FINAL REPORT

of the

Missouri Energy Policy Task Force

presented to

Governor Bob Holden

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Northwest Missouri State University

Maryville, Missouri

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Final Report to Gov. Bob Holden

By the Missouri Energy Policy Task Force

INTRODUCTION AND ACKNOWLEDGEMENTS

Energy is a complex, controversial topic. From the comfort and illumination that energy provides in our everyday lives to Einstein's profound formula that $E = mc^2$, energy presents universal issues. Energy creates and sustains life, but also causes struggle and conflict. Today, particularly after the September 11th attacks on the United States, a balanced and prudent energy policy is essential.

The Task Force believes that the solution to meeting future energy needs and addressing volatile prices requires sustained efforts. Consumers must be reasonable in their expectations. Energy utilities and other suppliers must recognize that new ways of doing business are essential to meet public expectations and to adapt to economic, technological and regulatory change. Governments must understand that safe and reliable energy at reasonable prices requires sensible regulation and the promotion of sustainable energy policies. New technologies must be encouraged through education and the prudent use of fiscal and technical incentives. Consumers should be better protected and given appropriate opportunities to provide for their own energy needs. The United States, as well as the State of Missouri, must develop and carry out long-range policies that will promote energy independence and the security that it will bring to our lives. These policies should include measures that address issues of both supply and demand.

In an effort to formulate an energy plan, the Energy Policy Task Force presents this Final Report in fulfillment of the tasks assigned to it by Governor Holden in February 2001. In the six sessions where information was received, the Task Force heard from over 30 presenters, and has

agreed upon a number of recommendations to improve Missouri's energy state of affairs. While the recommendations are not necessarily endorsed by each individual member of the Task Force, we have done our best to hear and consider all competing viewpoints. See Appendix B (Task Force Activities).

This Report is divided into three major sections:

* **Protecting Consumers**

Energy is now, more than ever, recognized as absolutely essential to our way of life. During last year's record cold winter, the volatile natural gas and propane markets created hardships for Missourians trying to pay their heating bills. Gasoline prices rose and fell throughout the year, often in patterns that seemed inexplicable. The Task Force recommends a number of policies that should be considered to ease the burdens of low-income and needy consumers, as well as to inform and benefit the public at large.

* **Encouraging Energy Efficiency & Conservation**

Missourians currently spend $12 billion each year on their energy needs. Because we import more than 95% of the fossil fuels we consume, most of this money leaves the Missouri economy. An overview of Missouri's energy use and sources, authored by the Energy Center of the Department of Natural Resources, is contained in Appendix C. The efficient use of energy and the development of renewable energy sources in the state should boost Missouri's economy and promote reliable supplies. Sustainable energy technologies will enable Missouri, as well as the United States, to become less dependent upon foreign sources and to expand the domestic industrial base. The adoption of such policies will permit Missouri to take advantage of the energy resources available to it, which are summarized in Appendix D.

* **Working with Public Utilities and Private Industry**

Missouri's public utilities are financially healthy and are providing safe and reliable service. However, the advent of energy restructuring policies and the security threats raised by the September 11th attacks require that all segments of the energy industry, as well as government, be responsive and flexible in dealing with these new challenges. We offer a number of recommendations that we believe will enhance the supply of energy and preserve the benefits of existing policies.

The Task Force expresses its thanks to Carol Gilstrap, the Governor's Deputy Chief of Staff, for her keen interest in our work and her valuable insight on many issues. Jeanne Martin of the Governor's Office has been indispensable to solving numerous logistical problems and to maintaining channels of communication. Many other individuals have provided us with support over these past months, including Anita Randolph and Brenda Wilbers of the Department of Natural Resources' Energy Center; John Coffman and Ryan Kind of the Office of the Public Counsel; Warren Wood of the Public Service Commission; Assistant Attorney General John Watson; and various representatives of Missouri's public utilities who have provided the Task Force with information and analysis. The Task Force owes a special thanks to Susie McGuire and the staff at Blackwell Sanders Peper Martin who were instrumental in the compilation and publication of this Report.

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EXECUTIVE SUMMARY OF RECOMMENDATIONS

I. Protecting Consumers

- The Governor Should Actively Support $3.4 billion of Federal Funding for the Low-Income Home Energy Assistance Program (LIHEAP) Annually
- The Division of Family Services Should Resume Participation in the LIHEAP Leveraging Incentive Program to Provide Additional Funds for Needy Families
- The General Assembly Should Consider Revising Missouri's Utilicare Law so that its Guidelines and Administration are Consistent with the Federal LIHEAP Programs
- The General Assembly Should Consider Granting the Public Service Commission Authority to Implement Low-Income Payment Programs
- Missouri State Agencies Should Increase Support for Weatherization of Low-Income Housing
- The Division of Family Services Should Allocate a Portion of LIHEAP Funds for "Summer Fill" or "Pre-Purchase" Programs of Bulk Fuels
- The General Assembly Should Consider Granting the Public Service Commission Specific Authority to Allocate Refunds Among Ratepayers

II. Encouraging Energy Efficiency & Conservation

- Missouri Should Fully Implement the Energy Efficiency in State Facilities Program
- Missouri's Fleet Vehicle Requirements to use Alternative Fuels Should be Enforced and Expanded
- State Agencies Achieving Savings from Energy Efficiency Should be Rewarded
- The Missouri State Office of Administration Should Implement "Performance Contracting" Principles to Achieve Energy Efficiency
- Missouri Should Include Energy Education in the Curriculum of Elementary and Secondary Schools, and Encourage it in other Educational Institutions
- Missouri Should Adopt a Minimum Renewable Portfolio Standard for Electric Utilities

- The General Assembly Should Consider Enacting Legislation that Permits Net Metering with Due Regard for Utility Safety and Reliability

- Missouri Should Consider Financial Incentives to Promote Energy Efficiency and Renewable Energy

III. Working With Public Utilities & Private Industry

- Missouri Utilities Should Assess the Security and Reliability of Their Infrastructure as a Result of the September 11th Terrorist Attacks

- An Energy Policy Council Should be Established to Advise the Governor on Energy Issues and to Recognize Achievements in Energy Efficiency and the Use of Renewable Energy

- The Public Service Commission Should Consider Implementing Time-of-Use Electric Rates

- Missouri Should Encourage a Competitive Wholesale Electricity Market and Regional Transmission Organizations

- The General Assembly Should Consider Legislation to Create Municipal Utility Districts

- Missouri Should Promote the Distribution of Energy Information and Consider Legislation to Enhance the Attorney General's Power to Deal with Price Gouging

- The Public Service Commission's General Ratemaking Authority Should be Retained

- Missouri Should Approach Electric Restructuring Issues with Caution

- Utilities' Construction Work in Progress (CWIP) Should Not be Included in Rate Base at This Time

- The Recommendations of the PSC Natural Gas Task Force Report of August 29, 2001 Should be Implemented

I. Protecting Consumers

Most Missouri families faced unexpected financial pressure from sharp increases in energy costs last winter, but those families living in or near poverty were faced with the greatest hardship. Low-income families, who often have barely enough to meet their basic needs, found themselves unable to provide food, shelter, medicine and other necessities, in addition to their energy bills.

The stress that increasing energy bills place on family budgets has serious ramifications. A 1995 study of Missouri households suggests a strong link between energy bills and the forced mobility of low-income families, as well as the resulting impact on the health and educational success of young children.[1]

A generally accepted measure of a consumer's ability to pay for energy is the "energy burden," which can be used to gauge the gravity of recent energy cost increases. A household's energy burden is the household energy bill divided by the household income. In 1999, families living at the median income spent 4% of their income on utilities, while the typical low-income family spent 14% of its income on utilities. That percentage increased dramatically this past winter for low-income families. According to national averages, the poor will spend one-fifth of their income on utilities this year, and due to the extreme cold in the Midwest, the percent of income spent on utilities by low-income families in Missouri was closer to 26%. It was not uncommon during this past winter for seniors or families with small children to have a single monthly bill ranging from 50% to 100% of their monthly income.

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[1] Colton, "A Road Oft Taken: Unaffordable Home Energy Bills, Forced Mobility and Childhood Education in Missouri" (June 1995).

A. Affordability Programs

There is wide consensus that universal service should be an important goal of any energy policy. "Universal service" refers to the generally accepted policy that all consumers should have reliable public utility services available to them at just, reasonable, and affordable prices. Universal service discussions often focus on those policies, practices and services that are designed to help low-income consumers maintain utility service by making it more affordable.

Affordability programs for low-income customers include: federal and state energy assistance programs; private non-government energy assistance programs; low-income payment programs; and weatherization programs. Each of these is discussed below along with related recommendations.

1. Federal Energy Assistance

The federal Low Income Home Energy Assistance Program (LIHEAP) is one of the most critical components of the social safety net. The program provides heating and cooling assistance to approximately 110,000 Missouri low-income households, including many of the "working poor," who are making the difficult transition from welfare to work, along with a large number of individuals with disabilities, seniors and families with young children. Missouri's Division of Family Services (DFS) administers this program statewide. LIHEAP provides direct vendor payments to assist families with an income below 110% of the Poverty Index (125% for a family size of 1 or 2). Although the maximum income eligibility for a family of three is $1,297 per month, the average income of families applying for assistance is less than $700 per month.

In accordance with federal guidelines, a percentage of LIHEAP dollars is allocated for crisis intervention and is intended to assist families experiencing utility problems that cannot be resolved with LIHEAP assistance. The Energy Crisis Intervention Program (ECIP) is

administered by Community Action Agencies throughout Missouri. ECIP provides direct assistance to clients who have utilities that have been shut off or are in threat of disconnection. This program assists families at 125% of poverty; however, this eligibility level was raised to 150% of poverty during the winter of 2001. This assistance may be expended during the winter for a primary heating source (gas, oil, kerosene, or wood), or for a secondary heating source, typically electric service. A portion of ECIP assistance funds is allocated for summer cooling assistance. These funds are used to provide cooling assistance to families demonstrating a need, with priority given to the elderly and disabled families.

Although Fiscal Year (FY) 2001 LIHEAP funding (including emergency funding) totaled approximately $51.4 million for Missouri, this amount was not adequate to assist many eligible families. FY 2001 funding increased the basic LIHEAP grant by 10% and raised the income eligibility guideline for crisis assistance to 150% of the poverty level. See Appendix E (LIHEAP Funding, 1981-2001). However, the funding did not permit an increase to basic LIHEAP income eligibility. As a result, many working poor families and elderly persons with moderate Social Security benefits were not eligible for the basic LIHEAP grant. Many families seeking help were denied due to income constraints. See Appendix F (Families seeking assistance and those denied by county in Missouri for FY 2001).

On August 2, 2001, Missouri Public Service Commission Chair Kelvin Simmons alerted federal decision-makers that Missouri is facing a potential crisis as a result of high energy bills incurred by low-income consumers to heat their homes last winter. In a letter urging greater LIHEAP funding, he pointed out that many low-income families have already been or soon will be disconnected for non-payment and will enter the next cold weather season without heat.

In August, the U.S. House of Representatives passed H.R. 4, the Securing America's Future Energy Act of 2001 (SAFE) bill, which would increase LIHEAP funding to $3.4 billion for FY 2002 through 2005. H.R. 4 would also increase the authorization level for the federal weatherization program to $273 million for fiscal year 2002, $325 million for fiscal year 2003, $400 million for fiscal year 2004, and $500 million for fiscal year 2005. The current recommendation contained in the President's budget is $1.7 billion for LIHEAP annually, including $300 million in emergency funds. Both the House and the Senate are currently considering funding levels.

Task Force Recommendation

The Governor should actively support federal funding for LIHEAP at the minimum annual level of $3.4 billion along with "forward funding" so that Missouri might have sufficient funds available before the onset of each winter.

2. Leveraging for Additional LIHEAP Funds

Since 1991 state LIHEAP directors have had the opportunity to participate in the LIHEAP Leveraging Incentive Program, established under the 1990 reauthorization of LIHEAP. Under the program, state grantees are rewarded for acquiring non-federal home energy resources for low-income households. Incentive funds are awarded to those states that use their own funds or other non-federal funds to supplement or leverage federal LIHEAP dollars. These awards vary based upon the amount of leveraged funds a state can identify in relation to all other states. See Appendix G.

The majority of leveraged resources identified by state grantees comes from state or local government funds and energy vendor "fuel fund" programs providing financial assistance and weatherization. Other resources include utility support programs, weatherization suppliers, churches, charities, community groups and weatherization funds from landlords. The

information necessary for Missouri's Division of Family Services to complete an application for leveraging funds is readily available from these groups, including state assistance provided under the Utilicare program as well as funds allocated by cities for utility payment assistance. From 1991 to 1996 the Division of Family Services submitted a request for leveraging funds to the federal Department of Health and Human Services, but no such requests have been submitted in the last five years.

Task Force Recommendation

The Division of Family Services should resume participation in the LIHEAP leveraging incentive program to provide additional funds for needy families in Missouri.

3. State Energy Assistance

State energy assistance is the second most crucial component of the energy assistance safety net. Although federal funding for LIHEAP increased in fiscal year 2001, it is estimated that federal dollars will meet only 30% of the need for assistance. The "Utilicare Stabilization Fund" is a program for appropriating state funds for both energy assistance and weatherization.[2] This program was created in 1979 and significantly revised in 1997. It is administered by the Division of Family Services but under different guidelines than the LIHEAP and ECIP programs. This program permits grants of $150 for families at or below 110% of the poverty level, and to seniors and individuals with disabilities.

The availability of state funding to supplement federal programs is especially important given the variability of resources and the variability of need from one year to the next. Despite strong support from Missouri's Congressional delegation, federal LIHEAP funding levels have varied significantly over the past ten years. See Appendix E. In addition, the variability of the winter weather can cause peaks of energy consumption that quickly generate a large demand for

low-income energy assistance, compounding the problem of variable funding. Furthermore, as Missouri's experience last winter illustrated, a sudden rise in natural gas prices can greatly increase the amount of energy assistance needed in a given year.

Currently, the conditions for receiving Utilicare assistance are very restrictive. A family must have an income below 110% percent of the poverty level and cannot have received more than $150 in assistance from the federal LIHEAP program in order to be eligible for Utilicare assistance. See Section 660.120. This eligibility provision actually prevents the poorest families from benefiting from Utilicare. The average family, who receives an average of $235 from LIHEAP, cannot receive additional assistance from Utilicare.

The Task Force believes that it would be more appropriate and more efficient for future energy assistance appropriations to be administered under the same guidelines established by the State of Missouri for the administration of LIHEAP funds. A wide range of stakeholders representing varying perspectives support this goal. These stakeholders include many members of Missouri electric and natural gas providers, low-income advocates, consumer advocates, and several state agencies and organizations.

The current delivery method for energy assistance is administratively burdensome as it requires the Division of Family Services and community action agencies throughout the state to administer assistance pursuant to different guidelines for state and federal funding sources. Utilizing consistent guidelines for both funding sources would permit a more efficient administration of the total funds that are available. LIHEAP guidelines have been proven to work effectively for many years to direct those funds that are available in any given year to the families that are in greatest need of assistance and that would be appropriate for any

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[2] See § 660.100 et seq., Mo. Rev. Stat. (2000). All future statutory references are to the Missouri Revised Statutes (2000) unless otherwise noted.

supplemental state assistance that becomes available to be administered under the same conditions. Appendix H contains language that would accomplish these changes.

Task Force Recommendation

The Task Force recommends that the current Utilicare Law be revised to make its guidelines and its administration consistent with the federal LIHEAP programs.

4. Low-Income Payment Programs

Low-income payment programs are offered by many utilities and other energy providers across the country to help low-income customers avoid disconnection of service. These programs are often voluntary, but have also been imposed legislatively or by order of the state public utility commission. There are numerous types of low-income payment programs, including (1) uniform rate discounts to income-eligible households, (2) income-based rate discounts, (3) marginal cost rates, (4) percentage of income payment plans (PIPs), (5) percentage of bill plans, (6) a fixed credit approach, and (7) customer charge waivers.

A variety of other related programs can enhance low-income payment programs. "Arrearage forgiveness" programs can eliminate a portion of the customer's debt after a series of timely bill payments. Weatherization programs can be combined with low-income payment programs to help reduce the amount of assistance needed.

Many of these programs link a customer's monthly utility payment to the customer's income. These programs insure that low-income consumers do not pay a disproportionate percentage of their income on utility costs. Customers enrolled in this type of program agree to make monthly payments to their utility based on household size and gross income. The monthly payment will be less than the bill for service, while the remaining portion of the bill is paid by other assistance funds. The utility would recover any remaining shortfall in rates.

Low-income payment programs are based on the recognition that many low-income customers are unable to pay their total bills. The unsustainable energy burden for these customers results in nonpayment and a large proportion of a utility's "bad debt" expense is associated with low-income customers. Energy companies spend large sums of money on collection activities as well as the disconnection and reconnection of service for these customers. The costs associated with bad debt, collection and disconnect/reconnect expenses are recovered from all consumers generally through utility rates. Proponents of low-income payment programs maintain that reducing these expenses justifies low-income payment programs as a more efficient way to provide service to low-income customers.

States that have considerable experience with low-income payment programs include Pennsylvania, New York, Ohio, Maine, New Hampshire, Colorado, California and Wisconsin. Evaluations of these programs performed by Pennsylvania utility companies have recognized that they result in dramatic cost reductions in customer disputes, new payment arrangements, cancellation of payment plans, and termination of service. One natural gas company found that after two years the program was not only revenue neutral, but was revenue positive.

After reviewing the Customer Assistance Programs ("CAP") which it oversaw, the Pennsylvania Public Utility Commission stated:

> The results of CAP impact evaluations show that participants enrolled in a CAP increase the number of payments they make while maintaining the same level of energy usage… More importantly, the results of two impact evaluations show that CAPs support the principles found in the CAP policy statement, namely that an appropriately designed and well implemented CAP as an integrated part of a company's rate structure, is in the public interest. Further, the results show that CAPs can be a more cost-effective approach for dealing with issues of customer inability to pay than traditional collection methods.[3]

[3] In re Revisions to the Customer Assistance Program Policy Statement Made Pursuant to 52 Pa. Code Chapter 69, Docket No. M-00991232 (Pa. P.U.C., March 1999).

A low-income pilot program will be implemented for the first time in Missouri under a stipulation and agreement that concluded Missouri Gas Energy's most recent rate case.[4] The two-year pilot program is being funded by the addition of $.08 to the residential customer charge. It will be available to 1,000 residential customers in Joplin, Missouri whose family incomes are at or below the federal poverty level. Customers at 50% of the poverty level or below will receive a fixed bill credit of $40 a month and customers at 51% to 100% of poverty will receive a fixed bill credit of $20 per month. An independent third party will evaluate the program at the end of two years.

Task Force Recommendation

The Task Force recommends legislation that would explicitly authorize the Public Service Commission to implement low-income payment programs.

The following language is based on recent Minnesota legislation[5] and would authorize the implementation of low-income payment programs for public utilities:

> Notwithstanding any other provision of this chapter, the commission may consider ability to pay as a factor in setting utility rates and may establish programs for low-income residential ratepayers in order to insure affordable, reliable, continuous service to low-income utility customers. The purpose of low-income programs is to lower the percentage of income that low-income households devote to energy bills, to increase customer payments, and to lower the utility costs associated with customer account collection activities. In ordering low-income programs, the commission may require public utilities to file program evaluations, including coordination of other available low-income bill payment and conservation resources, and the effect of the program on (1) reducing the percentage of income that participating households devote to energy bills; (2) service disconnections; and (3) customer payment behavior, utility collection costs, arrearages and bad debt.

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[4] In re Missouri Gas Energy, Order Approving Second Revised Stipulation and Agreement, Case No. GR-2001-292 (July 5, 2001).

[5] 2001 Minn. Sess. Law Serv., Ch. 212, Art. 4, § 4 (West).

5. Weatherization Programs

In 1977, using federal funds under the Low-Income Weatherization Assistance Program (LIWAP), Missouri launched a program to weatherize the homes of low-income, elderly and handicapped citizens. The program has evolved from humble beginnings applying generic low-technology solutions such as plastic film window covers and storm doors, to building-specific solutions that rely on modern instruments and computerized energy use analyses. The weatherization of low-income housing results in predictable savings and improved comfort and safety. Weatherization of homes seeks to reduce air leaks, improve the efficiency and safety of major energy systems such as furnaces, and reduce energy losses by insulating the living space. On average, weatherization reduces the consumption of natural gas used to heat a home by 20%.

Since 1977 over 138,000 homes have received weatherization improvements in Missouri. A May 1999 evaluation of the Missouri Gas Energy's Low-Income Weatherization Pilot Program found that weatherization improvements to Missouri housing cost $2,096 per residence, with an average effective life of 20 years. They yielded an average savings per residence of $3,403 over the life of the improvements. These estimated savings are based on the Department of Energy's 1999 Annual Energy Outlook's forecast of a steady decline in energy costs over the next 20 years, with prices in 2018 15% lower that actual costs in 1998. Energy prices in the winter of 2000-2001 suggest that actual savings were much higher.

Despite 24 years of improvements to Missouri's low-income housing, much remains to be done. State and federal funds available during the current fiscal year total $4,885,000, enough to make improvements to approximately 1,500 homes. In contrast, a recent estimate of Missouri's housing indicated that there are 447,000 low-income residential units in need of weatherization services.

While the persons living in weatherized housing experience lower bills, safer living conditions, and more comfortable homes, they are not the only beneficiaries of low-income weatherization. Extensive research has found that low-income energy-efficiency programs result in substantial savings to utilities. These non-energy savings include reductions in working capital expense, uncollectable accounts, and credit and collection expenses. Two studies identifying utility benefits from weatherization programs include:

- A March 1998 report on the Missouri Gas Energy Pilot Weatherization Program which found that the program "is successful at reducing customer debt for the participants who save energy and that the amount of the arrearage reduction is proportional to the amount of the savings."

- The Pennsylvania Low-Income Usage Reduction Program found that the delivery of weatherization assistance improved the payment patterns of the treated low-income households.

In recent years, utilities regulated by the Public Service Commission have funded pilot programs for the weatherization of low-income homes. Since utilities have an interest in reducing arrearages, and weatherization has been demonstrated to be a cost-effective way to increase energy efficiency and reduce delinquent accounts, funding for low-income weatherization should be a component of low-income affordability programs. In recognition of the potential benefits to both ratepayers and utilities, the Commission's Natural Gas Commodity Price Task Force Final Report recommended that "the Commission should pursue incentive measures for encouraging energy efficiency."[6]

Requiring LIHEAP recipients to apply for weatherization improvements would assure that those in need of financial assistance occupy homes that have been made as energy efficient as is feasible with the available weatherization funds. Federal LIHEAP provisions allow states

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[6] "Final Report of the Missouri Public Service Commission's Natural Gas Commodity Price Task Force," In re Commission Inquiry into Purchased Gas Cost Recovery, Case No. GW-2001-398 (Mo. P.S.C., Aug. 29, 2001) at 4, 58-60 [hereafter cited as PSC Task Force Report].

to earmark up to 15% of each year's LIHEAP award to the weatherization of homes. Missouri is one of only seven states that does not invest a portion of its LIHEAP funds to reduce the need for future energy assistance payments. Between 1982 and 1987, Missouri did earmark a portion of the LIHEAP funds to weatherization.

Finally, Section 660.135 of Missouri's Utilicare Stabilization Fund should be amended so it is consistent with federal guidelines. The federal program uses a computerized energy uses analysis to identify cost-effective efficiency measures that are candidates for weatherization funds. Revising the section noted above to require that when Utilicare funds are used, weatherization improvements are to be conducted consistent with federal guidelines would minimize administrative complexity and resulting costs.

Task Force Recommendation

Missouri should increase state support for low-income weatherization.

- **The Public Service Commission should include funding for weatherization of low-income housing as a component of low-income affordability programs.**
- **The Department of Social Services and the Department of Natural Resources should develop a simple method where applicants for energy assistance funds must also apply for weatherization assistance.**
- **Missouri's Utilicare statute should be revised to be consistent with federal weatherization guidelines. See Appendix H.**
- **Missouri should dedicate 15% of LIHEAP funds for weatherization to curtail the need for future energy assistance payments, understanding that in years of great need this percentage may need to be lowered.**

6. Summer Fill Programs for Bulk Fuels

Approximately 23,000 of the 110,000 families who received LIHEAP heat their home with "bulk fuels" such as propane and fuel oil. Some states set aside a portion of their regular LIHEAP or LIHEAP leveraging funds for "summer fill" programs or pre-purchases for these customers. This allows fuel to be purchased during the summer, at a reduced rate, for use in the

following winter. Other states have been able to negotiate discounts, save money and improve relationships with bulk fuel vendors. For example, Minnesota has obtained price discounts, as well as waivers of security deposits, late pay charges and delivery fees from over 100 oil and propane dealers. In addition to the cost savings associated with summer deliveries, this program allows vendors to plan and schedule deliveries before the onset of cold weather. Connecticut provides one initial summer purchase and the delivery of $200 to each household that received "bulk fuel" benefits in the immediately preceding LIHEAP heating season. Such purchase and delivery occurs in August as a prepayment for the coming heating season. Connecticut reported that providing "summer fill" saved the state LIHEAP program nearly 11% over fall and winter fuel prices.

Establishing a summer fill program assures adequate energy supplies before the normal rush if winter heating demands, and provides additional support in the event of disruptions or emergencies. Twelve percent of Missouri households use propane as their primary heating fuel. Propane is also used to support commercial operations, produce goods, dry grain harvests and fuel vehicles. While commercial users have more flexibility in switching fuels during the winter, residential customers do not.

Propane is moved by pipeline to six terminals in Missouri and transported to propane retailers and, in turn, their customers by truck. Last winter the extremely cold and severe weather led to energy emergencies and required propane retailers to extend their driving hours to insure delivery of fuel to customers. DNR Energy Center survey data showed that residential propane prices increased up to 80% as a result of the cold weather, limited inventories and constrained supply. The situation was made worse by the unprecedented demand from a large number of residential customers who waited to contact their suppliers until their tanks were

nearly empty. Allowing LIHEAP recipients to fill their tanks during the summer will help to lessen these fuel disruption problems in the future.

Task Force Recommendation

The Division of Family Services should allocate a portion of the LIHEAP funds for "summer fill" or "pre-purchase" programs.

B. Public Service Commission Authority to Allocate Refunds among Ratepayers

During the winter of 2000-2001 natural gas prices increased to levels that had never before been experienced. At the same time certain funds became available through the settlement of cases pending before the Federal Energy Regulatory Commission concerning Williams Gas Pipeline Central's storage service. Litigation before FERC resulted in a refund order of approximately $620,000 to Missouri Gas Energy (MGE) to be passed through to its customers.

The high price of natural gas caused MGE to suggest that the Williams refund be directed to low-income and other needy customers. The Staff of the Public Service Commission and the Office of the Public Counsel opposed the request of MGE to distribute the refunds to low-income customers. They argued that Sections 393.130.2 and 393.140(11) set out the Commission's authority to grant refunds and the procedure the Commission must use to distribute those refunds. Staff and Public Counsel argued that refunds were only lawful pursuant to those statutory sections when uniformly extended to all under like circumstances. After briefing and argument on the issue, the Public Service Commission agreed in a 3-1 vote. See In re Missouri Gas Energy, No. GE-2001-393 (March 6, 2001) (Simmons, C., dissenting).

The Task Force recommends that Chapter 393 of the Missouri Revised Statutes, which regulates natural gas corporations among other entities, be amended to provide the Commission

the power to order limited types of refunds to assist needy ratepayers. New Section 393.143 would grant the Commission authority to allocate sums representing unauthorized use charges, penalties or refunds from interstate or intrastate pipelines received by gas corporations among ratepayers in a manner consistent with the public interest.

The Task Force believes the following language will accomplish this purpose:

New Section 393.143 to Chapter 393, Missouri Revised Statutes

> Notwithstanding any statutory provision of this Chapter to the contrary, the Commission shall have the authority and discretion for good cause shown upon notice and after an evidentiary hearing to direct that sums representing unauthorized use charges, penalties or refunds from an interstate or intrastate pipeline, including interest on such sums, received by a gas corporation, as well as any penalties resulting from the operation of a gas corporation's tariffs, be allocated among ratepayers in such manner as the Commission finds to be in the public interest.

The proposal is sufficiently broad to permit the Public Service Commission to fashion a remedy that could benefit residential ratepayers not eligible for LIHEAP funding, such as the remedy recently ordered by the Kansas Corporation Commission.[7] This proposal would also permit the Commission to order refunds to selected commercial users who, for example, are not-for-profit corporations providing temporary shelter and residential care facilities to the poor.

Task Force Recommendation

The General Assembly should consider amending Chapter 393 to grant the Public Service Commission greater authority to allocate refunds among ratepayers.

[7] In re Greeley Gas Co., et al., No. 99-GRLG-405-GIG (Kan. Corp. Comm'n, May 3, 2001), clarified (June 28, 2001) (eligibility limited to residential ratepayers with family income at or below 300% of the federally defined poverty level who did not receive a full LIHEAP benefit).

II. Encouraging Energy Efficiency & Conservation

A. State Government and Programs Related to Facilities, Vehicles, Energy Savings and Education

The Task Force recommends that the Government of the State of Missouri lead the way to a comprehensive energy policy by setting the example. State law currently contains a number of goals and objectives for state facilities and vehicle fleets that are not being attained. By assuring that existing standards are being met and setting attainable goals in other areas, state government can reduce its energy consumption and costs, but more importantly set an example for its citizens to follow.

The Task Force makes these specific recommendations:

1. The Energy Efficiency in State Facilities Program

During the past four fiscal years, the Department of Natural Resources' Energy Center has used $450,000 of petroleum violation escrow funds (pursuant to Section 8.849) to pay for audits of state-owned and state-leased buildings. Approximately 5% of state structures have been audited. The audits identified energy-efficiency measures exceeding $7.5 million that could achieve annual savings of more than $1.3 million. About 20% of the dollar-value of these projects has been implemented and savings are now being achieved.

However, the state can and should do better. Missouri has approximately 62.5 million square feet of state-owned buildings. Assuming that energy use costs an average of $1.25/square foot for these structures, annual state energy costs exceed $78 million.[8] Currently, Section 8.835 requires the Office of Administration to initiate all projects with a simple energy savings payback period of five years or less. If such a plan were implemented on a comprehensive basis,

[8] The $1.25/square foot figure for energy costs is based on an analysis of a sample of utility bills from 1998, adjusted for inflation, prepared by the Department of Natural Resources' Energy Center.

the State of Missouri would achieve significant savings exceeding several million dollars annually on its energy bills. We consider the existing statute to be the minimum goal for state government. Many energy retrofit projects with payback periods exceeding five years have merit and could result in savings significantly exceeding several million dollars on an annual basis.

In any renovation of state buildings, including state higher education buildings, cost-effective energy efficiency and retrofitting projects should be implemented to achieve at least a 20% reduction in energy consumption. Such savings can be achieved if the structures are designed to meet the ASHRAE 90.1 (1999) minimum energy efficiency standards.[9] In constructing new buildings, the state should be able to accomplish 30% to 50% in energy savings by including cost-effective energy efficient equipment, materials and design techniques into the building design. Existing law requires that such new and renovated state buildings, at a minimum, meet nationally recognized ASHRAE 90.1 standards. Because projects can exceed ASHRAE 90.1 and remain cost-effective, the state should exceed these standards where appropriate to maximize energy savings.

The new arena planned for the University of Missouri at Columbia, as well as other new major projects where state funding plays a major role, should be designed to serve as national examples of energy efficiency.

In addition to implementing current statutory requirements, legislation should be enacted to achieve the following goals:

a. Require all state buildings to be analyzed for energy efficiency by the end of Fiscal Year 2008, including data on energy consumption and cost. Such analysis or audit should quantify the annual lost-

[9] The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) standards are incorporated into Missouri law under Sections 8.812 and 8.837.

opportunity costs for not implementing an energy efficiency program.

b. Extend the reach of Section 8.835 to require that all energy projects with a simple energy savings payback period of 15 years or less must be initiated.

c. Require that all designs initiated for construction or renovation of a state building maximize energy savings and exceed minimum ASHRAE standards whenever cost-effective. The use of life-cycle cost analysis should guide the determination of the cost effectiveness of design components for new buildings and energy retrofits of existing buildings.

Task Force Recommendation

The Energy Efficiency in State Facilities Program should be fully implemented.

- **All state buildings should be analyzed for energy efficiency by FY 2008.**
- **Major new projects, such as the arena planned for the University of Missouri, should exceed ASHRAE 90.1 standards where feasible.**
- **Section 8.835 should be extended so that all energy projects with a simple energy savings payback period of 15 years or less are initiated.**

2. Fleet Management Requirements to Reduce Fuel Consumption and to Use Alternative Fuels

A fleet management program with a fuel conservation plan for state vehicles currently exists, pursuant to Section 414.400, et seq. However, the Task Force believes that it should be expanded so that by 2012, 50% of all state-owned and contract vehicles capable of operating on alternative fuel will actually be operating on such fuel. Currently, Missouri law requires that 30% of all fuel purchased annually for such vehicles be an alternative fuel, provided that alternative fuel refueling stations are available. Alternative fuels include alcohol-based fuels like methanol and ethanol, as well as natural gas, liquefied petroleum gas, hydrogen and electricity.

In order to make these goals attainable, the state should devote resources to the development of refueling stations for alternative fuels, which will aid in state agency use, as well as public use of alternative fuels.

The Governor should require each state agency to report in its annual budget request the percentage of vehicles complying with this requirement and what plans are being made to achieve this goal.

Task Force Recommendation

Existing fleet management requirements should be enforced and expanded.

3. State Agencies Achieving Savings from Energy Efficiency

While the main goal of achieving energy efficiency in this context is to reduce the cost of state government and the burden on taxpayers, the Task Force recognizes that state agencies may be reluctant to become more efficient if those efficiencies result in a dollar-for-dollar reduction in their budgets. The policy of the State of Missouri, either by law, regulation or executive order, should allow an agency that achieves quantifiable energy savings to retain a reasonable portion of that amount in its budget to advance the agency's mission.

As part of such an incentive program, the heads of state agencies should be encouraged to designate an "energy efficiency officer" as a collateral responsibility of an appropriate agency employee to develop and oversee such energy efficiency programs. Such individuals and their superiors should be evaluated on their performance in this regard on an annual basis as part of their regular performance review. Attaining energy and environmental efficiency should be an element on which performance review and compensation decisions are made for those individuals appropriately tasked to design, implement and oversee energy efficiency programs.

Task Force Recommendation

State agencies that achieve savings from energy efficiency measures should retain a portion of those savings to advance their mission.

4. **“Performance Contracting” Principles and Energy Efficiency**

The Task Force believes that state agencies should aggressively explore financing options that will accelerate implementation of energy efficiency projects in state buildings. One option that deserves close examination is “performance contracting.” State contracting and procurement statutes should be amended to permit agencies to contract with qualified private energy services companies that offer comprehensive programs to design efficiency projects, arrange appropriate financing, oversee construction, and verify the savings achieved.

State law should also be changed to permit the Office of Administration the ability to carry out “design and build” projects for energy retrofits of state buildings. Such projects would permit OA to award both the project design phase and the project construction phase to a single bidder in one contract where deemed appropriate. This will streamline implementation of energy projects, capture energy savings sooner, and be consistent with the performance contracting approach.

Task Force Recommendation

The Office of Administration should implement “performance contracting” principles to achieve energy efficiency.

5. **Energy Education in Missouri Schools**

Increasing energy education in Missouri’s schools has been consistently identified as an integral component of a state energy policy. In 1992 the Missouri Statewide Energy Study recommended that Missouri expand programs to increase awareness of and interest in energy resource issues among Missouri’s youth. Taking a long-term perspective, the study reported, would plant the seeds for an environmentally literate population in the future.

The energy study specifically recommended that Missouri "implement a comprehensive energy curriculum in the state's elementary and secondary schools. An energy curriculum should focus on teaching such topics as the relationships between energy, the environment and the economy; the scientific basis for traditional and alternate energy sources; policy implications for governments and others; and basic energy management."

The Governor's Energy Futures Coalition (1997) also recommended that Missouri "develop and implement a public education curriculum for opportunities to increase energy literacy." One action identified by the coalition to support this recommendation was to "encourage energy knowledge in conjunction with basic educational assessment programs, where appropriate. Assure that energy knowledge, including its economic, environmental and social impacts, are integrated into statewide K-12 testing and assessment programs."

The National Environmental Education and Training Foundation reports that 95% of adult Americans feel environmental education should be taught in our K-12 schools. Because of the environmental impacts associated with energy production and use, energy is an essential component of environmental education. While there are some initiatives in Missouri that provide energy education in schools, energy education is not in K-12 curriculums and educational assessment programs.

We applaud the work of the Gateway Center, which offers energy education in St. Louis schools, as well as the Department of Natural Resources, which is developing an energy curriculum to be offered to Missouri educators. The Department of Conservation has also been active in this area, but we continue to face significant challenges in accomplishing full integration of energy and environmental education into Missouri's schools.

The Task Force recommends that Missouri implement an energy education program in its elementary and secondary schools. We recommend that the Missouri Department of Elementary and Secondary Education work with the Missouri Department of Natural Resources and the Missouri Department of Conservation to coordinate the integration of energy and environmental education in the classroom. A cooperative effort between these three agencies that combines a Missouri-specific energy curriculum with a clearinghouse of materials could enhance the integration of energy and environmental education into the formal school curriculum. Involving the Department of Elementary and Secondary Education in these efforts would be a powerful tool to educate students on the important and complex issues surrounding energy needs and energy use and would provide the infrastructure to formally integrate energy and environmental education into the school curriculum.

The Task Force also believes that energy education should be encouraged in institutions of higher learning, as well as in extension and community education programs. Combining energy education in an inter-disciplinary approach with coursework pertaining to social, economic, legal, engineering and environmental studies would raise students' awareness of the importance of energy issues in today's society.

Task Force Recommendation

Missouri should include energy education in the curriculum of elementary and secondary schools, and encourage it in other education institutions.

B. Initiatives and Opportunities for Private Industry

1. Renewable Energy Portfolio Standards

The volatility of the natural gas markets during the last year have demonstrated how vulnerable Missouri is to changes in the demand for and price of fuels that must be transported from producing areas outside the state. Missouri can take an active role in expanding the diversity of the energy sources used to light its homes and power its industries.

The Midwest possesses abundant wind, solar and biomass energy potential. Over the last decade, there have been numerous improvements in the cost-effectiveness of renewable energy options. Scientific advances, manufacturing and process improvements, and economies of scale have contributed to improvements in the unit cost, quality and function of renewables. The pace of growth in electricity generated by wind energy offers evidence of these improvements. During the last several years, wind has been the fastest growing energy source in the United States. While issues still remain regarding the transmission infrastructure needed to bring wind power to consumers in sufficient amounts, there have been recent positive developments in Missouri.

On August 21, 2001, UtiliCorp United Inc. began purchasing the output from a wind farm being constructed by FPL Energy (an affiliate of Florida Power & Light Co.) in western Kansas near Montezuma. The project will consist of 170 turbines over 200 feet in height which will ultimately be capable of generating 110 MW of electricity, enough to power 30,000 homes. UtiliCorp will purchase all the power produced by the project for sale to customers of its Missouri Public Service and St. Joseph Light & Power divisions, as well as its WestPlains Energy customers in Kansas.

In the summer of 2000 City Utilities of Springfield entered into an agreement to purchase 35 MW of wind power generated by a wind turbine facility owned by Western Resources, Inc., a Kansas public utility. Known as "WindCurrent," the City Utilities program markets the wind-generated energy for resale to customers in 100-KWh blocks at $5 per block. About 200 customers currently subscribe to the program.

Missouri also has strong solar energy resources which during the summer are comparable to Florida. As the cost of generating power from traditional fossil fuels is likely to increase, and the cost of photovoltaic generation decreases, solar energy becomes an increasingly attractive supplement to electric power generated from coal and natural gas. As with wind, there are no ongoing fuel costs for solar power. In addition, it is generally most available when demand for electricity is highest - during the hot summer days when air-conditioners place the greatest demand on the electric grid. Solar energy also has excellent power quality and may be attractive to high technology and data warehousing firms.

As a farm state, Missouri generates significant amounts of crop waste and has substantial land area available for energy crops. There are also site-specific opportunities to recover energy at low incremental cost. Methane can be recovered from landfills, animal waste systems and wastewater treatment plants. Cellulose fiber can be retrieved from sawmills, forest product industries, urban tree residue sites and traditional solid wastes. Biomass can be handled and burned in essentially the same fashion as coal. Low-cost feedstocks like wood or agricultural waste can be "co-fired" with coal in small percentages in many existing boilers, requiring no new generation facilities or modifications. Because biomass energy projects can convert waste resources to energy, costs associated with environmental remediation and treatment are avoided.

An increased reliance on renewable energy will provide a number of benefits to Missouri. Electricity derived from renewable energy sources, including solar thermal, photovoltaic cells and wind energy, does not result in air pollution, and avoids other issues raised by new fossil fuel generation plants. A more diverse electrical generation portfolio will increase energy system reliability by reducing dependence on the supply of fossil fuels which are susceptible to price volatility.

The Task Force recommends that the state expand its energy sources by requiring each electric utility to generate a portion of its electricity from renewable sources. This requirement could be met with electricity from renewable resources which the utility owns and operates or which it purchases. Electricity generated from new and existing renewable sources should provide at least 0.25% of the retail sales of each utility after 2003, increasing to 1.5% after 2006, 3% after 2009, and providing no less than 6% of all retail sales in each year after 2015 through 2025. Ten years of production at no less than 6% of total electricity used helps assure a predictable market for prospective investors in renewable energy. A firm schedule for increased use of renewable energy also helps assure a market for the renewable equipment manufacturing industry, which will continue to reduce unit costs as the industry matures.

Task Force Recommendation

Missouri should adopt a minimum renewable energy portfolio standard for electric utilities.

2. Net Energy Metering and Interconnection

Electrical generation technologies are available that would allow Missouri citizens and businesses to generate a portion of their electrical needs using renewable energy sources, such as solar and wind energy if they choose. Those interested in using these “distributed generation”

technologies learn that, in addition to the sizable initial cost to purchase the equipment and have it installed, they have additional costs to interconnect to the electric distribution system. By connecting to the electrical distribution system, customers can supplement the power they self-generate with power from the utility company.

To encourage increased reliance on grid-connected renewable energy and minimize administrative costs, a billing practice called "net energy metering" has evolved. Thirty-four other states have already adopted this billing practice. Net energy metering occurs when the kilowatt-hours produced by a small customer-generator in excess of the customer's needs are fed back into the electric distribution system and are subtracted from the kilowatt-hours of power obtained from the utility. Neighboring states that permit some form of net metering or parallel generation include Illinois, Iowa, Kansas, Oklahoma, Indiana and Minnesota.

Net energy metering allows the customer to bank excess electricity and withdraw it from the grid later that day or any time during the monthly billing cycle, making it more cost effective for homeowners and businesses to generate some of their own power. This is feasible because the standard kilowatt-hour meter used by the vast majority of residential and commercial customers accurately measures the flow of both incoming and outgoing electricity. Thus, the "netting" process occurs automatically because the meter spins forward or backward based on whether the electric current is flowing to or from the customer.

Net energy metering provides a variety of benefits for utilities, consumers, and the public. Utilities benefit by avoiding the administrative costs of a double meter system, and purchasing the small amounts of excess electricity from small-scale renewable generating facilities delays the need for costly new power plants and transmission line upgrades. Customers benefit by being compensated for excess power they generate and by being able to interconnect

economically to the utility using nationally certified safety equipment (compliant with standards found in or adopted by the National Electric Code, the Institute of Electrical, and Electronics Engineers, National Electrical Safety Code, and Underwriters Laboratories) together with their existing utility meter.

The public benefits by encouraging the adoption and refinement of clean energy technologies that reduce generation needs and harmful emissions from fossil-fuel fired power plants; diversify Missouri's energy resource mix, thereby helping to minimize fuel price volatility of conventional fuels; improve the reliability of the electric system by providing peak power in close proximity to loads during high demand periods; and encourage renewable energy equipment sales and jobs that benefit Missouri's economy.

Net metering programs adopted in other states include provisions to assure that the public's interest in expanded use of renewable energy is balanced against the utility's interests in meeting organizational goals. These provisions include limits on the size of customer-generated systems, a limit on overall enrollment, standardized safety and interconnection requirements, and limiting the eligible energy sources to clean renewable energy.

The Task Force recommends that Missouri enact legislation to enable Missourians that invest in electrical generation with renewable fuel sources to have the option of contracting with their electric service provider on a net metering basis using a simplified standardized interconnection agreement without the addition of new fees. To assure that utility concerns are addressed, the Task Force recommends that participation in net metering be limited to systems that comply with national electrical safety standards, and a generation capacity of 100 kilowatts or less. In addition, the Task Force recommends that the total capacity of customer-generator

systems eligible for a net energy metering interconnection agreement with their local electric utility is limited to one-tenth of a percent (0.1%) of that utility's peak annual demand.

Kansas amended its 1979 net metering or parallel generation statute earlier this year. Section 66-1,184 of the Kansas Statutes Annotated should be considered by the Joint Interim Committee as a possible model on which to base Missouri legislation.

Task Force Recommendation

The Task Force recommends that the General Assembly consider legislation permitting net metering with due regard for utility safety and reliability concerns.

3. Incentives to Promote Energy Efficiency and Renewable Energy

Energy efficiency is an energy resource like coal, oil, wind, sunlight, biomass or natural gas. In contrast to supply options such as building new generating plants, drilling for more natural gas or mining coal, energy efficiency helps provide energy supply and security by curbing demand instead of increasing supply.

An economic comparison of supply-side investments and efficiency will vary by region and utility however, the Department of Energy (DOE) has used the cost of energy in cents per kilowatt hour (KWh) saved as an index for making approximate comparisons. DOE data collected from utilities indicates an average cost of conserved energy at under 3 cents per KWh, while the Rocky Mountain Institute reports an average of 2 cents per KWh with the best designed programs costing less. Costs for new generation facilities are estimated to range from 3.5 to 5 cents per KWh. Using these cost estimates, energy efficiency investments are more cost-effective than building new generation. This comparison does not consider the additional environmental and transmission system benefits offered by energy efficiency, which would further magnify the cost effectiveness of energy efficiency initiatives.

The PSC Task Force Report recommended that the Commission pursue incentive measures for encouraging energy efficiency.[10] Balanced utility energy portfolios that address demand reduction in addition to increased supply can be designed to be good for the consumer (through lower energy costs) and the utility company (through incentives that mitigate reduced profits from a reduction in sales).

Missouri ranks in the top five states in terms of total potential energy savings and energy savings per home based on a 1998 Alliance to Save Energy study of states that have not adopted an energy code. Missouri utilities' total demand side management savings averaged 0.06% of total electricity sales in 1998, compared to the national average of 1.74% of sales. The Department of Energy estimates that 22% to 44% of the nation's electricity consumption could be saved with energy efficiency measures.[11]

Missouri spends approximately $12 billion each year on all its energy needs, ranking 17th in the nation in total energy expenditures. Missouri imports more than 95% of its conventional fuels from outside the state (coal, oil and natural gas). In 1999, over 99% of Missouri's primary energy sources were non-renewable fuels.

Missourians would benefit greatly from investments in energy efficiency and renewable resource programs. Efficiency programs provide assistance to customers by helping to reduce their energy usage and utility bills, which is particularly important when energy prices are high and volatile. System reliability and resilience are improved by reducing vulnerability to disruptions in energy supplies through efficiency and a diversified fuel mix. Long-term costs can be lowered by reducing expenditures by gas and electric utilities to upgrade their infrastructure to meet increasing demand. Investments in energy efficiency and the resulting

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[10] PSC Task Force Report, p. 4.

[11] Department of Energy, Western Area Power Administration, DSM Pocket Guidebook (1991).

lower energy costs coupled with the development of domestic renewable energy will improve the ability of businesses to compete, keep energy dollars closer to Missouri, increase customers' discretionary income, preserve natural resources and reduce pollution.

The barriers that inhibit customers from making investments in energy efficiency improvements and renewable energy systems include the lack of money or competing demands for available money, the perception that higher up-front costs are not worth long-term savings, and the lack of technical expertise. Effective renewable energy programs could include financial incentives for the installation of generating equipment and for the generation of electricity from wind, solar thermal and photovoltaic cells; biomass such as crop and wood waste; and methane gas recovered from landfills and animal farms.

Missouri has access to renewable resources that are economically viable and good for the state's economy and environment. Several forms of renewable energy are found in abundance in the Midwest, most notably biomass, wind and solar resources. As an agriculturally productive state, there is substantial land area available in Missouri for energy crops and crop waste, ground cover on Conservation Reserve Program set-aside acres, timber harvesting residues, primary wood processing wastes and municipal solid waste. If one-half of the energy content of these available biomass resources were used in technology that is as efficient as the average American electric generation plant, the net energy delivered to users annually would be 15.2 million MWh. This compares to 75.2 million MWh generated in Missouri in 1998, or 20.2% of our current generation. In gallons of gasoline, this equates to 451 million.

A DOE study found that 12 states in the midsection of the country have enough wind energy potential to produce four times the amount of electricity consumed by the nation in

1990.[12] Approximately 3% of Missouri's land area carries winds that can be economically developed for electric generation. In addition, Missouri's neighboring states to the north, west and south have extensive areas of Class 3 wind and substantial areas of Class 4 wind. Iowa ranks second in the nation for installed wind turbine generation capacity. The cost of wind-generated electricity is now in a competitive range with power technologies that use fossil fuels, ranging from 3 to 6 cents per KWh - not including the federal production tax credit of 1.5 cents per KWh provided to wind generation.

Mid-summer solar energy available from flat-plate collectors (such as photovoltaic panels) in all Missouri counties is 6 to 7 KWh per square meter per day - comparable to the desert Southwest in mid-summer that receives 7 to 8 KWh per square meter per day.

The Task Force recommends that Missouri pursue incentives funded through various sources to encourage the increased development of energy efficiency and renewable resources to provide for a more secure energy future. Incentives worthy of consideration include:

- Low-cost consumer loans or other financing for energy-efficient residential and commercial building improvements and appliances;
- Rebates for high-efficiency heating and cooling systems, hot water heaters, lighting or windows;
- Tax credits to encourage more energy-efficient new building construction and retrofit of existing buildings;
- Addition of energy-efficiency components in existing state funds, such as linked-deposit loans offered by the Treasurer's Office or financing offered by the Missouri Housing Development Commission.

[12] D.L. Elliott and M.N. Schwartz, "Wind Energy Potential in the United States," National Wind Technology Center, Department of Energy (1993).

Task Force Recommendation

Missouri should consider legislation that would offer consumers incentives to encourage energy efficiency and the use of renewable energy resources, such as

- **Low-cost consumer loans for building improvement and appliances;**
- **Rebates for heating systems;**
- **Tax credits for new building construction and retrofits;**
- **Energy-efficient components to state financial programs.**

III. Working With Public Utilities & Private Industry

A. Security and Reliability Issues

In light of the September 11th destruction of the World Trade Center and the attack on the Pentagon, the Task Force believes it is appropriate for all utilities who own energy infrastructure to assess current security practices and to take appropriate steps to safeguard their assets. A concern naturally arises as to how such costs will be paid. Investor-owned utilities should receive general assurance from the Public Service Commission that costs which are prudently incurred to enhance the reliability and security of Missouri's energy infrastructure in response to the heightened state of alert will be approved.

In this regard, the Federal Energy Regulatory Commission issued a Statement of Policy on September 14, 2001 to encourage companies to safeguard the reliability and security of their energy supply infrastructure. See In re Extraordinary Expenditures Necessary to Safeguard National Energy Supplies, 96 FERC ¶ 61,299 (2001).

The Task Force encourages the governing boards of Missouri's electric cooperatives, as well as the city councils or governing boards that are responsible for Missouri's municipal electric utilities to take steps to address security issues as well.

Task Force Recommendation

Missouri utilities should assess the security and reliability of their infrastructure as a result of the September 11th terrorist attacks.

B. Missouri Energy Policy Council

An Energy Policy Council should be established by law to advise the Governor on matters of state, as well as local, regional and national energy policy. The Task Force recommends that the Council consist of approximately 20 members, and that permanent

members include representatives from the Department of Natural Resources, the Department of Economic Development, the Public Service Commission and the Office of the Public Counsel. A state senator and a state representative should also be members.

The Task Force believes that the ability of the Council to advise the Governor will be enhanced with representatives of electric utilities and natural gas utilities; utility workers; non-utility and renewable energy companies; the propane and the petroleum industries; industrial, agricultural, and commercial consumers; municipal governments; and non-profit representatives of low-income consumers and energy efficiency and/or renewable energy organizations. Consideration should be given to consolidating the responsibilities of existing councils and commissions that have been given specific duties in energy or related efficiency areas. Such entities include the Missouri Ethanol and Other Renewable Fuel Services Commission and the Missouri Propane Education and Research Council.

We recommend that the Council establish the Governor's Energy Efficiency and Renewable Energy Award to be given annually to public or private organizations located in Missouri that significantly reduce their dependence on fossil fuels as an energy source or otherwise significantly advance the availability of energy efficiency or renewable energy to Missouri citizens.

The Task Force also recommends that the Council, in cooperation with the Energy Center of the Department of Natural Resources, publish annually a "Green Progress Report" that assesses how the state's public and private sectors are reducing their reliance on fossil fuels with increased use of energy efficiency and renewable energy sources. In particular, the report should contain an analysis of energy consumption by state departments and agencies that shows their energy conservation efforts and the resulting savings.

Task Force Recommendation

An Energy Policy Council should be established to advise the Governor on matters of local, state, regional and national energy policy.

- **The Council should establish the Governor's Energy Efficiency and Renewable Energy Award.**
- **The Council should publish annually a "Green Progress Report."**

C. Time-of-Use Electric Rates

The energy crisis in California has focused attention on the potential for lowering the demand for electricity by pricing electricity at levels that more closely reflect the costs of providing electric service at different times of the year and at different times of the day. Time-of-Use (TOU) pricing can be offered through advanced metering systems that could be used to moderate Missouri's need for additional generating capacity.

While California is examining real time pricing and TOU rates in response to its shortage of generation capacity, Puget Sound Energy Co. in Washington State began offering a TOU rate to about 300,000 residential customers in May 2001. Puget Sound, an investor-owned electric and gas utility, proposed extending and expanding the program in September 2001, citing the program's success in encouraging customers to shift 5% of their energy usage to off-peak times.

Many electric utilities, including some in Missouri, have made real time pricing and TOU pricing available to their larger customers for years. Georgia Power Co. is recognized as the utility that has been most aggressive in the implementation of dynamic pricing programs for large customers. Georgia Power has about 1600 large customers, with about 5,000 MW of load, enrolled in its program. These customers have generally reduced their loads by about 500 MW when prices reached $500/MWh. Up until now, one of the main barriers to introducing these types of programs to smaller customers has been the lack of interval metering equipment that is

capable of measuring variations in the customer's usage at different times of the day. Fortunately, the cost of interval metering equipment has declined significantly in recent years due to advances in technology.

Most Missouri electric investor-owned utilities (IOUs) already have seasonal rates that reflect the higher costs of electric generation during the peak summer months. However, no Missouri electric IOUs are offering TOU rates to small commercial and residential customers that reflect the higher cost of generating electricity during the time of the day when usage approaches its peak. Although no Missouri electric utility is currently offering TOU rates to small customers, AmerenUE and Kansas City Power & Light Co. are uniquely positioned to offer these rates since they currently have most of the necessary infrastructure in place. Both companies have installed automatic meter reading (AMR) systems that are capable or could be made capable of reading meters at designated intervals throughout the day.

The Task Force recommends that other Missouri electric utilities consider installing AMR systems in substantial portions of their service territories. The Task Force urges AmerenUE and KCPL to offer TOU pricing for their small customers with remote meters. The Task Force recognizes that utilities with AMR systems may incur additional expenses to implement a TOU billing system. However, these additional costs are likely to be less than the power supply costs that can be avoided by encouraging customers to shift their usage from high-cost to low-cost time periods. The Public Service Commission should determine whether any costs incurred in implementing AMR systems should be recovered in rates, and, once installed, whether TOU rates should be mandatory, voluntary or applicable to all who do not opt-out.

Task Force Recommendation

The Public Service Commission should consider implementing Time-of-Use electric rates.

D. Competitive Wholesale Electric Markets and Regional Transmission Organizations

Effective competition in the wholesale electricity markets is an essential ingredient to an efficient retail electricity market. Such competition can provide customers with a reliable, reasonably priced source of energy and offer public utilities a rational marketplace in which to prosper. While the Task Force is not unanimous in its opinion on the merits of restructuring the electricity market and retail choice, it is unanimous in its belief that Missouri must encourage the development of effective competition in wholesale electric markets. Three prerequisites for the development of wholesale competition are: (1) a sufficient number of generation suppliers so that no single supplier or group of suppliers can dominate the market, (2) the participation of distributed generation and demand side resources in wholesale markets, and (3) the formation of Regional Transmission Organizations (RTOs) that will provide sound management of the transmission grid and monitoring of the wholesale electricity markets.

Currently, Missouri finds itself split among several of the currently organized Regional Reliability Councils which oversee transmission reliability issues as part of the North American Electric Reliability Council (NERC). NERC, a voluntary organization founded by utility transmission owners, has operated since 1968 on the basis of reciprocity, peer pressure and the mutual self-interest of all market participants. However, the growth of competition and structural changes in the electric industry have significantly altered the incentives and responsibilities of market participants to the point that a system of voluntary compliance is no longer adequate. Federal legislation is now needed to ensure that NERC and its regional organizations have clear-cut statutory authority to enforce compliance with reliability standards among all market participants. The regional councils that currently affect Missouri's transmission assets include the Mid-America Interconnected Network (MAIN), the Southwest

Power Pool (SPP), the Southeastern Electric Reliability Council (SERC), and the Mid-Continent Area Power Pool (MAPP). These four councils, respectively located in Lombard, Illinois, Little Rock, Arkansas, Birmingham, Alabama, and St. Paul, Minnesota, exercise some level of authority over the transmission assets in Missouri. This balkanization of authority over the state's grid must end.

To that end, the Task Force applauds the efforts of the Federal Energy Regulatory Commission (FERC) to develop one large Regional Transmission Organization for the Midwest, which would oversee all transmission assets of Missouri and nearby states. The two prospective RTOs approaching operational status in the central United States are the Midwest Independent Transmission System Operator, Inc. (Midwest ISO) and the Alliance Regional Transmission Organization (Alliance). The Midwest ISO and the Alliance are, pursuant to a FERC directive, negotiating a Super-Regional Rate which should lower the cost of transmission across Missouri and other midwestern states. They are also in the process of implementing an Inter-RTO Cooperation Agreement intended to establish a relatively uniform and "seamless" wholesale electricity market throughout the Midwest.

Additionally, those portions of Missouri's transmission grid that are being administered by MAPP and SPP appear to be on their way toward combining with the Midwest ISO. The merger or combination of these three entities should lead to better oversight of the transmission grid, better management of congestion on the system, and a more coordinated effort to facilitate the planning and construction of new generation and new or upgraded transmission lines.

The task of RTOs is a challenge. Their goal is to improve efficiencies in transmission grid management, improve grid reliability, remove remaining opportunities for discriminatory

transmission practices, and improve market performance.[13] However, these goals set by FERC can only be accomplished if the RTO is sufficiently independent from market participants, and is permitted to exercise operational authority over a broad geographic area. Currently, there is no RTO in operation in the United States which has met all of these criteria unconditionally.

In encouraging the formation of RTOs, Missouri should stress that these emerging companies must be operated in a fashion that is independent of all market participants, but also attentive to the views of those participants and other stakeholders such as state regulators, consumer advocates and environmental groups.

Task Force Recommendation

Missouri should encourage a competitive wholesale electricity market and regional transmission organizations.

E. Municipal Utility Districts

The Task Force recommends that the General Assembly consider amending Article VI, Section 27 of the Missouri Constitution and the statutes dealing with joint municipal utility commissions (Sections 393.700-770 and 386.025) to authorize municipalities and certain other entities to jointly own power plants, transmission lines and other electric facilities without being required to submit to the full jurisdictional authority of the Public Service Commission.

Article VI, Section 27 of the Missouri Constitution provides in pertinent part that no joint board, commission or joint venture of any kind "shall purchase, construct, extend or improve any revenue producing gas or electric light works, heating or power plants unless and until" such entities "and all utility operations conducted by any joint board, commission, officer or officers are fully regulated in all respects as a public utility." This provision requires that "all utility operations" be fully regulated by the Missouri Public Service Commission, whose traditional

[13] Regional Transmission Organizations, Order No. 2000, FERC Stats & Regs. ¶ 31,089 (1999).

area of jurisdiction is directed to for-profit investor-owned public utilities. This constitutional requirement is echoed in state statute. Section 393.295 provides that the regulatory provisions of Chapters 386 and 393 concerning the powers and duties of the Public Service Commission are "fully applicable to any joint municipal utility commission which owns, operates, controls or manages all or any part of any water, gas or electric light works, heating or power plants, electrical energy resources or gas or electrical production, distribution or transmission facilities in this state." Sections 386.205 and 393.765 contain similar restrictions.

In recent years Missouri's municipal utilities have found significant value in working together. They believe that value will increase with the growing complexity of wholesale power transactions and transmission arrangements. Missouri's many small municipal electric systems are attempting to pursue a successful blend of community ownership and governance of such electric systems, but require a sufficient scale to assure a stable economic base. The larger municipal electric systems in Missouri (such as Springfield, Columbia and Independence) own a significant portion of their generating capacity. However, the small utilities in Missouri generally depend upon other utilities for their power requirements. As a result of the desire of small Missouri municipalities to have access to power based upon production costs, rather than market prices, they need to own a much larger proportion of their generating capacity requirements. State law currently presents obstacles to that goal.

As currently structured, state law would require small municipal utilities that become joint developers of utilities to incur significant legal and consultant fees, staff time and related expenses. Since municipal utilities are currently accountable to the public, and are governed or regulated by the city council or a local board, there is an argument that state regulation by the Public Service Commission would be duplicative and unnecessary. The current restrictions in

state law have effectively restricted the joint municipal utility commissions permitted by Sections 393.700 - 393.770 and 386.025 such that the joint commission concentrates all its efforts only on brokering functions. No such statutory restriction is applicable to Missouri's rural electric cooperatives, who have organized larger generation and transmission cooperatives which serve the local distribution cooperatives that provide electric service directly to their customers.

The Missouri Public Utility Alliance has also advised the Task Force that current elements of state law present an obstacle to the financing of any municipality or joint agency that wish to develop a significant utility project. The requirement that bonds be offered at public sale under Section 393.725.5 is a further obstacle, considering that such bonds are generally not the type of offerings that would be likely to attract large numbers of public buyers. The ability of such utilities to offer bonds in private placements should be considered.

The Task Force therefore recommends that the Joint Interim Committee on Telecommunications and Energy further explore these issues with the goal of enacting legislation that would permit Missouri's municipal utilities to act jointly in order to take advantage of economies of scale, as well as opportunities in the wholesale power markets without being subjected to the full regulatory powers of the Public Service Commission.

Task Force Recommendation

The General Assembly should consider legislation authorizing the creation of municipal utility districts.

F. Publicizing Energy Information and Monitoring Price Gouging

The Year 2001 has seen enormous fluctuations in prices of all energy commodities, but particularly natural gas and gasoline. The prices of these fuels, as well as related commodities

like propane and diesel, are not and have not in recent history been subject to regulation. Nevertheless, the Task Force believes that price and supply information should be more widely collected, publicized and carefully monitored in order for the public to understand how the free markets work. Citizens should have at least an elementary knowledge of how these markets establish energy prices, the factors that affect prices, and the actions that government takes to ensure that the markets are not subject to manipulation or unlawful conduct. Moreover, energy information is essential to inform state leaders about available and forecasted energy supply and demand, as well as emergency planning in the event of disruptions.

The Task Force believes that voluntary information-sharing between state agencies with energy responsibilities and the companies that supply energy will enhance the efforts of all concerned to meet the state's energy needs. Today's heightened recognition of the need for energy security accentuates the collective public and private responsibility to provide safe, reliable and affordable energy.

The Task Force recommends that information currently compiled by the Department of Natural Resources' Energy Center be more widely distributed and be available on an internet website that is more easily reached. The State of Pennsylvania has developed an "Energy in Pennsylvania" website - www.paenergy.state.pa.us - that presents average gasoline, diesel, heating oil and propane prices in an easily accessible fashion. Efforts should be made to disburse the information which the Energy Center currently compiles to all major broadcast and publishing outlets throughout Missouri.

Unfortunately, price gouging in commodities like gasoline occurs from time to time. The Task Force recognizes that price gouging is not the same as price volatility, which often occurs in unregulated markets when supply is limited, demand increases, or external forces like weather

and political crisis disrupt the normal flow of commerce. Prior to September, gasoline prices in 2001 fluctuated from .99¢ a gallon to close to $2.00 per gallon. With the price run-ups to $4.00 and $5.00 per gallon after the attacks of September 11th, Attorney General Nixon, as well as attorneys general in other states took prompt action to charge such gasoline retailers with violations of merchandising practices laws. The Task Force applauds the work of Missouri's Attorney General and his staff, who relied upon current state law which prohibits price gouging for energy products during times of emergency. However, the current law does not provide adequate tools to ensure an immediate termination of price gouging during times of emergency, leaving consumers vulnerable to price spikes based upon misleading or false information. The General Assembly should consider changes to existing laws that would provide the Attorney General with authority to issue cease and desist orders that have an immediate impact on energy prices and excess profits during times of emergency.

Task Force Recommendation

Missouri should promote the distribution of energy information, and the General Assembly should consider legislation to enhance the Attorney General's power to deal with price gouging.

- **The Public Service Commission, in consultation with the energy industry and other appropriate state agencies, should assess the long-term adequacy of Missouri's electric generating capacity and supply of natural gas.**
- **The Public Service Commission, the Department of Natural Resources and the Office of the Public Counsel should assess whether more state authority and reporting requirements are necessary to gauge the impact of unregulated power plants being built in Missouri.**
- **The Department of Natural Resources Energy Center should continue to monitor, assess and provide information on energy prices and supplies to the public, and should advise the Governor and the General Assembly on its need for information from unregulated energy companies to fulfill its mission.**

G. Ratemaking Issues

In light of the price spikes in natural gas this past winter, and problems in the western and northeastern electricity markets, the Task Force studied whether any additional powers need to be given to the Public Service Commission to regulate Missouri's investor-owned public utilities. State law gives the Commission general authority and discretion to carry out its duties. The wise use of those powers over the past two decades has produced financially healthy utilities whose rates are generally average to below-average when compared with national cost figures.

State law currently gives the Commission the power to set just and reasonable rates and to require safe and adequate service in return for the utility's right to be the exclusive monopoly provider within its territory. Regulated utilities serving Missouri have generally prospered because rates are based on the cost of service. The Commission sets rates at levels that allow the utilities an opportunity to recover their reasonably incurred costs and to earn a reasonable profit.

Rate of return or cost of service regulation permits the Commission to act as a surrogate for competition. This is because competitive markets also focus on the return on investment, often referred to as earnings per share. A primary purpose of any market structure, whether regulated or competitive is to provide the consumer with the desired product in an economically efficient manner. Regulation provides financial incentives similar to competitive markets. The incentives for regulated entities to achieve efficiencies are virtually the same as for firms in competitive unregulated sectors. For regulated utilities, once rates have been set, realized earnings will depend on actual revenues and costs going forward. To the extent the utility can improve its efficiency and reduce costs, it will enjoy a return greater than that authorized, other things remaining constant. After a period of time, a new rate case will result in new rates consistent with the utilities' costs.

Over the last decade the Commission has experimented with other regulatory models in an effort to improve the incentives inherent in the traditional regulatory model. The two general categories of methods that have been used are Performance Based Regulation and Alternative Rate of Return Regulation.

Performance Based Regulation focuses on a utility's performance in various operations in comparison to an established benchmark for those operations. Performance Based Regulation permits a utility to increase or decrease earnings under a preset financial procedure regardless of the utility's overall earnings performance. Alternative Rate of Return Regulation retains the focus on earnings, but substitutes a predetermined review plan that will be in effect for a period of time and that serves in place of the usual rate case.

Participants in Missouri regulation have not reached consensus regarding the effectiveness of alternative regulation. These experiments have allowed utilities to earn returns greater than would have been the case under traditional regulation and have allowed the ratepayers to share in the additional earnings through various types of refunds or credits. Some parties have criticized these models for allowing a greater level of earnings than necessary to facilitate increased efficiency. Supporters of these programs say they are responsible for the healthy state of Missouri's utilities and their ability to survive as Missouri-based independent companies, in light of the national trend of mergers and take-overs occurring in many other states. Problems associated with these models may be due to their structure or design, as well as their implementation.

Regulatory models that focus on earnings are preferable to a fixed formula in either law or regulation that would mandate a specific return on equity. Establishing a formula to determine an appropriate return on investment would remove the financial incentives to maintain

efficiency. The competitive market provides no such formula and the Task Force is unaware of any other state that has adopted such a public policy.

The Public Service Commission must retain its traditional ability to exercise judgment and discretion in the ratemaking process. Similarly, public utilities must be accorded a fair opportunity to earn reasonable returns on investment. The State of Missouri should encourage the Commission to use either the traditional regulatory model or alternative regulation that focuses on earnings.

The authority of the Public Service Commission to deal with sudden and novel issues arising in the industry is adequate. Section 393.140 grants the Commission extensive powers with regard to the regulation of gas and electricity companies. The Commission continues its oversight of utility plans for adequately addressing the needs of their customers by periodically reviewing issues of supply, capacity and planning. Known as "Integrated Resource Planning," this process has been modified in recent years to provide the Commission with an opportunity to review a utility's resource planning and acquisition program in a timely, flexible and confidential manner. The Commission has the authority to promulgate adequate consumer protection rules. Current rules permit the Commission to order reconnections or forbid disconnections under circumstances where the public interest is at stake. Missouri's Cold Weather Rule[14] is effective in regulating the supply of natural gas to residential customers during extremely cold periods.

Task Force Recommendation

The Public Service Commission's general ratemaking authority should be retained.

[14] The Cold Weather Rule is contained in the regulations of the Public Service Commission. See 4 CSR 24013.055 ("Cold Weather Maintenance of Service: Provision of Residential Heat-Related Utility Service During Cold Weather").

H. Electric Restructuring Issues

The movement toward deregulation began in high cost electric states where large industrial consumers argued that they should be given the opportunity to buy cheaper electricity from someone other than their local electric utility monopoly. With the advent of the increasingly integrated electric transmission grid, which permits the transmission of electricity over wide distances and not simply to serve local customers, some believed that offering consumers a choice made sense. Moreover, since electricity could be produced by a wide variety of generation sources - coal, natural gas, nuclear, wind, hydro, solar and biomass - it no longer appeared necessary to require full regulatory control over the generation function.

With a multitude of problems encountered since the summer of 2000 in California and other states that are restructuring their electric industries, many questions have been raised about the wisdom of deregulating the electric industry. Other states like Montana and New York have experienced problems as they restructure their electric industries, even though they did not adopt the California model. Some of the problems experienced by states that enacted laws to provide retail choice are related to insufficient competition in wholesale electric markets. Some industry analysts also cite the increased costs that may be incurred in deregulated electric markets and raise doubts about the ability of any savings from competition to overcome these increased costs. Increased costs may be incurred due to the need for higher reserve margins to encourage robust levels of competition, the need for new information systems, and the higher costs of financing competitive generation facilities that sell power in competitive markets. On the other hand, proponents of restructuring argue that encouraging generation from independent power producers and exempt wholesale generators will reduce the necessity of higher reserve capacity margins because more generation will exist. Furthermore, if the financing costs of new

generation are too high, that is probably a sign that the new generation is not needed, and the investment will not occur.

The Task Force believes that any restructuring of the retail electric industry in our state should occur only to the extent that it can be shown that all classes of consumers who will be affected will be better off as a result of such a change. At a minimum, such electric restructuring proposals should meet a "*do no harm*" standard. The following are some of the considerations that should be taken into account when analyzing any restructuring proposal:

1. Missouri has been very successful in maintaining relatively low electric rates as well as reasonable returns for electric company shareholders. Rate decreases have been the rule instead of the exception lately, even as most electric companies have enjoyed record profits. Rates for Missouri electric consumers are average or below the average rates for the nation as a whole. Reliability is secure and consumer fraud in the industry is rare.
2. Generation assets currently in rate base that serve Missouri customers should remain in rate base and continue to be fully regulated by the PSC. Given the current state of competitive wholesale markets, any transfer of generation assets or the reduction of Missouri's jurisdiction to regulate these assets would impose risks on consumers.
3. A focus on market structure is essential. No amount of consumer protections can compensate for a flawed market structure. The ownership of Missouri's generation assets is currently highly concentrated. Unless effective measures are taken to mitigate undue market power, effective competition will not develop and

restructuring will be destined for failure. Market power abuses must be addressed through prompt and effective regulatory oversight.

4. Retail choice should not occur until there are adequate highways for commerce in place. The transmission system must be independent of generation owners and other market participants and dedicated to the public functions of reliability and competitive power markets. Fully functional RTOs, configured and designed to meet the needs of Missouri consumers must be in place prior to any major restructuring or deregulation.

5. Retail choice should not occur until there is an effectively competitive generation market with adequate supplies and minimal entry barriers.

6. Reliability and universal service must be secured. A provider of last resort must be available and be regulated to ensure that all consumers are served and can afford basic energy needs.

7. Any retail restructuring plan should include the creation of a public benefits fund for use in low-income weatherization and affordable rate programs, cost-effective energy conservation, and support for Missouri-based renewable energy resources.

8. Strong consumer protections and massive consumer education must be in place to combat increased opportunities for fraud and confusion and to educate consumers about how to make informed choices between retail suppliers, including the cost, source and environmental attributes of the energy offered.

9. To the extent that significant restructuring proposals would cause utility assets to change the economic value that they possess under current regulation, the Commission should oversee the process of evaluating such claims of positive or

negative "stranded" costs or investments. However, to the extent utilities make independent financial decisions in a deregulated market, they must bear the consequences of those decisions.

10. Large, sophisticated energy customers must bear the financial responsibility of their decisions in a retail choice environment. Should they leave the incumbent utility serving as the default supplier of electricity, these large users should not be allowed to shift costs to other consumers when they choose other energy suppliers or return to default service.

The Public Service Commission and the Joint Interim Committee on Telecommunications and Energy should fully analyze the impact on residential consumers and businesses (both large and small) that would result from legislative proposals to restructure Missouri's electric industry or significantly alter the manner in which utilities are currently regulated.

Task Force Recommendation

Missouri should approach electric restructuring with caution.

I. Construction Work In Progress

The Public Service Commission is required by law to set a utility's rates at a level that is just and reasonable to the consumer and that allows a utility to recover its prudently incurred expenses and an opportunity to earn a reasonable profit so as to attract the necessary capital to continue its operations. In most states utilities are only allowed to recover expenses and return on investment that is "used and useful" in the public service. It is for this reason that an investment made during the construction phase of a new plant or other project (Construction Work in Progress or CWIP) is not ordinarily recovered in a utility's rates. Instead, the utility

accrues those construction funds used during construction. Once the construction project is complete and in service, the accrued amounts known as an Allowance for Funds Used During Construction (AFUDC) are included in rates. The ratemaking treatment is subject to audit to insure that all costs associated with the project have been prudently incurred.

CWIP is not included in rates for the following policy reasons:

- Property under construction is not "used and useful" in providing safe and adequate service. This position holds that there is no assurance that a project will ever provide service until it is complete and placed in service.
- Postponing rate recovery until a plant is "used and useful" creates financial incentives for management to bring facilities into service in a timely manner and at economic cost because the utility must finance the cash flow until the property is placed in service.
- It is inappropriate for the customers of a utility to fund its construction projects. It is the owners of the utility that must raise the investment to provide service, not the customers. Customers must buy services and are not investors.

Missouri has traditionally rejected the recovery of CWIP in rates as a matter of policy, but there has been a statutory prohibition in Section 393.135 since 1976 when Missouri voters passed Proposition No. 1. New Hampshire and Oregon also prohibit all CWIP from rate base by statute.

During the 1970's, a period of heavy base-load power plant construction and high capital costs, many states permitted the recovery of CWIP. After 1975 a total of 12 states allowed CWIP in rate base for the first time. As of 1978, 34 state regulatory commissions allowed CWIP. A number of states, including New York, have created hybrid models where the return on CWIP is offset by other factors, including the extent to which AFUDC is included in operating income. CWIP has not been a major issue in recent years because of smaller construction budgets and lower capital costs.

Task Force Recommendation

The Task Force does not recommend measures to include CWIP in rates at this time.

J. PSC Natural Gas Task Force Recommendations

This Task Force generally agrees with the recommendations of the Public Service Commission's Natural Gas Commodity Price Task Force.[15] The PSC Task Force consisted of 11 consumer representatives, 11 utility representatives, and 9 other individuals representing industrial consumers, labor and the Public Service Commission Staff.

The PSC Task Force strongly endorsed the use of price mitigation tools and hedging instruments by local distribution gas utilities or LDCs. We agree that LDCs should create a balanced portfolio of gas supply contracts with various pricing structures in an attempt to reduce, but not eliminate market sensitive pricing. While such a philosophy may result at times in above-market prices, this is necessary in order to control price volatility. Similarly, the costs of hedging and fixed-price contracts in order to assure some measure of gas price stability and limits on gas price spikes could result in higher gas costs over the long term. We also agree with the PSC Task Force that LDCs should be encouraged to store natural gas as a physical hedge against price fluctuations, as well as to assure reliability of supply and flexibility of operations.

The PSC Task Force generally endorsed the concept of the Purchased Gas Adjustment (PGA) mechanism which permits LDCs to pass through to customers, dollar-for-dollar, the prudently incurred wholesale cost of natural gas, adjusted for any price mitigation measures. LDCs are currently permitted twice a year, and once for good cause, to request adjustments in these costs from the Public Service Commission. Thereafter, an annual proceeding known as the Actual Cost Adjustment occurs before the Commission where an LDC's actual gas costs are

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[15] See Note 6, supra.

reconciled against the amounts it has collected from customers through its PGA charges during the year.

The strong recommendation of the PSC Task Force was that alternative recovery mechanisms for low and fixed-income customers should be developed. As discussed above in "Protecting Consumers" (Section I), this Task Force endorses those proposals. Additionally, the PSC Task Force recommended, although not strongly, that PGA rates be changed more frequently than twice a year and once for good cause. The opinion appeared to be that four times annually would permit the LDCs to recover their costs more regularly, as well as communicate to consumers the changes in natural gas prices. Generally, this Task Force believes that the PGA mechanism, which has been used in Missouri since 1962 and which has been adopted by 46 of the 50 states, should be preserved.

The PSC Task Force also endorsed the use of properly designed incentive programs for LDCs where additional profits would be awarded for achieving cost reductions and efficiency gains. Properly designed incentive programs balance LDC and consumer risk, and target areas where LDC's can control costs. Among the areas where incentive programs could be implemented include natural gas procurement, hedging programs, off-system sales of natural gas and energy efficiency programs. This Task Force agrees with those recommendations.

IV. Conclusion: Developments
Since March 1 Initial Report and August 1 Interim Report

Since the Task Force's Initial Report, we can advise that the prices of both natural gas and propane have fallen substantially. Indeed, the prices have fallen below the most optimistic levels that were predicted at our sessions earlier this spring. During the summer the price of natural gas fell below $3.00/MMBtu, which was lower than the summer 2000 prices that ranged in the area of $3.75 to $4.25. Reports show that exploration and production have increased and storage levels have increased to levels far above that of the summer 2000.

At the end of September the price of natural gas fell to a 2 ½ year low after the American Gas Association reported that underground storage deposits rose to 2.914 trillion cubic feet, an 18% increase over 2000 levels. Inventories of 3 trillion cubic feet, normally considered adequate for winter, should be reached by the end of October. Indeed, the Natural Gas Supply Association, a producer group, predicted that inventories would reach 3.2 trillion cubic feet, the highest level since the American Gas Association began tracking inventories in 1993. Natural gas for October 1st delivery fell to $1.83/MMBtu during the final week of September, with November prices at $2.253/MMBtu. Prices are down over 80% from a December 27, 2000 record of $10.10/MMBtu. Appendix I summarizes these and related trends in energy prices.

The Task Force is not aware of any new information indicating that the price volatility experienced by Missouri consumers during last winter was a result of unlawful conduct. Based upon information supplied to the Task Force, it appears that most Missouri natural gas utilities have taken steps to diversify their gas supply portfolios through increased use of financial hedging tools, fixed-price arrangements, and new weather products designed to protect them against the high cost of gas should a severe winter re-occur. However, the number of consumers

who have been disconnected and who face disconnection from their heating sources because of their failure to pay last winter's bills remains alarmingly high.

The Task Force urges Congress to pass promptly and the President to approve at least $1.7 billion in LIHEAP assistance, as well as to expedite release of the $300 million supplemental LIHEAP appropriation. Based on figures released by the Public Service Commission, as much as $54 million may be needed to reinstate Missouri gas customers with their local utilities.

APPENDIX A

GLOSSARY

Biomass

A variety of organic fuel sources which can either be processed into synthetic fuels or burned directly to produce steam or electricity.

Demand-Side Management

Any effort aimed at getting customers to use less electricity during peak demand periods. It includes conservation efforts like high-efficiency lighting, home insulation and lighting design, and incentives for replacing inefficient heating and cooling systems. Load control may include incentives to use less electricity as well as curtailment.

Distributed Generation

Any technology that provides electricity closer to an end-user's site, like a home or business. It may involve a small on-site generating plant or fuel cell technology.

Distribution

The systems that ultimately bring energy to the end user. Electricity distribution refers to the system of non-high voltage power lines, transformers, and switches. Natural gas distribution systems include the mains, service connections and equipment used to transport or control the supply of natural gas from the "city gate" (where the transmission phase ends) to the customer.

EIA

The Energy Information Administration, an agency of the U.S. Department of Energy that collects and analyzes statistical information. It provides a wealth of information at www.eia.doe.gov. It also gathers required information from industry participants.

Energy Efficiency and Conservation

Measures that can be taken to reduce energy consumption, including encouraging consumers to invest in capital improvements (e.g., improved home insulation, more energy-efficient appliances) and changing energy consumption behavior (e.g., thermostat set-back).

Exempt Wholesale Generators (EWGs)

A wholesale power generator that is exempt from the provisions of the Public Utility Holding Company Act and generally from state regulation. Created by the Energy Policy Act of 1992, it allows registered public utility holding companies and other corporations to own wholesale generating assets that are leased or sell power to non-affiliates without being subjected to full regulation under PUHCA.

Federal Energy Laws

Key legislation passed by Congress and orders by the Federal Energy Regulatory Commission (FERC):

Year	Law	Competitive Implications
1920	Federal Power Act	Regulates interstate transmission and sales of electricity (amended in 1935).
1935	Public Utility Holding Company Act (PUHCA)	Restricts ownership of electric business by non-utility company.
1978	Natural Gas Policy Act	First step toward deregulation of natural gas prices.
1978	Public Utility Regulatory Policies Act	Beginning of competition for generation of electricity. Requires utilities to provide open access to transmission lines for use by independent power producers and non-utility generators.
1985 - 1991	Gas Open Access (FERC Orders 436 through 636)	Direct access, disaggregation of integrated natural gas industry, and unbundling of products at wholesale levels.
1989	Wellhead Decontrol Act	By 1993 ended all price controls on first sales of gas by producers.
1992	Energy Policy Act	Set the stage for competition in wholesale electricity generation.
1996	Electricity Open Access (FERC Orders 888 and 889)	Order 888 opened up wholesale power sales to competition; Order 889 addressed transmission system fairness to all competitors as pertains to wholesale power transactions.
2000	Regional Transmission Organizations (FERC Order 2000)	Required the formation of regional bodies to operate and monitor the electric transmission grid.

Federal Energy Regulatory Commission (FERC)

The federal regulatory agency within the Department of Energy that oversees interstate electricity sales, electric rates, hydroelectric licensing, natural gas transmission, and gas and oil pipeline rates. However, the FERC has jurisdiction only over investor-owned utility transmission.

Federal Power Act

The legislation, enacted in 1920 and amended in 1935, that governs the FERC.

Federal Power Commission (FPC)

The federal agency that preceded the FERC.

Generation, Electric

The act or process of transforming other forms of energy into electric energy. This also refers to the amount of electric energy so produced, expressed in kilowatt hours or megawatt hours.

The conventional method of generation is where a steam turbine is driven by steam generated in a boiler by heat from burning fossil fuels. In a nuclear generator, the turbine is driven by steam generated in a reactor by heat from the fission of nuclear fuel such as uranium.

Electricity is also generated by natural gas turbine engines, and by turbines driven by falling water, wind, or the burning of organic fuel sources known as "biomass," as well as through the use of solar power.

The other two stages of the electric industry are transmission and distribution.

Grid

The network of high-voltage transmission lines through which power moves. In the United States, there are three distinct electric power grids: the Eastern Interconnection, the Texas (or ERCOT) Interconnection and the Western Interconnection. The grid has big, fat power lines that have a tendency to hum.

Independent Power Producer (IPP)

A producer of electricity not affiliated with the local utility company that owns new independent power facilities.

Independent System Operator (ISO)

An entity that controls and administers access to electric transmission for a number of independent utilities in a region or state or across several systems, on a non-discriminatory basis, meaning one transmission customer doesn't get a better deal than another. ISOs must comply with FERC Order 2000 to comply with specified functions and characteristics to become RTOs (Regional Transmission Organizations).

Kilowatt (kW)

A unit of electric power equal to 1,000 watts. One kilowatt can power ten 100-watt light bulbs.

LIHEAP

The Low-Income Home Energy Assistance Program established by the Low-Income Home Energy Assistance Act of 1981, 42 U.S.C. Section 8621, et seq. In FY 2001 the U.S. Government provided $1.4 billion in regular appropriations and $855 million in emergency funds.

Local Distribution Company (LDC)

The local utility that operates the retail distribution system for the delivery of natural gas or electricity to end-use customers, i.e., the company that supplies a customer's home or business with electricity or natural gas.

Mcf

One thousand cubic feet, generally of natural gas.

Megawatt (MW)

One thousand kilowatts. One megawatt-hour is enough electricity to service 1,000 homes for about one day.

MMBtu (Million British Thermal Units)

One million of the standard unit for measuring the quantity of heat energy, such as the content of fuel. It is the amount of heat energy necessary to raise the temperature of one pound of water one degree Fahrenheit.

Missouri Public Service Commission (PSC)

The state agency that regulates investor-owned public utilities in Missouri. Its five commissioners are appointed for 6-year terms by the Governor and confirmed by the Senate.

North American Electric Reliability Council (NERC)

A power industry alliance formed in 1968 as a result of the massive 1967 New York City blackout. Its purpose is to make sure that kind of event doesn't recur. NERC is composed of 10 regional councils and includes virtually all the power regions of the contiguous United States, Canada, and the northern portion of Baja California, Mexico.

Performance-Based Rates

Any method of setting regulated utility rates that provides incentives for utilities to reduce costs and/or meet other specified performance targets.

Real-Time Pricing

Pricing of electricity that reflects the actual time of day when the power is used. Customers with real-time pricing receive frequent signals throughout the day on the price of electricity at that moment.

Regional Transmission Organization (RTO)

FERC-mandated regional organizations that will operate and monitor the transmission of power with the objective of increasing the security and reliability of the transmission grid.

Renewable Energy

Any source of energy that is continually available or that can be renewed or replaced, such as wind, solar, geothermal, hydro, photovoltaic, wood and waste. Non-renewable energy sources include coal, oil, and natural gas which all exist in finite amounts.

Solar Power

Energy generated by the sun through the collection, transfer and storage of the sun's heat. Photovoltaic or solar cells convert sunlight into electric energy.

Transmission

The act or process of transporting electric energy over high-voltage power lines in bulk from a source of supply to the distribution part of a utility's system or to other utility systems.

In the natural gas industry, transmission is the transportation of gas over highly-pressurized pipelines.

In electricity, the other two stages of the industry are generation and distribution. In natural gas, the other stages are exploration/production and distribution.

Transmission Grid

An interconnected system for transmitting power along high-voltage lines in bulk from points of supply to points of demand.

Watt

The basic unit for measuring volume of electricity. Technically, it's the power produced by a current of one ampere across a potential difference of one volt.

Weatherization

A set of measures designed to reduce heat gain and/or heat loss, and thereby energy consumption. Common measures include weather stripping, ceiling and wall insulation, and storm windows and doors. Some utilities operate weatherization programs offering incentives such as low interest loans or rebates for these installations.

APPENDIX B

Task Force Activities

The Task Force's initial meeting was February 16, 2001 in Jefferson City. Through a facilitated process, the Task Force identified generally the causes that led to the high prices of natural gas that existed at that time. The Task Force discussed the desired outcomes that could be achieved through changes in Missouri energy policy. A schedule of future meetings was agreed upon.

All of the Task Force's subsequent meetings have been held in public. While individual members of the Task Force have had conversations with individuals representing consumer groups, energy companies, energy consultants, and government agencies, as well as individuals representing their own personal interests, no meetings of the Task Force or any of its committees have been held in private.

On March 1, pursuant to Gov. Holden's directive, the Task Force published its Initial Report. We concluded that the sudden rise in the price of natural gas and propane during the winter of 2000-01 was caused by the combined effect of factors relating to supply and demand, extremely cold weather, and federal and state regulatory practices. There was no credible evidence that the sudden rise in prices was caused by unlawful conduct. As discussed later in this report, the significant drop in natural gas, propane and petroleum prices this summer has generally confirmed the Task Force's belief that this winter's crisis was an extraordinary event.

A. March Meeting

The Task Force's March 16 meeting in Jefferson City focused on the high cost of natural gas and propane. Presentations were made by Warren Wood, Manager of the Natural Gas Department, Missouri Public Service Commission and Wayne Terpstra, area manager for

Ferrellgas, LLP, one of the largest United States retail marketers of propane, headquartered in Liberty.

The Task Force also heard from Representative Carol Jean Mays, Chairman of the House Utilities Committee. She welcomed the work of the Task Force, stating that she intended to use the recommendations of the Task Force in formulating legislation for the upcoming legislative session. The Task Force also heard briefly from Phil Wright, representing several consumer groups and Kansas City Power & Light Company, as well as Steve Murray, representing UtiliCorp United Inc.

B. <u>April Meeting: Consumer Issues (St. Louis)</u>

The Task Force's April 20 meeting, conducted at the Wainwright State Office Building in St. Louis, focused on consumer issues. The Task Force heard statements from a number of individuals, including Lt. Governor Joe Maxwell, mainly commenting on the natural gas price spikes on various sectors of consumers. The Task Force also heard a number of recommendations, both short-term and long-term, on energy policy in general.

Making statements or presentations to the Task Force were:

1. Joe Maxwell, Lieutenant Governor of Missouri;
2. Deborah Chollet, Gateway Center for Resource Efficiency, Missouri Botanical Gardens, St. Louis;
3. Elaine West, Missouri Association of Community Action, St. Louis;
4. Ocie Johnson, Office of the Mayor of St. Louis;
5. Jan Yacovelli, Yacovelli's Restaurant, Florissant;
6. Dennis Kelley, Executive Director, Missouri EnergyCare, St. Louis;
7. Duncan E. Kincheloe, General Manager, Missouri Public Utility Alliance, Columbia;

8. Winifred Colwill, Executive Director, League of Women Voters of Missouri, St. Louis;

9. Edward Choklek, Woolpert Corporation, representing the Energy Committee of the St. Louis RCGA Environmental Council;

10. Ivan Eames, Central Missouri Counties' Human Development Corp., Columbia; and

11. J. Kay Smith, Ameren Corporation, St. Louis.

C. <u>May Meeting: Industry Issues (Kansas City)</u>

On May 24 the Task Force met in Kansas City, hearing mainly from representatives of public utilities and other corporations providing energy services. The meeting convened at the headquarters of Aquila, Inc. in downtown Kansas City. Aquila is a leading marketer of power and natural gas that also specializes in risk management techniques as well as independent power plants not operating as regulated public utilities. After remarks made by Jeffrey D. Ayers, General Counsel, Bradford T. Nordholm, Senior Vice President for Capacity Services - Power, and Mark Gurley, Senior Vice President and General Manager of Trading, the Task Force toured the Aquila Trading Floor, receiving explanations on how energy and related financial tools are traded in the marketplace.

The Task Force then adjourned to the Lakeside Nature Center in Kansas City's Swope Park, where it heard presentations from the following:

1. Alan H. Richardson, President, American Public Power Association, Washington, D.C.;

2. Michael C. Pendergast, Assistant Vice President and Associate General Counsel, Laclede Gas Company, St. Louis;

3. Craig Nelson, Vice President for Corporate Planning, Ameren Corporation, St. Louis;

4. Tim Kearns, Trigen Energy Corporation, Kansas City;

5. William Downey, Executive Vice President, Kansas City Power & Light Company, Kansas City;

6. Robert J. Hack, Vice President for Regulatory Affairs, Missouri Gas Energy, a division of Southern Union Company, Kansas City;

7. Richard E. Malon, Director, City of Columbia Water & Light Department; and

8. Ken Carlson, Fuels Consultant, Black & Veatch, Overland Park, Kansas.

D. <u>June Meeting: Energy Efficiency and conservation Issues (Springfield)</u>

The Task Force's next meeting was conducted on June 15, 2001 in Springfield. Hosted by City Utilities of Springfield, this session focused on energy efficiency, conservation and technology issues. After opening remarks by Kenneth McClure, Associate General Manager for Customer Relations of City Utilities and a former member of the Missouri Public Service Commission, the following individuals made presentations:

1. Ryan Kind, Chief Energy Economist, Office of the Public Counsel, Jefferson City;

2. Tina Worley, Utility Services Manager, City of Columbia Water & Light Department;

3. Willy Haffecke, Power Systems Technician, City Utilities of Springfield;

4. Jamie Kline, Missouri Corn Growers Association and Missouri Corn Merchandising Counsel;

5. Alecia Ward, Executive Director, Midwest Energy Efficiency Alliance, Chicago, Illinois;

6. Dr. Arley Larson, Northwest Missouri State University, Maryville;

7. Joe Lucas, Vice President of Communications, Americans for Balanced Energy Choices, Alexandria, Virginia;

8. Travis Creswell, Ozark Solar, Inc., Springfield;

9. Lori Bird, Senior Energy Analyst, National Renewable Energy Laboratory, Golden, Colorado;

10. Julio Rovi, The Cadmus Group, Inc., Waltham, Massachusetts;

11. Carla Klein, The Sierra Club, Missouri Global Warming Program; and

12. Wallace McMullen, The Sierra Club, Missouri Chapter.

E. <u>July Meeting: Fuels, Markets and Transportation Issues (Cape Girardeau)</u>

The Task Force's July session was held at the Show-Me Center, Southeast Missouri State University in Cape Girardeau. Conducted on July 13, the Task Force was welcomed by Don Dickerson, Chairman of the Board of Regents of the University. This session was designed to conclude with several energy efficiency and fuel choice presenters, as well as other individuals who had not been able to attend previous sessions. The presenters were:

1. Frank B. Stork, Executive Vice President, Association of Missouri Electric Cooperatives, Jefferson City;
2. Kelley J. Ogletree, Executive Director, Missouri Oil Council, Jefferson City;
3. Glenda Thomason, International Brotherhood of Electrical Workers, Washington, D.C.;
4. Mark Krebs, Laclede Gas Company, St. Louis;
5. Sterling S. Miller, Area Manager, CMS/Viron, St. Louis;
6. Anna Garcia, Center of Energy and Climate Solutions, Global Environmental & Technical Foundation, Washington, D.C.; and
7. Ron McLinden, Environmental Analyst, City of Kansas City, and a member of the former Missouri Total Transportation Commission.

Written statements were submitted by Rick Kinn of Exelon Services, Inc. in Kansas City, and Norma Collins, Associate State Director for Advocacy for the AARP in Missouri. The Task Force also received public comment from a member of the Sierra Club concerning nuclear power and the Callaway Nuclear Plant, and from Representative Carol Jean Mays, Chairman of the House Utilities Committee.

F. <u>Working Sessions</u>

The Task Force subsequently met in open session in Jefferson City on August 10, August 30 and October 5 to draft its final report to the Governor. The Task Force presented its

final report to Governor Holden on October 16 at Northwest Missouri State University in Maryville, an institution noted for developing its own alternative fuels energy plant.

APPENDIX C

An Overview of Missouri Energy Use and Sources

The state of Missouri ranked as the 20th largest energy consuming state overall and ranked 35th in per capita energy consumption in the U.S. in 1999, (U.S. Department of Energy; most current available data) with a population of approximately 5.6 million.

Missouri's population has grown by about 3 percent in the past ten years while energy demand has increased nearly 8 percent. Missouri ranked in the top 20 states in all energy-using sectors except the industrial sector. Missouri consumption ranked 16th in the nation for residential, 14th in commercial, 29th in industrial and 15th in transportation (1999 data).

Missouri's primary energy-consuming sectors and their share of total energy consumed includes the following: transportation 35 percent, residential 24 percent, commercial 19 percent and industrial 22 percent (1999 data). Electricity is primarily consumed by the residential and commercial sectors while natural gas is used predominantly by the residential, commercial and industrial sectors.

Missouri relies heavily on energy resources from outside the state, importing more than 95 percent of its energy source – coal, petroleum and natural gas – and paying more than $12 billion each year for energy.

Electricity

Electricity is produced predominantly by coal imported from Wyoming (83%) and nuclear power (12%). The remaining 5 percent comes from hydroelectric power, wood, fuel oil and other minor sources.

Generating facilities within Missouri provide the great majority of the state's electrical power. These utilities include investor-owned regulated electric utilities, municipal electric utilities and rural electric cooperatives. Missouri also receives additional supplies of electricity from outside the state through 4 electric reliability power pools.

The electric utility industry, in response to a major electric utility blackout in the northeastern U.S. in 1965, established the North American Electric Reliability Council (NERC), a voluntary nonprofit corporation owned by 10 regional reliability councils. The NERC set operating standards and monitors compliance with rules designed to ensure the operating reliability of the electricity network.

The four electric reliability organizations that serve Missouri are the Mid-America Interconnected Network, Inc., which serves a large portion of eastern Missouri; the Southeastern Electric Reliability Council, which serves central Missouri; the Southwestern Power Pool, which covers Missouri from the City of St. Joseph to McDonald County in Southwestern Missouri and Mid-continent Area Power Poll (MAPP).

The Missouri Public Service Commission (PSC) regulates Missouri's five electric investor-owned utilities. The PSC works closely with these utilities to monitor current situations, provide direction if there are capacity of reliability concerns and set appropriate customer rates. The five regulated utilities in Missouri are AmerenUE (St. Louis), Kansas City Power and Light, St. Joseph Light and Power (a division of UtiliCorp United Inc.), The empire District Electric Company (Joplin) and Missouri Public Service (Kansas City, Missouri, also a division of Utilicorp United Inc.). These five utilities comprise approximately 70 percent of electricity sales to Missouri customers. Rural electric cooperatives have 16 percent of the market share while municipal utilities have 12 percent. A complete list of electric power plants operating in Missouri is attached. This list identifies the fuels used and the technologies employed to generate electricity. In addition, a directory of all electric and gas utilities operating in the state is attached.

Missouri is ranked as the nation's 31st largest consumer of electricity per capita. For more than two decades Missouri has enjoyed an abundance of electricity and was able to sell excess electricity out of state. However, as consumer demand for electricity increases, load forecasts for Missouri's investor-owned utilities indicate a need for additional electric supplies.

Through the year 2004, Missouri's regulated utilities will generate just over 14,000 megawatts (Mw) of electricity annually and will purchase approximately 1,600 Mw annually to meet consumer demand. Projections indicate Missouri's growing peak demand for electricity could result in a shortfall of more than 500 Mw in 2002 and 2003, and a shortfall of over 800 Mw by 2004. In the short term, utility companies are purchasing power to cover any shortfall until new generation facilities are built. These projections do not include generation by rural electric cooperatives or municipalities.

Residential customers account for more than 41 percent of Missouri's electricity consumption, followed by commercial users at 35 percent, industrial at nearly 23 percent and remaining balance for street lights and other applications at a little more than one percent.

Electrical Transmission Network

A high-voltage, large-scale transmission system connects multiple large power plants to assure reliable generation supplies. These transmission networks historically served defined regional boundaries. However, the advent of wholesale electric competition, or "wheeling," fostered by federal law and regulation has changed operation of the transmission network. The transmission system is now used as an "interstate highway" for the delivery of a competitively priced electricity commodity.

Where long-term power and transmission arrangements were once the norm, and short-term spot-market purchases were relatively uncommon, the grid now handles a much greater number of exchanges or short duration. This has created significant concern about the capacity of the nation's transmission system to deliver reliable and sufficient amounts of electricity where and when needed. Confronted with a changing legal and contractual landscape, investment in new transmission lines has been deferred by many utility companies.

Electric Utility Restructuring in Missouri

The Energy Policy Act of 1992 and the Federal Energy Regulatory Commission (FERC) Orders 888 and 889 encourage wholesale electrical competition by providing for open access to transmission lines. Regional electricity price differences, new lower-cost generation technologies and federal policies have prompted a movement to restructure the retail level of the tradition regulated electric industry and introduce market-based competition.

Large industrial users and many utility companies advocate electric utility restructuring. Industrial users see an opportunity to lower the utility costs because they would be free to shop for the best market price; utility companies see opportunities to increase revenues by marketing their product – electricity – to new customers across the nation. New generation technologies, which use natural gas to generate electricity, have reduced the cost of building centralized power plants, thus reducing the need for regulated rates that guarantee recovery of these costs over a long period of time.

As of October 1, 2001, a total of 25 states have passed bills or approved regulations that provide for competition, including the bordering states of Illinois, Arkansas, and Oklahoma. As a relatively low-cost state (below the national average) and because of concerns that residential rates might increase, Missouri legislators have not felt the urgency to overhaul the current regulated approach. Some states that have moved ahead have experienced transition problems, including a limited number of competitors willing to serve residential customers, misleading promotion of "green power," disruptions in reliability and higher prices to residential customers.

In Missouri, a PSC task force and a legislative committee have studied restructuring. During the 1999 and 2000 legislative sessions, several bills were introduced and discussed in the Missouri General Assembly. A major part of the discussion centered on the recovery of stranded investment costs by utilities, revising the method for collecting utility tax revenues to protect this significant income source for local governments, and the lack of bill contents supporting energy efficiency as a means of helping address increasing electrical demand.

Bills introduced in the 2001 legislative session have shifted from comprehensive restructuring to limited restructuring. These bills would have allowed Missouri utilities to transfer generating stations to an unregulated affiliate and large customers the opportunity to choose their electrical energy service provider. In essence, the bills would have freed the large industries and utility companies to participate in a free market, while residential and commercial customers would have remained under the existing regulated system. Significant oversight would have been transferred from the Missouri PSC to FERC. While adoption of the structure would not provide choice of supplier to all customers, it would have indirect impacts on Missouri supplies and rates.

Natural Gas

Approximately 60 percent of Missouri households use natural gas to heat their homes. Natural gas also is used to produce goods and generate electricity. During 1999, Missourians used

approximately 260 billion cubic feet of natural gas. A combination of low drilling rates during the past decade, low gas inventory, an unusually cold winter and increased demand led to wholesale natural gas prices that spiked 350 percent higher during the 2000-2001 winter than during the winter of 1999-2000.

Electric utilities are now using more natural gas to produce electricity as on approach to meet Clean Air Act requirements. This new demand for natural gas places additional pressure on natural gas supplies, which stand significantly below historical levels. Missouri's electric utilities used about 7 billion cubic feet of natural gas in 1997 and 19 billion by 1999. Utilities and independent power producers have announced plans to construct new generating capacity in Missouri fired by natural gas, so this share is expected to increase. In the U.S., approximately 88 percent of planned new generating capacity between 1998 and 2007 will be gas-fired.

Natural gas is transported into Missouri by interstate pipeline from Arkansas, Oklahoma and Kansas to local distribution companies (gas utility companies) which, in turn, move the product to the consumer through their local gas lines. Missouri's not a natural-gas producing state with no commercial gas production and little potential for future production.

Propane

Approximately 12 percent of Missouri households heat with propane. Propane also is used to support commercial operations, produce goods, dry grain harvests and fuel vehicles. In 1997, Missourians used approximately 500 million gallons of propane. The residential sector consumed the largest share at nearly 60 percent, followed by industry (which includes agriculture) at approximately 30 percent. The commercial sector used 10 percent while the transportation sector consumed the smallest share at one percent.

A by-product of both crude oil refining and natural gas production, propane prices increased more than 80 percent during the 2000-2001 winter compared with the winter of 1999-2000 (based on Missouri DNR Energy Center survey data). Similar factors to those affecting natural gas – low inventories, cold winter and high fossil fuel prices – contributed to the propane price increases.

Propane is moved by pipeline and truck. Pipelines move propane to distribution terminals in Missouri located at Kearney, Moberly, Jefferson City, Belle, Mt. Vernon, and Dexter. From these points, propane product is moved by large transport trucks to retailers. Local propane retailers then move propane to Missouri end-use customers using smaller trucks.

Missouri customers are served by 229 propane companies with 657 local storage locations that fill propane tanks for their consumers. Ferrellgas Company, located at Liberty, is the second largest propane company in the U.S.

Energy Efficiency

The link between energy, the environment and the economy is apparent. In Missouri, we spend $12 to $13 billion every year on all of our energy needs. Because we import more than 95

percent of the conventional fuels we consume from outside the state (coal, oil and natural gas), most of the money leaves Missouri's economy. When we use energy more efficiently, energy costs are reduced and the resulting savings stay within the state to bolster the state economy.

From the combustion of fossil fuels, electrical generation is the nation's single largest source of population accounting for 70 percent of the nation's sulfur dioxides, 33 percent of the nitrogen oxides and 35 percent of the carbon dioxide. In Missouri, the electric utility sector's hare of greenhouse gas emissions was 47 percent in 1996.

Energy efficiency serves as an energy resource. While additional energy supplies may be needed to meet increasing demand, energy efficiency also provides a means to moderate demand and reduce the number of new power plants and development of other energy sources. A recent national report from the Alliance to Save Energy concluded that, of those states that do not have an established energy standard, Missouri ranked fifth in the potential to save energy.

Installation of cost-effective energy-efficiency measures (building shell upgrades and equipment replacements) in an "average" Missouri residence is estimated to reduce the annual utility bill by as much as 47 percent.

The Department of Natural Resources Energy Loan Program has loaned more than $28 million to schools and local governments to implement energy-efficiency upgrades since 1989, saving more than $5.7 million annually in energy costs.

In response to California's energy crises, Governor Davis is calling for a 20 percent reduction in the state's energy consumption. Efficiency and demand reduction programs are expected to reduce California's peak load electricity demand by more than 3,700 megawatts from a summer peak load of approximately 48,000 megawatts. By some estimates, if California had maintained energy efficiency spending at 1993 levels instead of reducing investments by 50 percent, there would be 1,000 more megawatts available now – enough to power about one million homes.

Renewable Energy Sources

Renewable energy sources in the Midwest can play an increasing role in the future of our environment and our economy. Diversifying energy sources in Missouri will provide benefits by reducing our vulnerability to volatile oil markets, improving grid reliability of businesses and energy systems, offering economic benefits from the development of renewable energy industries and improving the environment from reduced emissions. Clean domestic energy choices for power generation, including solar, wind and biomass, can improve efficiencies and reduce expenditures on transmission and distribution equipment by siting these technologies close to the point of consumption.

The costs of wind energy is now in a competitive range with power technologies that use fossil fuels, ranging from 3.0 to 6.0 cents per kilowatt-hour, not including the U.S. federal production tax credit. Increasingly, utility companies are deciding to build wind-powered generation because it is economical to do so. Two Missouri utilities, Utilicorp United and City Utilities of Springfield are investing in wind generation as part of their generating mix.

A U.S. Department of Energy study found that 12 states in the midsection of the country have enough wind energy potential to produce four times the amount of electricity consumed by the nation in 1990. Estimates identify approximately 3 percent of Missouri land area with winds that can be developed for electric generation. If utility-scale wind turbines were operational on some of this land area, they would yield a sizeable portion of Missouri's electricity consumption.

Missouri has an average daily summer solar radiation comparable to the vast majority of the United States, making solar energy in Missouri an untapped opportunity. As the cost of traditional fossil fuels increase and the cost of solar energy declines, solar energy for electrical power generation and water heating is becoming more cost-effective as a means to help meet peak electrical demand. The Sacramento Municipal Utility District in California is taking advantage of solar power by installing solar systems on its customers roofs at no cost to the customer.

As an agriculturally productive state, Missouri has substantial land area available for energy crops and crop waste. Other site-specific opportunities exist to recover energy at low incremental cost from waste streams such as methane from landfills, animal waste systems and wastewater treatment plants and cellulose fiber from sawmills, forest product industries and solid waste.

Petroleum

Petroleum products far outdistance both electricity and natural gas as the primary energy resources used. Consumption of petroleum-based products accounted for approximately 58 percent of total energy consumption. Motor gasoline, motor distillate fuel, kerosene/distillate and jet fuel accounted for over 90 percent of the total petroleum consumption. Nearly 80 percent of petroleum consumed in the state is for transportation use. Missouri imports and taxes an estimated 245 million gallons of gasoline each month. The majority of petroleum products enter Missouri through pipelines running from Texas, Louisiana, Arkansas, Oklahoma, Kansas and Illinois.

Missouri Department of Natural Resources
Energy Center
Revised October 9, 2001
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APPENDIX D

Energy Resources in Missouri

February 2001

Fossil Fuels

Natural Gas – As of February, 2001 there are no commercial natural gas production wells in Missouri. Faced with falling production, and low prices, the last remaining wells were plugged in 1997. There are approximately 45 private gas wells in the state. These wells are in the Kansas City area and northwest Missouri, with the resulting gas used exclusively on the landowners' premises.

Following the rise in commercial gas prices in the summer of 2000, the Department of Natural Resources has fielded some inquiries from potential developers. Production from Missouri wells tends to be low-volume per well. Much of it is believed to originate from coal seams in the subsurface. Due to the nature of Missouri's resource, commercial development would require numerous shallow wells and a corresponding investment in a collection system.

There is not an easy way to determine whether Missouri's natural gas or coal-bed methane resources are profitable to develop. Potential developers of natural gas resources will need to examine expectations for future market prices in relationship to costs associated with developing natural gas resources including land leasing costs, posting bond, complying with regulations, drilling, de-watering coat beds and so forth. There has not been extensive study of potential natural gas resources in Missouri. It certainly may be worthwhile for companies to conduct some systematic testing of natural gas resources and coal-bed methane resources in Missouri to determine economic viability.

Coal – The sulfur content of coal in Missouri has made it economically beneficial for electric utilities and other major users to purchase coal from Wyoming, rather than use Missouri coal deposits. The lower sulfur content of Western coal makes it easier for utilities to meet clean air requirements. The price of coal has increased very little during the past several years; therefore, the economics of developing Missouri coal resources have not improved significantly.

Oil – Deposits of crude oil in western Missouri have been developed when the anticipated price per barrel was sufficient to cover the substantial extraction costs. Due to the heavy nature of the oil in Missouri deposits, extraction has been enhanced by the injection of steam into the formation. In 1998, the gross value of sales of Missouri crude oil was approximately $1.0 million.

Renewable Energy

Diversifying Missouri's energy mix through the increased use of renewable fuels will mitigate fossil fuel price increases, improve grid reliability through on-site generation, provide

environmental benefits from reduced emissions and offer economic benefits from the development of renewable energy industries in Missouri.

Wind – With existing technology, the cost-effectiveness of wind turbines requires an average wind speed of at least 14.3 mph. While the average wind speed for the majority of Missouri's land area has wind-speeds below this level, estimates prepared for the U.S. Department of Energy have determined that approximately three percent of the state has good winds that can be developed for electric generation. If utility-scale wind turbines were operational on some of this land area, they would yield a sizeable portion of Missouri's electricity consumption.

With continued rapid improvement in wind turbine technology, and long-term reliable wind measurements, the costs of wind-generated electricity have substantially decreased. The cost of wind-generated power in areas with substantial wind speed now rivals the costs of coal-fired and natural-gas-fired power plants. Increasingly, utility companies are deciding to build wind-powered generation because it's economical to do so.

In Missouri specifically, our best winds lie in southern Missouri along the Ozark Plateau running roughly from Joplin to Rolla and in limited areas along the Missouri-Iowa border. These areas should be closely examined for cost-effective development of wind-generated electricity.

As large areas with a superior wind resource are found in neighboring states, it is anticipated in that utility scale development will opt for the most cost-effective opportunities first. A Department of Energy study found that twelve states in the midsection of the country have enough wind energy potential to produce four times the amount of electricity consumed by the nation in 1990. Wind resources in neighboring states can and should be considered for potential use in Missouri. Due to the proximity and regional interconnectedness of transmission lines, Missouri should not limit its discussion of renewable resource development to our borders.

Solar - Missouri has strong solar radiation. In June, solar energy is on par with that found in Florida for a photovoltaic system, which generates electricity from solar power. Photovoltaic (PV) electricity generation is being found in an ever-expanding variety of uses. As the cost of traditional fossil fuels increase, solar energy becomes an increasingly attractive supplement to electrical power generation and water heating. With solar, there are no ongoing fuel costs. One of the most important aspects of Missouri's solar resource is that it is most available when demand for electricity is highest – during the hot summer days when air conditioners place the greatest demand on the electric grid. Historically, when a new electrical use requires a significant extension of electrical lines, solar power is often more cost-effective than running new power lines. So, its use is often cost-effective now in remote areas. As the cost of solar energy declines and fossil fuels increases, PV is becoming more cost-effective in everyday applications, especially as a means to help meet peak demand.

It would be beneficial for Missouri to implement simple standards for interconnection to the grid and compensation for any excess power generated (net metering) to make renewable energy sources, such as solar, more economical for homeowners and businesses to use.

Biomass - As an agriculturally productive state, Missouri has substantial land area available for energy crops and crop waste. There are also site-specific opportunities to recover energy at low incremental cost from waste-streams such as methane from landfills, animal waste systems and wastewater treatment plants, and cellulose fiber from sawmills, forest product industries and solid waste.

A 1997 study by the University of Missouri-Columbia commissioned by DNR assessed the volume of biomass and municipal solid wastes in Missouri. It found that there are vast quantities of unused or under-used biomass resources such as crop wastes, dedicated energy crops on Conservation Reserve Program land, wood residues, used tires and municipal solid wastes. Biomass and coal can be handles and burned in essentially the same fashion. In fact, biomass can be "co-fired" with coal in small percentages in existing boilers, requiring no new generation facilities. The co-fired biomass are usually low-cost feedstocks like wood or agricultural waste.

APPENDIX E

Missouri Historic LIHEAP Funding

(graph)

APPENDIX F

MISSOURI DEPARTMENT of SOCIAL SERVICES
Division of Family Services
FY – 2001 LIHEAP Statistics

COUNTY	Total Applications	DENIALS	COUNTY	Total Applications	DENIALS
ADAIR	804	128	MCDONALD	739	79
ANDREW	325	53	MACON	452	75
ATCHISON	250	27	MADISON	654	82
AUDRAIN	762	81	MARIES	305	31
BARRY	1272	168	MARION	956	152
BARTON	417	40	MERCER	161	25
BATES	631	107	MILLER	811	122
BENTON	804	108	MISSISSIPPI	1429	135
BOLLINGER	493	51	MONITEAU	269	49
BOONE	2676	277	MONROE	245	48
BUCHANAN	2380	328	MONTGOMERY	423	77
BUTLER	2296	257	MORGAN	760	127
CALDWELL	295	69	NEW MADRID	1713	175
CALLAWAY	868	163	NEWTON	1104	150
CAMDEN	884	143	NODAWAY	370	47
CAPE GIRAR.	1730	259	OREGON	608	58
CARROLL	331	54	OSAGE	216	41
CARTER	478	53	OZARK	591	55
CASS	1032	211	PEMISCO	1960	158
CEDAR	618	56	PERRY	484	60
CHARITON	256	28	PETTIS	1439	215
CHRISTIAN	1132	189	PHELPS	1385	158
CLARK	291	51	PIKE	503	77
CLAY	1387	350	PLATTE	379	88
CLINTON	345	82	POLK	1038	138
COLE	1168	213	PULASKI	978	148
COOPER	431	81	PUTNAM	286	32
CRAWFORD	891	124	RALLS	225	37
DADE	264	42	RANDOLPH	875	131
DALLAS	767	90	RAY	427	56
DAVIESS	357	54	REYNOLDS	435	31
DEKALB	245	38	RIPLEY	1082	95
DENT	781	96	ST. CHARLES	1514	235
DOUGLAS	664	10	ST. CLAIR	506	48
DUNKLIN	3125	292	ST. FRANCOIS	2088	242
FRANKLIN	1624	240	STE. GENEV.	424	49
GASCONADE	332	33	ST. LOUIS CO.	10569	2858
GENTRY	240	45	SALINE	637	102
GREENE	4695	670	SCHUYLER	190	29
GRUNDY	492	56	SCOTLAND	205	27
HARRISON	445	53	SCOTT	1892	181
HENRY	998	143	SHANNON	678	70
HICKORY	473	37	SHELBY	255	46
HOLT	171	22	STODDARD	1623	201
HOWARD	383	57	STONE	1005	117
HOWELL	1629	232	SULLIVAN	297	36
IRON	618	95	TANEY	1428	285
JACKSON	11816	2546	TEXAS	1128	142
JASPER	2320	461	VERNON	933	129
JEFFERSON	2121	415	WARREN	388	56
JOHNSON	706	131	WASHINGTON	1532	137

KNOX	179	24	WAYNE	1005	75
LACLEDE	1292	157	WEBSTER	1058	162
LAFAYETTE	628	122	WORTH	110	18
LAWRENCE	1165	162	WRIGHT	1122	136
LEWIS	369	66	ST. LOUIS CITY	17551	4127
LINCOLN	914	168			
LINN	526	88			
LIVINGSTON	538	121	**TOTALS:**	**137564**	**22977**

APPENDIX G

1999 STATE LEVERAGING SUMMARY DATA
(Compiled by the LIHEAP Clearinghouse, June 2000)

ALABAMA: Resources: $4,637,186. Award: $266,627.
$2,365,278 - utility discounts
$2,271,908 - fuel funds

ALASKA: Resources: $6,851,145. Award: $615,800.
$6,851,145 - state funds
$3,863,841 - State Power Cost Equalization Program (subsidizes electric bills of low-income people in remote areas)
$2,323,145 - supplemental weatherization program
$664,159 - Rural Residential Energy Rehabilitation Program

ARIZONA: Resources: $8,056,653. Award: $820,712.
$6,095,785 - utility discounts
$722,763 - state/local funds
$367,826 - fuel funds
$617,940 - utility-funded weatherization
$252,339 - community donations

ARKANSAS: Resources: $260,364. Award: $17,817.
$260,364 - fuel funds

CALIFORNIA: Resources: $66,012,298. Award: $1,958,620.
$43,913,331 - mandated utility rate discount, 10-30%
$11,769,029 - utility-funded weatherization, energy efficient appliances, weatherization inspections, and donated repair of appliances
$3,686,001 - fuel funds
$2,976,537 - state weatherization rehab program and Petroleum Violation Escrow funds
$3,034,428 - discounted weatherization materials, equipment, service discount for furnaces
$604,996 - church and community; $12,850 - firewood discount
$15,126 - weatherization materials from landlords and other donations

COLORADO: Resources: $7,343,908. Award: $298,691.
$2,502,210 - state funds (property tax heat rebate)
$3,497,511 - fuel funds, including $2,500,000 from the Colorado Energy Assistance Foundation, which raises money from a variety of private sources to supplement LIHEAP
$1,069,786 - utility-funded weatherization
$274,401 - utility discount, affordable payment pilot program

CONNECTICUT:	Resources: $12,328,800. Award: $424,182. $1,005,500 - state funds for energy assistance for elderly/disabled $6,400,690 - gas utility arrearage forgiveness $1,970,000 - gas and electric utility-funded weatherization $1,440,510 - oil purchased under Fixed Margin Pricing Program $828,900 - electric utility arrearage forgiveness $683,200 - statewide fuel fund
DELAWARE:	Resources: $428,250. Award: $47,614. $247,200 - fuel funds $109,550 - church and community donations $48,300 - utility-funded weatherization $23,200 - bulk discount for fuel oil and kerosene
DISTRICT OF COLUMBIA:	Resources: $1,331,300. Award: $124,572. $917,000 - electric utility discount $414,300 - gas utility discount
FLORIDA:	Resources: $4,926,566. Award: $217,488. $1,785,983 - state funds for weatherization $2,068,468 - community and church funds $1,072,115 - fuel funds
IDAHO:	Resources: $466,093. Award: $33,266. $221,583 - fuel funds $219,175 - utility funded weatherization $22,807 - church and community contributions $2,528 - county indigent funds
ILLINOIS:	Resources: $69,265,237. Award: $1,783,338. $62,338,487 - SLIEAP funds through restructuring law $6,926,750 - SLIEAP funds used to match utility weatherization program
INDIANA:	Resources: $6,760,334. Award: $208,678. $3,803,477 - township trustee assistance $1,301,617 - gas utility waiver of reconnect and deposit fees $839,235 - church and community $725,371 - fuel funds $63,437 - summer bulk fuel discounts $27,197 - supplier discounts on fans and air conditioners
KENTUCKY:	Resources: $2,265,121. Award: $82,097. $706,130 - statewide fuel fund $691,368 - arrearage forgiveness

$354,308 - utility discount
$265,478 - church/charitable/community
$231,980 - state/county
$15,857 - utility weatherization

MAINE: Resources: $8,291,202. Award: $363,355.
$5,940,000 - utility discounts, waivers, arrearage forgiveness, and weatherization
$1,364,628 - bulk fuel vendor discounts
$768,156 - donated materials and labor for weatherization, supplier discounts
$218,418 - church/community donations for emergency including furnace repairs and fuel deliveries, Operation Santa Claus.

MARYLAND: Resources: $18,581,851. Award: $693,433.
$8,612,727 - utility fee waivers (includes discounts and arrearage forgiveness)
$6,642,513 - state funds for adult disabled ($5,541,600); state funds for emergency assistance ($1,100,913)
$3,326,611 - miscellaneous donations, fuel fund and tax rebates

MASSACHUSETTS: Resources: $44,050,228. Award: $1,223,891.
$32,672,337 - utility rate discounts
$8,019,454 - weatherization leveraging (including utilities, landlords and suppliers)
$1,972,087 - bulk fuel discounts
$729,070 - state programs
$657,280 - fuel funds

MICHIGAN: Resources: $6,230,952. Award: $166,849.
$3,997,847 - fuel funds
$1,623,362 - utility late fee and deposit waivers
$423,972 - utility arrearage forgiveness
$122,768 - state funds for heat and electrical allowances for state assistance recipients
$63,003 - utility weatherization

MINNESOTA: Resources: $9,270,072. Award: $266,546.
$4,022,323 - utility discounts and fee waivers
$1,679,991 - state energy emergencies assistance and weatherization funds
$2,489,096 - utility-funded weatherization
$640,811 - fuel funds
$437,851 - miscellaneous donations

MISSISSIPPI: Resources: $1,239,260. Award: $20,368.
$442,987 - utility waivers

$386,764 - church and community contributions
$210,124 - fuel funds
$153,717 - miscellaneous donations
$45,668 - supplier discounts

MONTANA: Resources: $1,737,708. Award: $123,027.
$853,000 - utility discounts
$656,631 - utility-funded weatherization
$162,612 - fuel fund
$50,567 - landlord weatherization contributions
$14,898 - suppliers' discount of weatherization materials

NEVADA: Resources: $505,229. Award: $90,447.
$381,498 - fuel funds
$102,786 - utility-funded weatherization
$14,400 - utility fee or deposit waivers
$3,650 - local funds
$2,893 - miscellaneous donations

NEW HAMPSHIRE: Resources: $1,643,902. Award: $93,744.
$898,612 - assistance from towns to supplement LIHEAP (state law mandates that town governments fund assistance programs)
$312,258 - bulk fuel discounts
$195,924 - statewide fuel fund
$108,628 - utility-funded weatherization
$82,945 - church and community contributions
$45,535 - utility discount

NEW JERSEY: Resources: $87,111,770. Award: $2,442,256.
$70,284,262 - Lifeline, a state-funded program that supplements elderly/handicapped energy bills
$10,833,034 - utility funded weatherization
$5,841,456 - utility deposit/fee waivers
$153,018 - fuel funds

NEW YORK: Resources: $47,295,900. Award: $1,113,164.
$41,096,027 - state and local funds for Safety Net ($39,798,988), state funds for arrearage payments to public assistance households ($1,297,039)
$2,791,306 - utility/fuel bill sales tax exemption for public assistance households
$1,648,300 - utility discounts and credits, including affordable pay plans and arrearage forgiveness
$568,255 - utility deposit, fee waivers
$494,450 - utility company fuel funds
$697,562 - Public Assistance Co-op for Energy

NORTH CAROLINA: Resources: $2,775,503. Award: $79,492.
$206,644 - city/county funds
$1,933,969 - fuel funds
$154,816 - utility discount
$480,074 - church and community contributions

OHIO: Resources: $29,740,345. Award $794,625.
$11,677,783 - utility fee waivers
$8,372,135 - utility-funded weatherization
$6,077,532 - state funded Energy Credit for elderly and disabled
$2,371,271 - utility rate discounts
$1,150,000 - fuel funds
$91,624 - supplier discount (air conditioners, Project Air Care)

OKLAHOMA: Resources: $1,660,866. Award: $106,023.
$1,660,866 - utility rate discount

OREGON: Resources: $3,667,946. Award: $170,222.
$2,046,771 - utility-funded weatherization
$961,400 - fuel funds
$257,595 - discounts on weatherization supplies
$375,798 - donations of heating fuels, blankets, coats etc.
$26,382 - utility discounts, waivers and fuel oil discounts

PENNSYLVANIA: Resources: $119,761,240. Award: $2,463,911.
$80,362,373 - utility arrearage forgiveness, discounts, affordable pay plans
$18,459,747 - utility late payment, disconnect, reconnect fee waivers
$15,210,914 - utility-funded weatherization
$5,745,493 - utility and charitable organization fuel funds
$18,713 - bulk fuel vendors

RHODE ISLAND: Resources: $2,702,275. Award: $156,105.
$2,345,950 - utility discounts
$356,325 - arrearage forgiveness for participants in statewide Percentage of Income Payment Plan

SOUTH DAKOTA: Resources: $606,160. Award: $47,973.
$95,834 - county funds
$45,588 - landlord contributions to weatherization
$227,021 - propane prepay contract
$190,138 - church and community donations
$28,495 - fuel funds
$19,084 - utility waiver

TEXAS: Resources: $1,515,440. Award: $53,229.
$1,515,440 - utility weatherization programs

VERMONT: Resources: $4,163,503. Award: $289,861.
$3,549,983 - weatherization trust funded through gross receipts tax on energy
$256,907 - fuel funds
$226,383 - state general assistance funds
$127,980 - bulk fuel discount
$2,250 - church and community contributions

VIRGINIA: Resources: $1,994,034. Award: $65,896.
$1,248,877 - fuel funds
$412,267 - states funds for weatherization
$308,511 - state sales tax waiver on deliverable fuels
$24,379 - waived security deposits

WASHINGTON: Resources: $18,565,908. Award: $689,886.
$7,155,253 - utility discounts
$4,282,386 - state funds for weatherization
$1,916,823 - fuel funds
$3,930,465 - utility-funded weatherization
$839,850 - community/charitable contributions
$441,131 - landlord contributions to weatherization

WISCONSIN: Resources: $15,679,507. Award: $458,337.
$8,811,790 - utility-funded weatherization
$6,544,346 - utility arrearage forgiveness
$230,457 - fuel funds
$64,557 - landlord contributions to weatherization
$22,313 - Housing Cost Reduction Initiative Utility Payment
$6,044 - utility discount

APPENDIX H

FIRST REGULAR SESSION

92ND GENERAL ASSEMBLY

AN ACT

To repeal sections 660.100,660.105,660.110,660.115,660.120,660.122,660.135 and 660.136, RSMo 2000, relating to the utilicare program, and to enact in lieu thereof seven new sections relating to the same subject, with an emergency clause.

Be it enacted by the General Assembly of the state of Missouri, as follows:

Section A. Sections 660.100, 660.105, 660.110, 660.115, 660.120, 660.122, 660.135 and 660.136, RSMo 2000, are repealed and seven new sections enacted in lieu thereof, to be known as sections Section 660.100, 660.105, 660.110, 660.115, 660.122, 660.135 and 660.136 to read as follows:

660.100. The department of social services is directed to establish a plan for providing financial assistance to elderly households, disabled households and qualified individual households for the payment of charges for the primary or secondary heating or cooling source for the household. This plan shall be known as "Utilicare".

2. For purposes of sections 660.100 to 660.136, the term "elderly" shall mean having reached the age of sixty-five and the term "disabled" shall mean totally and permanently disabled or blind and receiving federal Social Security disability benefits, federal supplemental security income benefits, veterans administration benefits, state blind pension pursuant to sections 209.010 to 209.160, RSMo, state aid to blind persons pursuant to section 209.240, RSMo, or state supplemental payments pursuant to section 208.030, RSMo. For the purposes of section 660.100 to 660.136, but not for the purpose of determining "eligible subscribers" pursuant to subdivision (4) of section 660.138, the term "qualified individual household" shall mean a household in which:

(1) One or more residents of the state of Missouri reside and whose combined household income is less than or equal to one hundred and [ten] **fifty** percent of the current federal poverty level **or sixty percent of the state median income** for the relevant household; and

(2) While the Federal Low Income Home Energy Assistance Program remains in effect, the household is also determined to be eligible for assistance under such program and related state programs of the Missouri department of social services.

660.105. Every qualified individual household for which an application is made, and every applicant household in which the head of the household or spouse is elderly or disabled and the income for the prior calendar year does not exceed one hundred and [ten] **fifty** percent of the current federal poverty level **or sixty percent of the state median income,** shall be an "eligible household" and shall be

entitled to receive assistance under the utilicare program if moneys have been appropriated by the general assembly to the utilicare stabilization fund established pursuant to section 660.136. "Income" shall be as defined in section 135.010, RSMo.

660.110. The department of social services shall be responsible for coordination of all federal heating assistance programs [as well as] **into** the utilicare program and shall provide plans for the implementation and administration of these programs. [Except as otherwise provided in section 660.100 to 660.136, the utilicare program shall be administered in the same manner as the Federal Low Income Emergency Assistance Program.] The department may contract with local not-for-profit community agencies which render energy assistance pursuant to affiliation or contract with the United States Community Service Administration or another federal agency to distribute the federal money [and]**,** to administer the federal heating and cooling assistance programs in accordance with the plan developed by the department **and** [The department may contract with local not-for-profit community agencies which render energy assistance pursuant to affiliation or contract with the United States Community Service Administration or another federal agency] to provide certain administrative services in connection with the utilicare program which may include the processing of utilicare applications and any other service which the department deems practical. Insofar as possible, within the provisions of federal law and regulations, all payments made from funds available from the Crude Oil Windfall Profit Tax Act of 1980 and other federal sources shall be made directly to energy suppliers in a manner similar to payments made under the state utilicare program.

660.115. For each eligible household, an amount not exceeding [one hundred fifty] **six hundred** dollars for each fiscal year may be paid from the utilicare stabilization fund to the primary or secondary heating source supplier, or both, including suppliers of heating fuels, such as gas, electricity, wood, coal, propane and heating oil. For each eligible household, an amount not exceeding [one hundred fifty] **six hundred** dollars for each fiscal year may be paid from the utilicare stabilization fund to the primary or secondary cooling source supplier, or both.

[Notwithstanding any other provision of section 610.100 to 660.136 to the contrary, the amount paid from the utilicare stabilization fund for cooling assistance in any single cooling season shall not exceed the lesser for five percent of the total amount appropriated by the general assembly to the fund for the most recent fiscal year of five hundred thousand dollars.]

2. For an eligible household, other than a household located in publicly owned or subsidized housing, an adult boarding facility, an intermediate care facility, a residential care facility or a skilled nursing facility, whose members rent their dwelling and do not pay a supplier directly for the household's primary or secondary heating or cooling source, utilicare payments shall be paid directly to the head of the household, except that total payments shall not exceed eight percent of the household's annual rent or one hundred dollars, whichever is less.

[**660.120**.1 Funds for the utilicare program may come from state, federal, or other sources.

2. Any household which is eligible to receive both federal assistance and utilicare assistance in paying for its primary or secondary heating or cooling source may receive utilicare assistance only as follows: In the event that the federal assistance available to such household is less than the total benefits available to the household under the provisions of section 60.115, then the household may receive

utilicare assistance only in an amount equal to the amount of the difference between the federal assistance available in paying for its primary or secondary heating or cooling source and the total benefits available to such household under the provisions of section 660.115.]

660.122. [Notwithstanding any other provision of sections 660.100 to 660.136 to the contrary, f] **F**unds appropriated under the authority of section 660.100 to 660.136 may be used to pay the expenses of reconnecting or maintaining service to households that have had their primary or secondary heating or cooling source disconnected because of their failure to pay their bill. Any qualified household or other household which has as its head a person who is elderly or disabled, as defined in section 660.100, shall be eligible for assistance under this section if the income for the household is no more than on hundred [ten] **fifty** percent of the current federal poverty level **or sixty percent of the state median income** and if moneys have been appropriated by the general assembly to the utilicare stabilization fund established pursuant to section 660.136. Payments under this section shall be made directly to the primary or secondary heating or cooling source supplier. Any primary or secondary heating or cooling source supplier subject to the supervision and regulation of the public service commission shall, at any time during the period of the cold weather rule specified in the cold weather rule as established and as amended by the public service commission, reconnect and provide services to each household eligible for assistance under this section in compliance with their terms of such cold weather rule. All home energy suppliers receiving funds under this section shall provide service to eligible households consistent with their contractual agreements with the department of social services. [Notwithstanding the above, the division of family services shall only utilize general revenue funds appropriated in conjunction with the chapter after such time as the division has obligated all federal emergency funds available for the purposes enumerated above.]

660.135. 1. [Not more than five million dollars from state general revenue shall be appropriated by the general assembly] **The general assembly shall appropriate funds** to the utilicare stabilization fund established pursuant to section 660.136 for the support of the utilicare program established by section 660.100 to 660.136 for any fiscal year [, except in succeeding years the amount of state funds maybe increased by a percentage which reflects the national cost-of-living index or seven percent, whichever is lower].

2. The department of social services may, in coordination with the department of natural resources, apply a portion of the funds appropriated annually by the general assembly to the utilicare stabilization fund established pursuant to section 660.136 to the low income weatherization assistance program of the department of natural resources; provided that any project financed with such funds shall [have a full energy savings payback period of no greater than ten years]. **Shall be consistent with federal guidelines for the Weatherization Assistance Program for Low-Income Persoms as authorized by 42 U.S.C. 6861.**

660.136 1. The "utilicare Stabilization Fund" is hereby created in the state treasury to support the provisions of section 660.100 to 660.136 RSMo. **Funds for the utilicare program may come from state, federal, or other sources including funds received by this state from the federal government under the provisions of the Community Opportunities Accountability and Training and Education Services Act of 1998 (Title III, Section 301-309, Public Law 93.568), together with any interest or other earnings on the principal of this fund.** Moneys in the utilicare stabilization **fund shall be used for the purposes established in the Federal Low Income Home Emergy Assistance**

Program and Section 660.100 to 660.136 RSMo. [that are not required to meet or augment the utilicare funding requirements of the state in any fiscal year shall be invested by the state treasurer in the same manner as other surplus funds are invested. Interest, dividends and moneys earned on such investments shall be credited to the utilicare stabilization fund.]

2. The provisions of section 33.080, RSMo, to the contrary notwithstanding, money in this fund shall not be transferred and placed to the credit of general revenue until the amount in the fund at the end of the biennium exceeds two times the amount of the appropriation from the fund for the preceding fiscal year. The amount, if any, in the fund, which shall lapse, is that amount in the fund which exceeds the appropriate multiple of the appropriations from the fund for the preceding fiscal year. Moneys in the utilicare fund not needed currently for the purposes designated in section 660.100 to 660.136 RSMo, may be invested by the state treasurer in the manner that other moneys of the state are authorized by law to be invested. All interest, income and returns from moneys of the utilicare stabilization fund shall be deposited in the state treasury to the credit of the utilicare stabilization fund.

APPENDIX I

Spot Price of Natural Gas at the Henry Hub (24 months of fuel data in dollars per MMBtu) (graph)

Average, Highest and Lowest Retail Price of Residential Propane Sold in Missouri (24 months of fuel data in cents per gallon) (graph)

Spot Price of Crude Oil, West Texas Intermediate at Cushing (dollars per barrel) (graph)

Current, Month Ago and Year Ago Retail Prices of Transportation Fuels Sold in Missouri (cents per gallon) (graph)

Average, Highest and Lowest Retail Prices of Regular Unleaded Gasoline Sold in Missouri (24 months of fuel data in cents per gallon) (graph)

APPENDIX J

Task Force Members

KARL ZOBRIST, Chairman of the Task Force, is a partner with the law firm of Blackwell Sanders Peper Martin, LLP in Kansas City. He served as Chair of the Missouri Public Service Commission (1996-97).

DR. ROBERT BUSH is Director of the Regional Healthy Communities Initiative at Northwest Missouri State University in Maryville. He has served for the past 23 years on the University's Alternative Energy Project which has provided 85% of the school's energy needs using renewable resources.

JACQUELINE A. HUTCHINSON is Director of Crisis Intervention Programs for the Human Development Corporation in St. Louis. She is a member of the Committee to Keep Missourians Warm.

MARTHA HOGERTY is the Public Counsel for the State of Missouri. She has served as president of the National Association of State Utility Consumer Advocates and is a member of the Federal Communications Commission's Joint Board on Universal Service.

STEPHEN MAHFOOD is Director of the Missouri Department of Natural Resources. He formerly served as Director of the Environmental Improvement & Energy Resources Authority.

KATHRYN NELSON is the former Program Director for the Danforth Foundation in St. Louis. She is an educator and community activist.

DR. GENE OAKLEY is the Presiding Commissioner of Carter County. He is a former member of the Missouri House of Representatives, and served as an educator and school administrator for many years in the Ozarks.

PETER SHEMITZ is Resource Conservation Manager for the City of Kansas City. He teaches environmental history at the University of Missouri at Kansas City.

RUSSELL STRUNK is Business Manager and Financial Secretary for Local 753 of the International Brotherhood of Electrical Workers in Springfield. He is a member of the IBEW Electricity Restructuring Task Force.