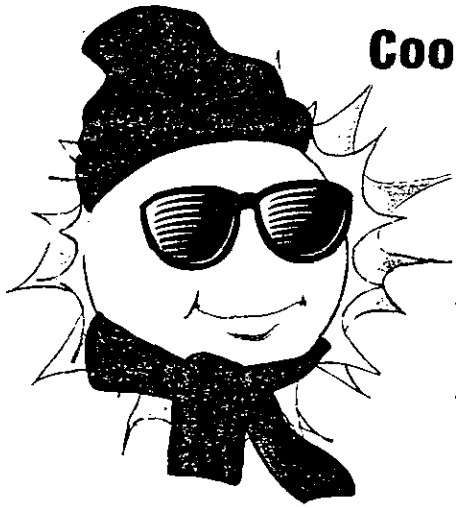
The AmerenUE chairman informed us earlier this year, that its utility company has a Hot weather program. However, we mentioned to him, that the Missouri Public Service Commission needs to develop and mandate a more comprehensive regulated Hot Weather Rule which fully protects the financial, heath and safety well-being of its ratepayers, in particular seniors, the disabled and low-income families with small children.

The Eastern parts of Missouri is in desperate need of programs which protect those who are finding electricity non-affordable during the hot summer weather. There is also fewer funding opportunities in the summer for cooling energy assistance and this is very dangerous.

Finally, the Public Service Commission needs to appreciate that high cooling bills have a dramatic negative impact on low-income ratepayers and then they are faced with higher winter natural gas bills. The needy raterpayers will never be able to play catch as monologies.

The public awareness programs, we do are just stop-gaps to raise awareness on the need to protect oneself or a neighbor. The reality is that there are not enough funds to ensure that the needy do not fall victim of heat-related strokes and illnesses. A mandatory Hot Weather Rule is essential for the well being and safety of all Missouri ratepayers.

Be A Good Neighbor...
Check On Your Neighbors



Cool Down Assistance Card

1. Do you need an air-conditioner?
2. Do you need your electric restored?
3. Are you having difficulty paying your electric bill?
4. Did you call your utility company to negotiate?
5. Do you feel unusually weak, dizzy or confused?

My Name is _____ (phone) _____, and I am your neighbor. I wanted to drop by, to see if you or anyone within your household required any cooling assistance in your home.

How Can I help you?

Save your Life - Turn on the Air!

1-800-427-4626 Cooling Centers
Very Weak, Dizzy or Confused? -- Call 911
314-241-7668 - Electric and Air-Conditioning Assistance
Serving St. Louis Metropolitan counties in Missouri and Illinois

Save A Life and Read These Tips
DO NOT LET THE HEAT PUT YOU IN A PANIC!

1) If you are feeling ill due to the lack of electricity or air-conditioning, don't hesitate to call your doctor or **911**.
2) Use air-conditioning without hesitation and don't worry about paying your electric bill.
3) When you receive your disconnection notice do not panic, call the electric company immediately and attempt to negotiate.
4) If you are a senior or disabled person let your local electric company know immediately that you are having difficulty paying your bill.
5) Always attempt to sign-up on a budget plan with your electric company.
6) If you are at risk for heat-related illnesses, do not hesitate to ask your neighbors, relatives or a friend to check on you daily, especially when the temperature is in the 90s.
7) Limit activities in the middle of the day when temperatures are at their highest.
8) Drink plenty of cool water and other non-alcoholic and non-caffeine liquids.
9) Limit cooking to keep indoor temperatures down and avoid hot, heavy and greasy meals.
10) Do not increase salt or potassium intake without consulting your physician.
11) Take advantage of public air-conditioning centers when temperatures are in the 90s.
12) When calling your social service or community action organization for assistance always provide them with the necessary medical or income documentation.
13) Don't ever let a fan blow directly on you when the temperatures are high. This can actually increase your temperature and cause heat stroke.
14) Don't ever use a fan in a closed room without windows or doors open to the outside.
15) Always wear light and loose fitting clothing during the summer.

WE WANT YOU TO HAVE A SAFE AND HEALTHY SUMMER

COOL DOWN ST LOUIS

www.cooldownstlouis.org

Y98 FM TODAY'S BEST MIX

Sponsored as a Public Service

Schnucks

Cool Down St. Louis, is a regional non-profit cooling assistance and advocacy charity

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Cold Weather Rule & Possible Hot Weather Rule

November 6, 2002

Name	Organization	Phone
Warren Wood	MOPSC	573-751-2978
Ivan Eames	CMCHDC	573-443-8706
Kevin Ellen	Salvation Army	816-968-0404
Kim Lambert	MGE	816-360-5585
Bob Jackson	City of Kansas City	816-513-3041
Jo Simmons	Ameren UE	773-385-6880
Molly Martin	Ameren UE	314-554-2478
Denny Williams	Aquila	816-737-7857
Lori Wessley	Aquila	816-737-7777
Nancy Moon	KCPL	816-654-1181
Lois Luchti	KCPL	816-556-2612
Terry Sanders	Ozark Action Inc.	417-256-6147
Rae Lewis	MGE	816-360-5759
John Coffman	OPC	573-751-5565
Janet Hoerschgen	MOPSC	573-751-3160
Vickie Myers	KSPL	816-242-6483
Bill Guinther	Parkway	314-415-8278
Maureen Paty	Three Rivers Electric Coop	800-892-2251
Rev. Mann	Heat-Up St. Louis	314-241-0001
Curt Swearengen	Heat-Up St. Louis	314-241-0001
Gentry Trotter	Heat-Up St. Louis	314-241-0030
Carol Braun	MO Dept. Health & Sr. Services	573-526-4175
Lori Harris-Franklin	MO Dept. Health & Sr. Services	573-751-6160
Tom Byrne	Ameren UE	314-554-2519
Bob Mill	Ameren UE	214-535-5304
Laurie Karman	Ameren UE	314-992-8983
Cara Shaefer	City Utilities of Springfield	417-831-8345
Terry Oliver	Empire District	417-625-4242
Ann Butts	Empire District	417-625-6171
Eileen Bauman	Citizens Electric	573-338-5339
Connie Schneider	Citizens Electric	573-883-5339
Lena Mantle	MOPSC	573-751-7520
Mike Straub	MOPSC	753-526-5016
Dave Meier	Fidelity Natural Gas	573-468-1218
Ben McReynold	Laclede Gas	314-658-5411
Jackie Hutchinson	HDC	314-535-7633
Kwang Choe	MOPSC	573-751-2072
Pam Levetzow	MGE	816-360-5540
Amy Tempel	Legal Services of Eastern MO	314-534-4200
Rob Hack	MGE	816-360-5755

Solace Simpson	GRO	573-635-7157
Victoria Kizito	MOPSC	573-751-6726
Tracie Hunsacker	MOPSC	573-526-6919
Bob Quinn	MOPSC	573-751-2690
Jim Fischer		573-636-
Scott Klem	Southern MO Gas	
Toni Messina	MOPSC	573-751-5472
Richard Martin	Ameren UE	
Bill Spencer	Laclede Gas	573-635-2245
Duncan Kincheloe	MPUA	573-445-3279
Tom Imhoff	MOPSC	573-751-7471
Jan Marcason	Mid America Assistance Coalition	816-561-2727
Sean Gallaher	KCPL	573-634-3244
Cindy Kadlec	Senate Research	573-751-4666
Jim Busch	OPC	573-526-4426
Russ Trippensee	OPC	573-751-5564
Mike Pendergast	Laclede	314-342-0552
Randy Campbell	Fidelity Natural Gas	573-458-1239
Sheila Lumpe	MOPSC	573-751-4221
Gloria Thirkill	Laclede Gas	
Donna Prenger	MOPSC	573-751-7492

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Missouri Census data
http://mcdc2.missouri.edu/cgi-bin/broker?_PROGRAM=websas.dp3_2k.sas&_SERVICE=sasapp&st=29

Low Income Consumer Utility Issues: A national Perspective
www.sharethewarmth.org/docs/low_income.pdf

Identifying saving arising from low-income protections
http://www.fsconline.com/lib/lib.htm

Cold Weather Rule Protection Regulations
http://www.ncat.org/liheap/tables/moratorm.htm

Leveraging Funds Table
http://www.ncat.org/liheap/pubs/01stlvsm.htm

Heat related Links

The Other Part of the year
http://www.fsconline.com/lib/lib.htm

Heat related deaths
http://www.cdc.gov/mmwr/preview/mmwrhtml/mm4822a2.htm

Operation Weather Survival
http://stlouis.missouri.org/citygov/health/owsindex.html

http://www.stl.unitedway.org/UWCommunity/community_programs.htm

OKLAHOMA

Limitations and Special Provisions regarding Residential Disconnection.

a. *Limitations on disconnections:* After notice and hearing, the Commission may issue an order that may include limitations on disconnection of residential utility service used or needed for the primary heating or cooling source.

b. *Temporary ban on Disconnections:* The Commission shall have the authority to order a temporary ban on any or all disconnections during periods of extremely severe weather or when circumstances exist such that disconnection could create a situation dangerous to the life or health of consumers or to property.

c. *Severe Weather Moratoriums:* If the high temperature is actually, or predicted to be 32 degrees Fahrenheit or below on the proposed day of disconnection, or the nighttime low is predicted to be 20 degrees Fahrenheit or less, the Company shall suspend its disconnection of service if the electric service is used for heating purposes.

If the service is used for cooling and the temperature is actually or predicted to be 103 degrees heat index or higher on the proposed day of disconnection, the Company shall suspend its disconnection activity. Nothing in this Section shall prohibit the Company from establishing a higher temperature threshold for residential heating purposes below which it will not disconnect utility service, or from establishing a lower temperature threshold for residential cooling purposes above which it will not disconnect utility service. The Company may continue to disconnect utility service for unauthorized use of the Company's measuring equipment or tampering with wires, pipes, meters, or any other utility equipment or obtain service without contract.

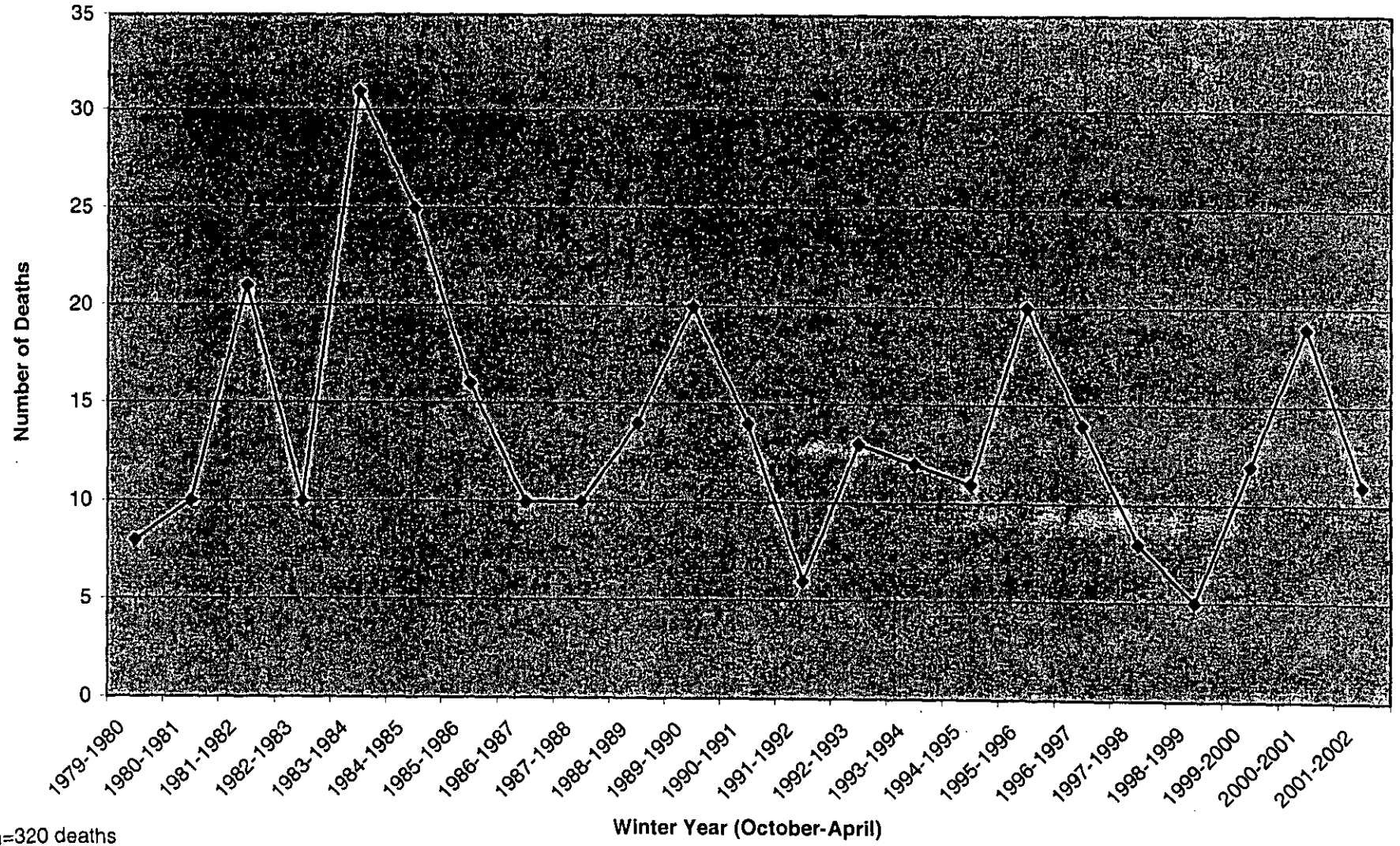
d. *Financial Assistance Delay:* When a residential consumer has applied for and is awaiting financial assistance, including social security income, from a federal, state, or local social service agency, and the Company has initiated written notice of disconnection, it shall delay disconnection of service for a period of at least twenty (20) days from the date when such notice was either delivered or mailed to the premises where service is rendered, provided:

(1) The reason for disconnection is nonpayment of the utility bill:

(2) The consumer has notified the Company that the consumer has applied for and is awaiting financial assistance;

(3) Verification from the involved agency has been provided in a form prescribed by the Company upon its request;

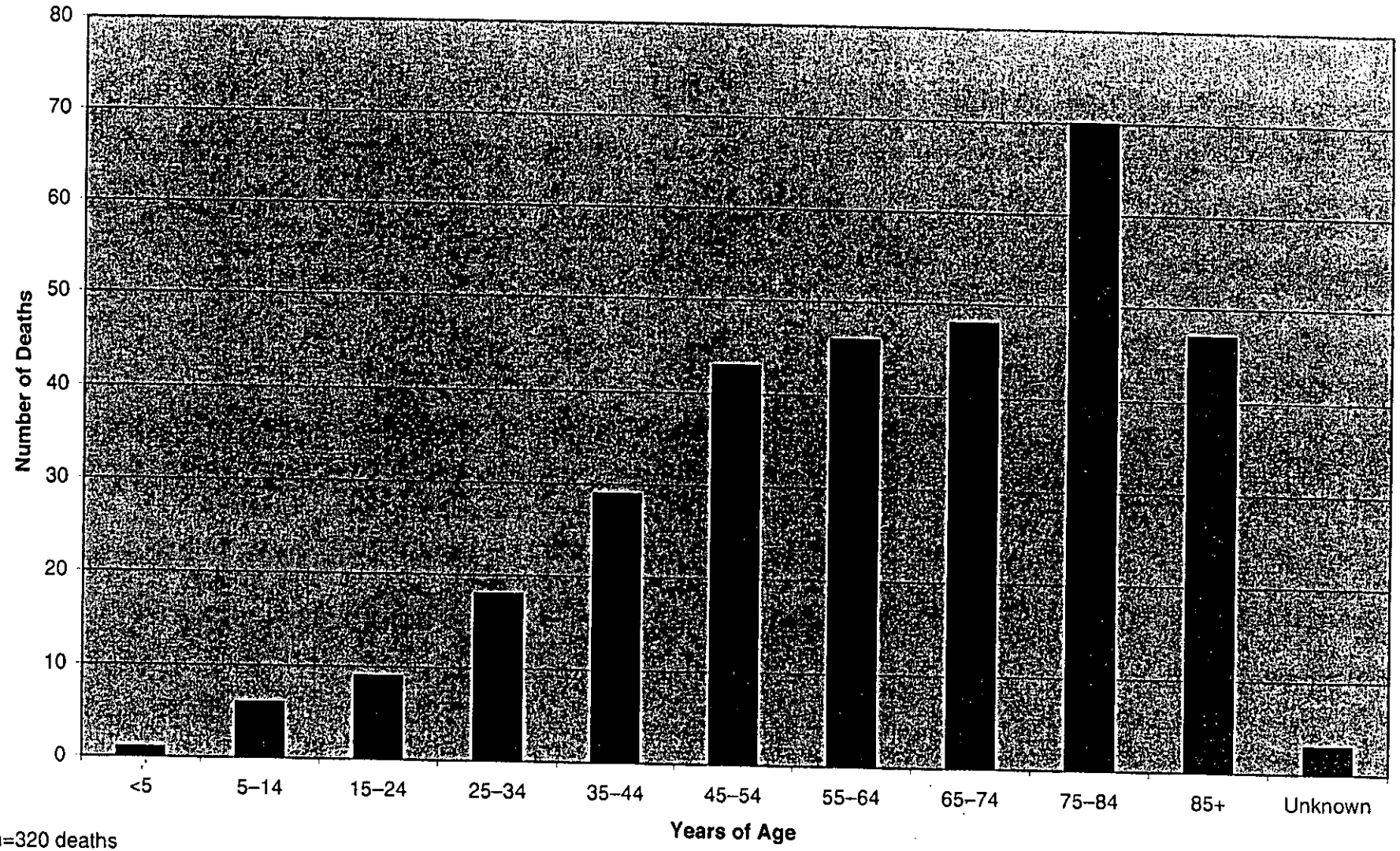
Missouri Hypothermia Deaths 1979-2002



n=320 deaths

11/06/2002

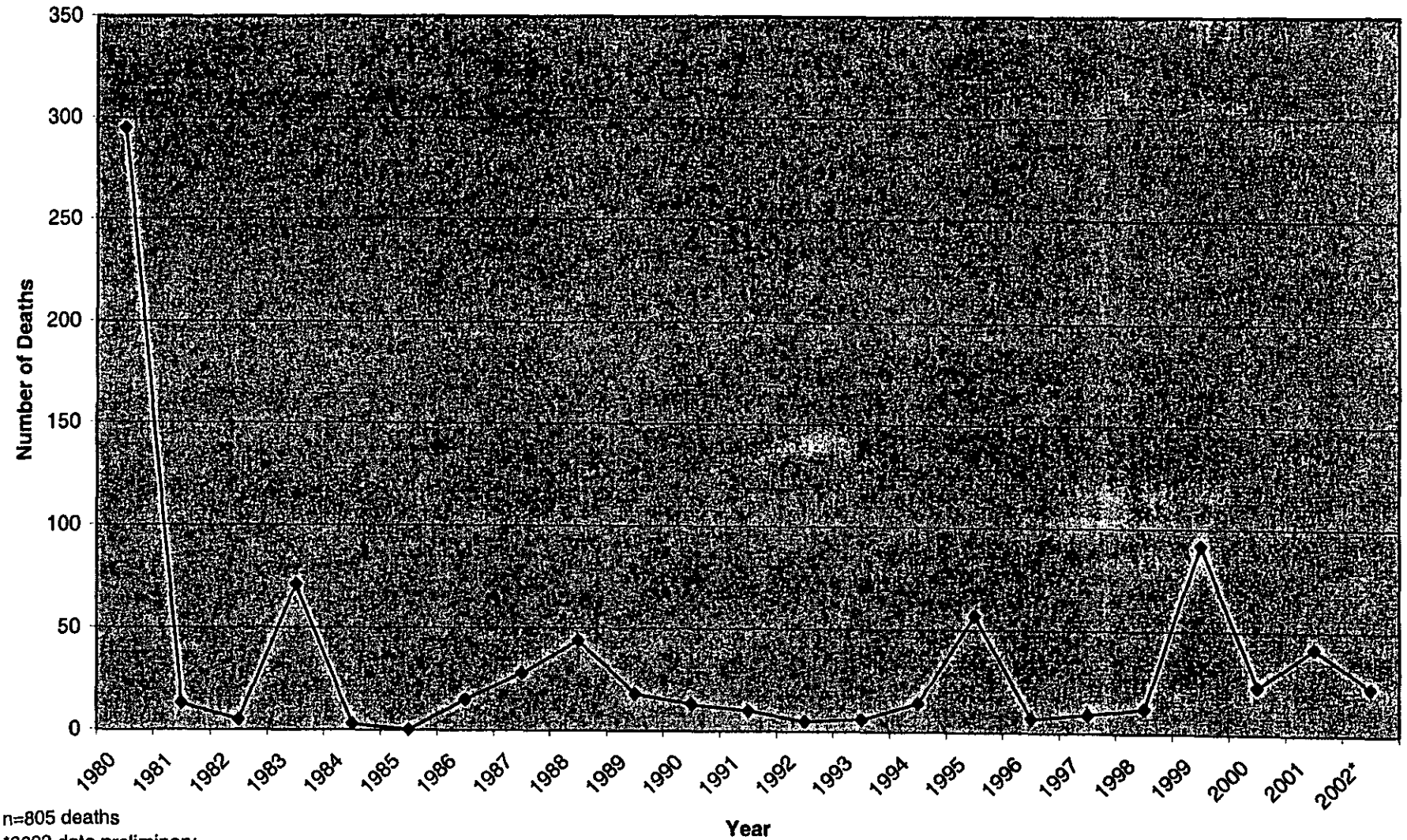
Missouri Hypothermia Deaths by Age Group 1979-2002



n=320 deaths

11/06/2002

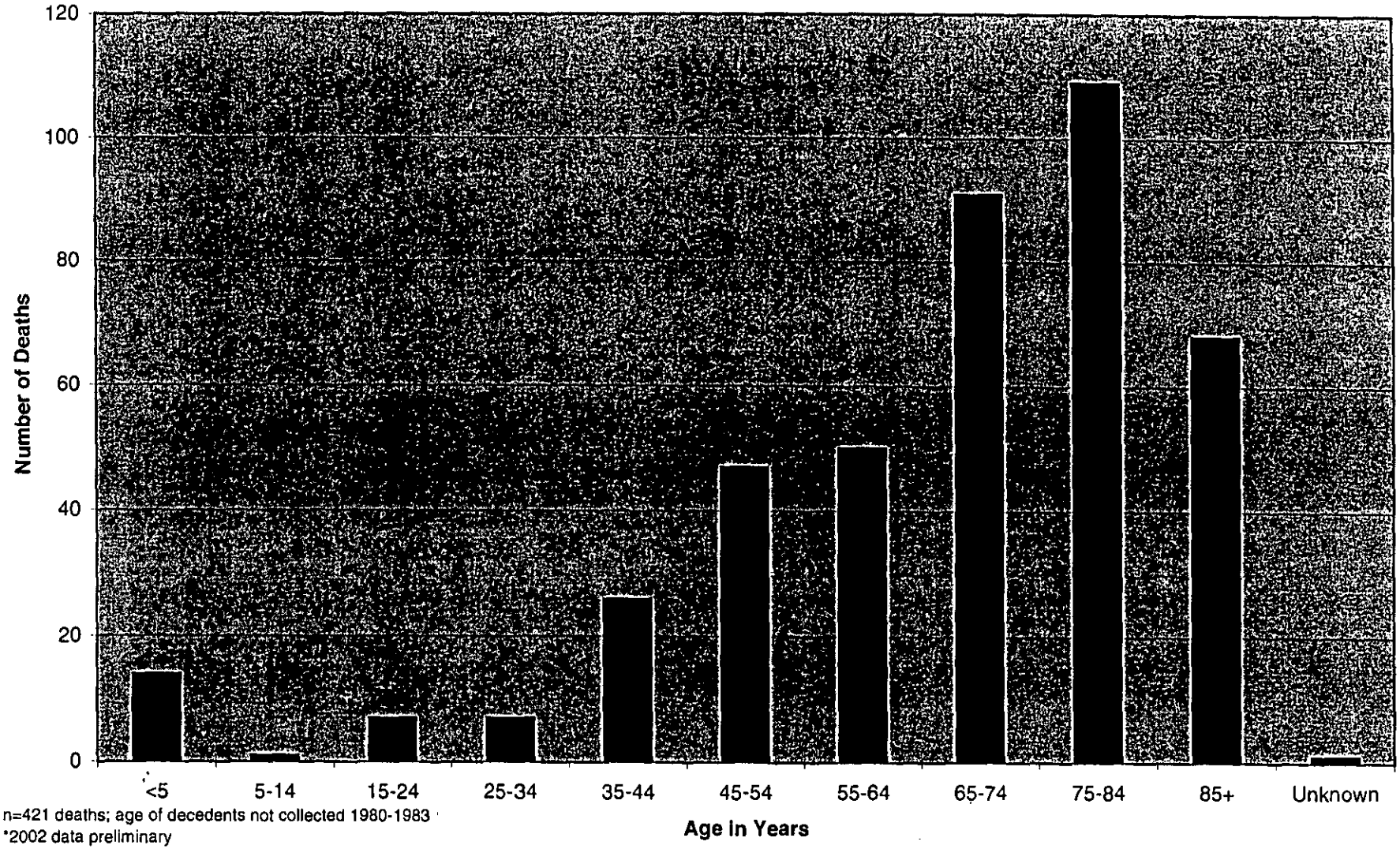
Missouri Hyperthermia Deaths 1980-2002*



n=805 deaths
*2002 data preliminary

11/06/2002

Missouri Hyperthermia Deaths by Age Group 1984-2002*



n=421 deaths; age of decedents not collected 1980-1983
*2002 data preliminary

Cold Weather Default Emergency Rule

Dollar & Measurement Matrix

Customer Groups in Default of Cold Weather Agreements	Rule Impact @ Reconnection	Rule Impact After Reconnection if Customers Pay Bills	Rule Impact After Reconnection if Customers Do Not Pay Bill
Customers that would have reconnected without the emergency rule provisions	Receive less monies upon reconnection	Interest costs on monies not collected up-front	Additional Bad Debts equivalent to reduction in receipt of up-front monies and interest costs on monies not collected up-front
Customers that would not have reconnected without the emergency rule provisions	Receive more monies than amounts realized through normal collection practices	Reduction in bad debts equivalent to monies received in excess of amounts realized through normal collection practices	Additional bad debts equivalent to unpaid portion of 2001-2002 winter bill

Cold Weather Default Emergency Rule

Dollar & Measurement Matrix

Measurement Characteristics	Basis
Customers that would have reconnected without the emergency rule provisions	Historical experience of the number or percentage of customers that connect in previous winters
Customers that would not have reconnected without the emergency rule provisions	Difference between actual customers connected in default of cold weather agreements and historical experience of the number or percentage of customers that connect in previous winters.
Receive less monies upon reconnection	Difference between actual receipts and benchmark established from sample of prior customer arrangements.
Receive more monies than amounts realized through normal collection practices	Difference between actual receipts and benchmark established from percentage of monies realized through historical collection practices.
Interest costs on monies not collected up-front	Application of company's short-term debt interest rate to relevant amounts

Cold Weather Default Emergency Rule

Dollar & Measurement Matrix

Measurement Characteristic	Basis
Additional Bad Debts equivalent to reduction in receipt of up-front monies and interest costs on monies not collected up-front	Difference between actual receipts and benchmark established from sample of prior customer arrangements. Application of company's short-term debt interest rate to relevant amounts
Reduction in bad debts equivalent to monies receive in excess of amounts realized through normal collection practices	Difference between actual receipts and benchmark established from percentage of monies realized through historical collection practices.
Additional bad debts equivalent to unpaid portion of 2001-2002 winter bill	Actual customer billing records.