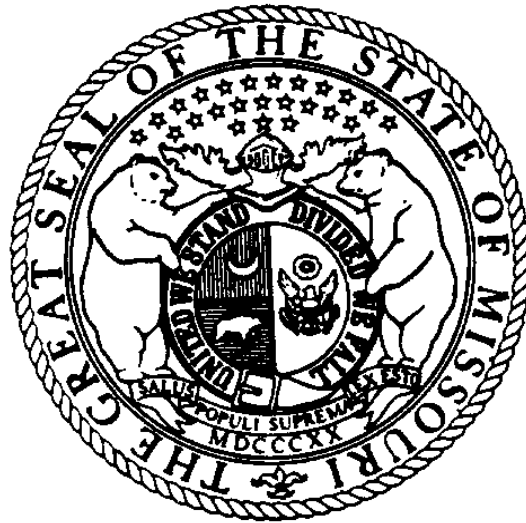


REPORT
OF
SENATE INTERIM COMMITTEE
ON
21st CENTURY CHOICE IN TECHNOLOGY



January 2007

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Prepared by

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January 15, 2007

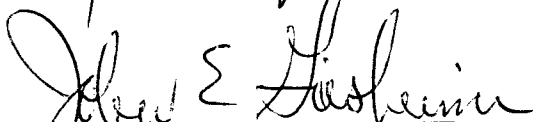
The Honorable Michael Gibbons, President Pro Tem of the Senate
State Capitol
Jefferson City, MO 65101

Dear Mr. President:

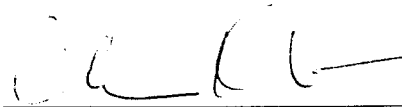
The Senate Interim Committee on 21st Century Choice in Technology gathered information from a variety of sources during the summer months of 2006. The committee heard testimony from utility regulators, electric company representatives, telephone company spokespersons, teachers, and members of the health care profession. The committee expresses its gratitude to all the parties who provided vital information and assistance on the technological issues and challenges facing Missouri. The undersigned members of the committee are pleased to make the following recommendations to the General Assembly about how Missouri can use 21st-century technology to improve education, rural medical-care services, telecommunications, cable television, the Internet and the state energy supply.




Senator Kevin Engler, Chair



Senator John Griesheimer



Senator Chris Koster



Senator Joan Bray



Senator Timothy Green

Senate Interim Committee on 21st Century Choice in Technology

I. OVERVIEW

The Senate Interim Committee on 21st Century Choice in Technology was created on June 27, 2006. The committee was charged primarily with:

- 1) Studying the use of technology to improve education and rural medical care and the implications of improved technology on competition and consumer choice;
- 2) Examining the financial, legal, social, taxation, environmental, and technological issues of 21st century telecommunications, cable television, and all Internet services;
- 3) Reviewing and developing an understanding regarding the recent changes by Congress and the Federal Communications Commission and how these changes affect Missouri;
- 4) Evaluating the technological and economic impact of deregulation and increasing competition in energy production, distribution and sale on residents, businesses, and other stakeholders; and
- 5) Exploring assistive technology for disabled, aged, and blind individuals, specifically as it relates to Relay Missouri.

The committee held four public hearings and solicited testimony regarding a wide range of issues related to Missouri's use of technology in the 21st century. Hearings were held in the following locations:

| | |
|--------------------|--------------------|
| August 4, 2006 | Farmington, MO |
| August 21, 2006 | Des Peres, MO |
| August 29, 2006 | Belton, MO |
| September 13, 2006 | Jefferson City, MO |

Based on the testimony and handouts presented at the hearings, the interim committee developed and adopted a list of recommendations. Section II of this report summarizes testimony presented to the committee, and Section III contains recommendations adopted by the committee.

II. SUMMARY OF TESTIMONY

A. Farmington Meeting - Impact of Deregulation in Energy Production.

On August 4, 2006, the interim committee held its first meeting in Farmington, Missouri. During the course of the hearing, the committee explored the issue of the technological and economic impact of deregulating the electric utility industry. The committee also explored the

impact of increased energy production competition on residents, businesses, and other stakeholders.

Drue Duncan, Director of Legislative Affairs for the Ameren UE Corporation, gave an overview of Ameren's response to storm power outages that occurred on July 19th and July 21st. The storms knocked out electricity to approximately 700,000 homes and businesses within the St. Louis area. Mr. Duncan stated that Ameren did everything it could to minimize the damage caused by the storm and further noted that 4,000 field personnel and 1,200 extra workers were brought in to repair power lines and restore power. Mr. Duncan also addressed criticism that some of the damage caused by the storm could have been avoided had Ameren increased its tree-trimming operations. Mr. Duncan stated that Ameren had spent over \$30 million on tree-trimming (a 25 percent increase), but the majority of the power outages caused by the storms occurred outside the tree-trimming zones.

Jeff Davis, chairman of the Missouri Public Service Commission, gave an overview of Missouri's electricity industry. Mr. Davis noted that Missouri's electricity rates are among the least expensive in the nation. Only four states have cheaper rates than Missouri. Missourians, on average, pay 6.65 cents per kilowatt hour, which is 2.35 cents lower than the national average. Missouri's low electricity rates are largely attributable to the state's fleet of coal-fired baseload power plants. Mr. Davis cautioned, however, that Missouri's low electricity rates should not be taken for granted. Over the next ten years, Missouri either will have to build new plants or upgrade existing facilities to comply with environmental mandates. In addition, demand for electricity will continue to rise. These factors will contribute to higher electricity rates. Mr. Davis noted that building new power plants is in order, but Missouri's options are limited. For example, there are very limited additional hydroelectric power sites available and obtaining permits to build them would be nearly impossible. Wind power is an alternative, but power capacity and transmission issues present a problem. Natural gas-fired plants are relatively inexpensive to build, but a volatile fuel market makes them expensive to operate. Building new nuclear power plants may be an option, but large upfront construction costs, changing governmental safety standards, and liabilities associated with nuclear power and disposal of waste make them less desirable than other options.

Mr. Davis also gave a brief overview on restructuring. He noted that Missouri electric investor-owned utilities are not restructured, and there is no current movement within the state to do so. Some states, such as California, Maryland, and Illinois, have restructured their electric utilities to break down vertically integrated types of utilities. Restructuring involves removing generation from the regulated electric utility to create a "wires" company that either delivers power purchased by customers from third-party generation companies or buys power for redelivery from outside generation companies. The restructuring efforts also have involved differing levels of customer choice programs that allow customers to purchase power from nontraditional electric utilities.

Tony Campbell, CEO of Citizens Electric Corporation, testified about electric deregulation. Mr. Campbell noted that wholesale deregulation started back in the mid-1990s.

Electric deregulation was presented as a way to force old regulated utilities into becoming more efficient through competition. Mr. Campbell stated that although deregulating wholesale electric power has been a success, the retail customers of his company have not seen a reduction in rates. According to Mr. Campbell, the investor-owned utilities who owned the transmission systems placed roadblocks to stymie wholesale electric deregulation. He also stated that deregulation has brought a number of unethical players looking to make a quick buck. According to Mr. Campbell, these companies succeeded in hurting not only their employees, but also many American electric consumers.

Mr. Campbell further noted that deregulation has benefitted baseload generation plants that have excess power to sell to the market. According to Mr. Campbell, the winners of deregulation are investor-owned utilities, electric cooperatives and electric municipalities. He further stated that for the smaller electric utilities that had positioned themselves with the investor-owned utilities, it has been a struggle to reposition themselves quickly to be generation-owning entities.

Finally, Mr. Campbell opined that the electric industry as a whole in the United States could be on the verge of a perfect storm. He stated that electric utilities have not been re-investing enough in electrical infrastructure, such as stronger transmission systems, to facilitate wholesale electric deregulation. According to Mr. Campbell, there are many new baseload plants on the drawing board, but almost none are able to move forward with construction because of environmental group delay tactics. Since it takes approximately five to seven years to build new baseload generation plants, Mr. Campbell stated that citizens should expect to see substantially higher electric rates along with much higher volatility and risk in the interim.

Bill Brier, Vice President of Policy and Public Affairs for the Edison Electric Institute, discussed rising electricity prices from the national perspective. Mr. Brier pointed out that the national average price for electricity today is less than it was in 1980, when adjusted for inflation. Although the average American household's total spending on electricity has fallen steadily over time, demand for electricity has increased. Some of the key drivers of electricity costs are rising fuel costs, infrastructure investment costs (generation, distribution and transmission), and environmental compliance costs. The Energy Information Agency forecasts a 19 percent increase in electricity rates over the next ten years, compared to a general inflation forecast of 26 percent. Mr. Brier stated that utilities are trying to control costs by "hedging" or entering into long-term, fixed contracts for fuel at set prices. Some utilities have increased the productivity of their power plants while at the same time decreasing their operations and maintenance costs. In addition, electric utilities have taken a leading role in developing energy efficiency and demand response programs for residential, commercial, and industrial customers.

Ryan Kind, Chief Energy Economist from the Missouri Office of the Public Counsel, testified regarding the impacts of energy market deregulation and competition. Mr. Kind briefly outlined the history of electric company deregulation, noting that many of the expected benefits of deregulation did not come to fruition. In fact, many of the states that deregulated on the East and West coasts are facing large rate increases that far exceed the rate increases occurring in

states without retail access. According to Mr. Kind, deregulation has not lived up to its expectations due to a myriad of factors. For instance, higher financing costs for competitive investments, such as independent power producer plants and the tendency of such plants to concentrate on gas-fired generation, has led to higher rates. In addition, increased costs from vertical de-integration was greater than many experts expected.

Mr. Kind also discussed Federal Energy Regulatory Commission Orders 888 and 2000. In 1996, the Federal Energy Regulatory Commission issued Order 888, which required public utilities to provide non-discriminatory transmission access. The order encouraged, but did not require, public utilities to form independent system operators (ISOs). In 1999, FERC issued Order 2000, intended to restructure the electric utility industry toward one in which region-wide transmission systems are independent of generation suppliers and local distribution companies. The Federal Energy Regulatory Commission's encouragement of developing regional transmission organizations (RTOs) and ISOs has led to the creation of MISO (Midwest Independent System Operator) in the eastern half of Missouri and the SPP (Southwest Power Pool) in the western half of the state. Both organizations are responsible for coordinating, controlling and monitoring the operation of the electrical power system in Missouri and other states.

Mr. Kind stated that RTOs and ISOs are in a unique position to facilitate the development of demand response programs. Demand response refers to individual users responding to price signals to alter their electrical usage at specific points in time. Demand response programs are designed to reduce or shift electric consumption or improve energy efficiency at an end-user facility. Such programs provide electricity customers with a choice whereby they can respond to dynamic or time-based prices or other types of incentives by reducing and/or shifting usage, particularly during peak periods, such that these demand modifications can address issues such as pricing, reliability, emergency response, and infrastructure planning, and operation.

Duncan Kincheloe, the general manager and CEO of the Missouri Public Utility Alliance and the Missouri Joint Municipal Electric Utility Commission, testified regarding municipality-owned electrical systems. Mr. Kincheloe stated that 88 municipally owned electric systems in Missouri serve approximately 14 percent of its customers. Traditionally, municipal utilities provide power at rates below those of regulated investor-owned utilities. Mr. Kincheloe noted, however, that federal policies promoting competition in wholesale electricity markets have been implemented in such a manner to produce higher costs for utilities and their customers. The federal policies have also led to the deterioration in the reliability and value of the electric transmission grid. Mr. Kincheloe noted that higher electrical rates are attributable to higher fuel costs, environmental regulations, and under capacity caused by a failure to support new energy infrastructure. He also stated that there is an inadequacy of transmission facilities. He said the broad regional blackouts almost always have been linked to transmission problems rather than power generation problems. Investments required for transmission are small in comparison to the costs of power generation, but their impact in promoting robust systems capable of importing power from multiple directions outside their own territory can be invaluable. Mr. Kincheloe stated that some states, such as Kansas, recently have established state transmission authorities

with special responsibility for facilitating infrastructure improvements. He suggested that Missouri legislators may wish to explore something similar in nature.

B. Des Peres Meeting

The committee held its next hearing in Des Peres, Missouri on August 21, 2006. The committee met to discuss recent changes made by Congress and the Federal Communications Commission and how these changes affect Missouri. The committee also focused its attention on assistive technology for the disabled, aged and blind as it relates to the Relay Missouri program.

Lisa Zaina, the executive director for Independent Telephone & Telecommunications Alliance (ITTA), gave a brief overview of her organization. ITTA was formed in 1994 to serve as a voice for mid-size local exchange companies in Washington D.C. ITTA's ten-member companies are cutting edge providers of a broad range of high quality wireline and wireless voice, data, Internet and video telecommunications services to over 13 million customers in 43 states.

Mrs. Zaina also discussed the Universal Service Fund program. The Universal Service Fund is a federal program that provides subsidies for telephone service to low-income and rural areas. In 1996, Congress decreed that it is federal policy to provide support for services essential to education, public health or public safety and established that all people, regardless of location or income level, should have affordable access to telecommunications and information services. The High Cost Program, a segment of the Universal Service Fund, ensures that rates paid by customers who live in high-cost areas are reasonably comparable to rates paid in other areas. Support is provided to the telecommunications carrier to cover a portion of the costs to provide the telephone service in the high cost areas. Mrs. Zaina noted that Missouri was one of the top ten recipient states of the Universal Service Fund in 2005. Mrs. Zaina stated that Missouri received approximately \$127 million from the fund in 2005 and that without the fund, rural Missourians would pay an additional \$145 annually for telephone service.

Mrs. Zaina also discussed legislation in Congress authored by Senator Ted Stevens of Alaska. The federal bill, dubbed the Communications, Consumer's Choice, and Broadband Deployment Act of 2006, addresses U.S. broadband deployment, changes to video franchising requirements, the Universal Service Fund, digital TV and net neutrality. Mrs. Zaina stated that there are several positive provisions associated with the federal bill. For example, the bill requires every provider of broadband, telecom, and IP-enabled voice services to pay into the fund. The bill also "broadens" the Universal Service Fund funding base and would permanently exempt the fund from the Anti-Deficiency Act. Mrs. Zaina also discussed the Missoula Plan and the recent repeal of the Federal Excise Tax. The federal excise tax on long-distance service was originally enacted in 1898 as a luxury tax on wealthy Americans who owned telephones. The taxes originally were used to fund the Spanish-American War.

Nacelle Dietrich, a supervisor of the Telecommunications Department of the Public

Service Commission, testified regarding two pieces of federal legislation, HR 5253 and HR 5252. The federal bills would:

- 1) create a nationwide approval process for pay-TV services;
- 2) require Internet-based telephone services to offer 9-1-1 capabilities while ensuring Internet telephone providers have access to all necessary 9-1-1 infrastructure and technology;
- 3) clarify the FCC authority to prevent Internet service providers from blocking or degrading any content or applications delivered over the public Internet;
- 4) preserve municipalities' right to collect up to a five percent fee from pay-TV providers; and
- 5) allow cities and towns to develop their own broadband networks.

Mrs. Dietrich pointed out that under the terms of the House bill, Voice Over Internet Protocol (VIP) providers interconnection agreements could be arbitrated by state commissions such as the Public Service Commission. She also noted that the FCC or other state commissions could not impose intermarried compensation requirements on VIP providers under the terms of the bill. In addition, the bill would prohibit the FCC and other state commissions from requiring VIP providers to contribute to universal service funds.

Mrs. Dietrich also discussed the Senate bill known as the Advanced Telecommunications and Opportunity Reform Act. Under this broad-based telecommunications bill, state commissions would be preempted from regulating or adjudicating the terms and conditions for wireless carriers. Under current law, the Public Service Commission has authority to designate wireless carriers as "eligible telecommunications carriers (ECCS)" in order to receive federal universal service funding. Under the terms of this federal act, wireless ECCS may avoid offering lifeline and local usage plans, offering reasonable and affordable rates, and meeting other state requirements. In addition, state commissions would be preempted on VIP except perhaps consumer protection issues. The federal act potentially could allow VIP providers to be exempt from PSC jurisdiction. The proposed federal act would preempt state commissions from applying access charges to VIP and would only allow reciprocal compensation for this type of traffic.

Finally, Mrs. Dietrich discussed the Missoula Plan. The Missoula Plan represents the culmination of a three-year process of negotiation and compromise among all segments of the telecommunications industry. If adopted by the FCC, the Missoula Plan would unify intermarried charges by reducing or eliminating regulatory disparities among intermarried rate levels (e.g., wireline vs. wireless, interstate vs. intrastate, and VIP vs. circuit-switched telephony) and minimize arbitrage opportunities and competitive distortions. The Missoula Plan would give carriers an opportunity to recover lost intermarried compensation revenues through supplemental sources of recovery. These sources include increased subscriber line charges ("SACS") as well as a new Restructure Mechanism, which is designed specifically to replace switched carrier-to-carrier revenues lost by carriers participating in the Missoula Plan and not otherwise compensated for that loss through end-user charges. Mrs. Dietrich noted that the Missoula Plan attempts to resolve phantom traffic issues and also attempts to resolve compensation issues (wireless/wireline/VIP) that have been arbitrated repeatedly by the Missouri Public Service Commission. She stated that PSC staff are reviewing the plan since proposed

comments on the plan are due September 25, 2006.

Walt Cecil, a regulatory economist with the Public Service Commission, testified with respect to Missouri's Dual Party Relay Service (DPMS). The Relay Missouri Program is a statewide dual-party telephone relay service, created under section 209.253, RSMo, for the deaf, hearing-impaired and speech-impaired. Dual-party relay services are services that allow third-party intervention to connect deaf, hearing-impaired, and speech-impaired persons with telecommunications devices for the deaf (TDD) and the telephone system, in order to make available "reasonable access to telephone service to eligible subscribers." Missouri first offered Telecommunications Relay Services in 1991 and expanded its portfolio to include Speech to Speech services in 1994 and enhanced voice carry-over or captioned telephone calling in 2003. Section 209.255 provides that the Missouri Public Service Commission shall establish a rate recovery mechanism, or surcharge, to recover the costs of implementing and maintaining the programs. The commission initially set the surcharge at \$.06 per month per access line. The current surcharge is now \$.13 per month per access line. Mr. Cecil stated that he would like to see the surcharge base include an assessment on wireless phones since the number of landlines has been diminishing over the last few years. Mr. Cecil also testified that the surcharge might have to be increased if the FCC transfers responsibility of local VRS and IP-relay services to the states. If the FCC follows through with this proposed change, Mr. Cecil predicts that Missouri will see its DPMS expenditure increase by 210 percent. Mr. Cecil would like the Missouri General Assembly to modify section 209.259 to allow for more frequent review of the surcharge. Section 209.259 provides in pertinent part that "the commission shall review such surcharge no less frequently than every two years but no more than annually." He would like the Public Service Commission to have flexibility to review the surcharge in case the FCC transfers more responsibility to the states.

Mike Dandino, Deputy Public Counsel from the Office of Public Counsel, testified regarding the merits of the Missouri Relay System. Mr. Dandino stated that the Relay System should remain strong and be able to take advantage of new technology. The relay program should serve communication systems in addition to traditional telephone service. Mr. Dandino is worried about the role of state oversight as it pertains to new technologies. He noted that wireless telephone service, DSL broadband, cable television, Internet calling, and video via the telephone system have been removed from state service oversight. Mr. Dandino requested that the state retain an oversight role over service and billing issues in order to promote consumer protection.

Diane Golden, Director of Missouri Assistive Technology, testified regarding the challenges facing the Missouri Assistive Technology program. The goal of Missouri Assistive Technology is to increase access to assistive technology for Missourians with disabilities. Programs and initiatives of Missouri Assistive Technology are directed by the Missouri Assistive Technology Council, which was established by state statute in 1993. The council is charged to serve as an advocate for policies, regulations, and programs to establish a consumer-responsive, comprehensive assistive technology service delivery system. Mrs. Golden's testimony focused on the Telecommunications Access Program within Missouri Assistive

Technology. For Missourians with disabilities, the two Telecommunications Access Programs (Telecommunications Access for Telephone and Internet) have made purchasing products, applying for services, searching for jobs, and even attending colleges classes via the telephone and Internet commonplace. Mrs. Golden noted that in fiscal year 2006, the Telecommunications Access Program provided 5,791 adaptive telephones and 1,104 computer adaptations for people with disabilities. Mrs. Golden highlighted the fact that Missouri's Telecommunications Access Program has been recognized as the national model for providing telecommunication devices to persons with disabilities.

Tracy Mishler, manager for Audiology and Intraoperative Monitoring Services, testified with respect to the legislative changes needed to make the Relay system more fair. As mandated by the state, the Missouri Public Service Commission is required to provide a statewide third-party relay system that facilitates telecommunications for the deaf, hearing impaired, and disabled citizens of Missouri. Funding for these required services is provided by a surcharge on land line phones. As the number of land lines drop, input to the fund drops as well. Fifty percent of calls into relay services are initiated by individuals with no hearing impairment, using all different types of telecommunication services. Mrs. Mishler advocated legislation that would expand the fund base and spread the Relay surcharge across all forms of telecommunications in that the current surcharge only applies to land lines. She noted that approximately 3 million land lines contribute through a surcharge of 13 cents per month while at least 3 million wireless lines are presently exempt from the surcharge.

Mike Barry, director of external affairs for AT&T, testified on the effect of recent Congressional and FCC actions on Missouri. Mr. Barry first gave an overview of the history of the Telephone Consumer Protection Act that was passed in 1991. Mr. Barry proceeded to explain the current FCC rules regarding commercial faxes. The current rules allow faxes where an established business relationship exists. If there is no established business relationship, the sender of the fax must secure permission to send an unsolicited advertisement by fax. Faxes promoting property, goods, or services must contain an opt-out notice. Mr. Barry also discussed the federal Do Not Call List as it applied to wireless numbers. Under the new rules, consumer wireless numbers may be placed on the federal list. Calls between telemarketers and businesses, however, are largely exempted from the federal Do Not Call List rules. The rules also provide that wireless numbers may not be called using autodialers. Mr. Barry stated that it was the position of AT&T that the federal laws and rules provide sufficient safeguards to prevent unsolicited faxes and consumer telemarketer calls. He requested on behalf of AT&T that Missouri not adopt any redundant state legislation governing the use of faxes that might inadvertently impinge on its current business practices. In addition, he requested that the expansion of Missouri's Do Not Call list be limited to those wireless numbers that are primarily used by consumers for personal and familial purposes.

Rick Cimerman, Vice President of State Government Affairs for the National Cable and Telecommunications Association, discussed the video franchising process. He outlined the history of telephone companies and the video market. He noted that telephone companies were initially denied entry into video market in the 1970s because of anticompetitive concerns. In

1996, telephone companies were allowed entry into the video market. Mr. Cimerman stated that telephone companies can obtain franchises like other cable companies, and any provider willing to accept existing franchise terms can obtain a franchise quickly. Mr. Cimerman described how two telephone companies have approached the video franchising process. He stated that Verizon has obtained non-statewide franchises in 65 markets and generally plays by the rules as it enters the market. AT&T, on the other hand, tries to skirt the local video franchising process by arguing that its use of Internet protocol takes it outside the definition of "cable service." Mr. Cimerman refuted the proposition that creating a statewide video franchising process would lower cable bills. He stated that telephone companies want to cherry pick high-value customers rather than serve the entire franchise area of the incumbent cable company. Mr. Cimerman also discussed two bills in Congress that would streamline the video franchising process. Mr. Cimerman also noted that cable operators are introducing high quality phone services and customers saved an average of \$11.19 per month on their phone bills.

Clint Highfill, Director of Government Affairs for United States Telecom Association, testified on matters relating to video franchise reform. He stated that current franchising requirements are an impediment to video competition, and the lack of competition has caused cable rates to soar over the past decade. Mr. Highfill noted that reforming the franchising process could save U.S. customers \$8 billion in the first year and consumers in Missouri could save \$151 million in the first year. Mr. Highfill stated that the House of Representatives passed a franchising bill (H.R. 5252) in June that would create a national video franchise. The Senate's version of the bill establishes a streamlined franchising process with an opportunity for local officials to play a direct role in local franchising negotiations.

Kent Custer, a telecom analyst for A.G. Edwards and Sons, shared his views regarding the telecommunications and cable industries. He testified that traditional access lines to the home are declining at an annual rate of about five percent, driven by wireless and cable substitution. Mr. Custer stated that a key competitive dynamic the industry is observing now is the bundling of voice, video, and data services. He stated that entry level offers for all of these services are now available in many locations for less than \$100. Mr. Custer anticipates a convergence of delivery platforms and applications toward universal IP or Internet Protocol systems. With the public deployment of Wi-Fi and Wi-Max networks, consumer electronics will recognize their environment and will adjust accordingly.

Mr. Custer stated that the key federal regulatory issues are video franchising, net neutrality and USF reform. On the video franchising issue, he sees a drag on the rollout of video by telephone companies due to the requirement of gaining video distribution rights for each individual municipality. The Bells are seeking state and/or national franchising legislation to streamline the process. On the net neutrality issue, Mr. Custer believes the industry is seeing a face-off between the access providers (telephone and cable) and the application providers (e.g. Google, Yahoo, or MSN). In his view, the Bells are seeking to protect the status quo and potentially seek new revenues from the application providers, while the application providers seek protections from additional fees that could stifle their competitiveness and innovation. On the Universal Services Fund issue, Mr. Custer noted that contributions to the fund are based on

interstate phone calls. This is becoming irrelevant in the current network environment. Wireless and soon cable providers are required to contribute to the fund based on percentage of revenue.

C. Belton, Missouri Meeting

The committee held its next hearing in Belton, Missouri on August 29, 2006. The committee explored the topic of using technology to improve education and rural medical care in Missouri.

Representative Brian Baker testified about the recently enacted Missouri Virtual School Act (Senate Bill 912). The Virtual School Act uses the Internet and other cutting-edge technologies to establish a virtual-curriculum extension for Missouri public school students. Under the bill, Missouri's virtual schools will be subject to the same educational standards as every other public school district in Missouri. The Missouri Department of Elementary and Secondary Education (DESE) will have direct oversight over virtual schools. The bill requires virtual schools to meet the same standards as a typical school district, such as using certified teachers, having an approved curriculum, using state standardized tests and making progress under the federal No Child Left Behind law. Representative Baker noted that the virtual school program will start with about 500 students and a \$2.6 million cost the first year. Representative Baker stated that there is already a waiting list of 1,000 students wanting to participate in the program. Supporters of virtual schools envision an Internet-based school used by a variety of students — the sick, disabled and home-schooled, those failing in a traditional classroom, or those needing a more challenging curriculum. Students could enroll full time in the virtual school or take just a course or two. Senator Koster asked whether the virtual school act could be expanded to include colleges. Senator Koster noted that Texas has established a virtual campus system and perhaps Missouri could control the spiraling costs of college tuition by allowing college students to complete their freshmen year online.

Mr. Eric Langhorst, a history teacher for the Liberty School District, testified on how he employs technology in the classroom. Mr. Langhorst employs innovative technologies to teach his classes, such as posting notes and study guides on the web. He also allows students to listen to lectures via podcasting and uses blogs to explore historical issues. For example, in one of Mr. Langhorst's blogs he poses the question: "What if the British had won the American Revolution?" He also collaborates with teachers around the country and other countries to exchange ideas.

Mr. Langhorst also testified about U.S. House Resolution 5319, the Deleting Online Predators Act (DOPA). Under the proposed resolution, social networking sites, such as Myspace, and chat rooms must be blocked by schools and libraries or those institutions will lose their federal internet subsidies. Specifically, the proposed resolution would amend the Communications Act of 1934 to require recipients of universal service support for schools and libraries to protect minors from commercial social networking websites and chat rooms. Mr. Langhorst cautioned Missouri legislators from blocking social networking sites like Congress is

proposing. Instead, educators should incorporate social networking sites into the classroom curriculum.

Robert Trottmann, Director of Marketing for Fidelity Communications, testified about distance learning and telemedicine. He stated that distance learning and telemedicine are critical applications to keep rural communities viable. Distance learning enables students from multiple geographically separated schools, through a two-way interactive television, to be technologically grouped into a single classroom. Telemedicine is the practice of healthcare delivery, diagnosis, consultation, treatment, and transfer of medical data and education using interactive audio, visual and data communications. Both require widely available broadband connectivity. Mr. Trottmann outlined the history of both technologies in Missouri. He stated that rural telephone companies have been instrumental in working with these applications with the deployment of broadband networks since the early 1990s. He stated that the issue with telemedicine and distance learning is not a lack of technology availability. According to Mr. Trottmann, both network facilities and medical instrumentation have been available for well over a decade. He noted, however, there are economic problems within the industries that may cause failure. Some schools and hospitals are closing due to lack of finances or insufficient students and patients, not because they cannot get the technology. He summarized by stating that equipment and network services are getting much less expensive and are readily available throughout rural Missouri.

Richard Telhorst, President of Missouri Telecommunications Industry Association (MTIA), testified before the committee. MTIA is a trade association open to all telecommunication providers serving Missouri. MTIA's membership includes all local telecommunications carriers in the state, as well as a number of wireless providers, competitive access providers, and other telecommunications companies. He stated that Missouri's private telecommunications carriers are providing the manpower, the network and the specialized equipment required to deliver high-value, advanced telecommunications services in both metropolitan and rural areas of Missouri. Mr. Telhorst urged Missouri policy makers to continue to support the delivery of these services through private enterprise. He noted that consumers receive the most benefit when the competitive marketplace is allowed to work and government entities are not competing with private enterprise. He further elaborated that government-owned networks, subsidized by local taxpayers, are duplicative and risky ventures that waste taxpayers' resources. Furthermore, private carriers have made a significant investment in broadband technology and network development. Government-owned networks would stifle private investment in advanced technology. Mr. Telhorst mentioned that Missouri law currently prohibits municipalities from providing telecommunications services in competition with private carriers. That law, however, expires in 2007. Mr. Telhorst would like to see the legislature adopt a five-year extension or make the prohibition permanent.

Neal Gilb, Government Relations Manager for Charter Communications Central States Market, testified on behalf of the Missouri Cable Telecommunications Association. Mr. Gilb's testimony focused on the importance of the Cable in the Classroom program. The Cable in the Classroom program began in 1989. The program currently provides more than 2,300 non-public and public schools with free cable television. Mr. Gilb also discussed the Cable in the

Classroom magazine, which provides theme-based articles on professional development, articles written by teachers for using Cable in the Classroom programming, and a detailed monthly listing of cable television programs by grade level. He summarized by stating that cable television definitely improves education and enhances the learning environment.

Alan Freeman, Executive Director of Missouri Highland Health Care, testified before the committee regarding the importance of technology to rural health care. He stated that the largest barrier to implementing technology into the rural areas is financial capital. He stated that his organization receives federal grants, but they are inadequate. He noted that health information technology does reduce costs. Although startup costs are high, costs are reduced over time.

Dr. Karen Edison, M.D., head of dermatology at the University of Missouri-Columbia Medical School, testified about the importance of telemedicine to rural medical care. Dr. Edison described telehealth or telemedicine as the use of electronic information and telecommunications technologies to support long-distance clinical health care, patient and professional health-related education, public health, and health administration. She stated that the Missouri Telehealth Network serves over 2,000 patients a year. She noted that telemedicine also helps doctors treat patients who do not speak English by allowing health care practitioners access to translators via teleconferencing. Dr. Edison pointed out that telemedicine improves quality, access, and affordable care by reducing repeat visits for the same problem, reducing unnecessary and repeat hospitalizations, and reducing travel costs and other barriers. Telemedicine also saves travel costs for routine patients and will help the state reduce costs associated with transporting prisoners and state mental patients. Dr. Edison presented statistics demonstrating what certain patients would have done without the Missouri Telehealth Network service. According to her survey, 14 percent of the patients would have received care from their primary care provider; 26 percent would not have received care; and 59 percent would have traveled an average of 71 miles (one way) to receive care. Although telemedicine is a great asset for health care providers, there are several barriers to overcome:

- 1) Equipment costs;
- 2) Reimbursement rates;
- 3) High telecommunication costs;
- 4) Resistance to change;
- 5) Privacy and security issues (HIPAA); and
- 6) Credentialing of providers.

Dr. Edison concluded her testimony by stating that she envisions a one-network system throughout Missouri where any site can connect to any other site for clinical services, preparedness training, administrative meetings, and educational purposes.

D. Jefferson City Meeting

The committee held its last hearing on September 13, 2006, in Jefferson City, Missouri. The committee explored the financial, legal, social, taxation, environmental, and technological issues surrounding the telecommunications, cable television, and Internet services industry.

Scott Mackey, a tax policy consultant with the law firm of Kimbell, Sherman, and Ellis, discussed the recent Missouri Supreme Court case that struck down H.B. 209 (the new telcom tax law) as an unconstitutional special law. The bill had forced Springfield to drop a lawsuit against Sprint for unpaid back taxes charged to telephone and wireless companies operating in the city. Since 1968, Springfield has charged companies that supply telephone and telecommunications services a license tax equaling 6 percent of their gross receipts. When cell phones and other wireless technology hit the market, telecommunications companies refused to pay the city's license tax on them stating that wireless is not a telephone. The city sued Sprint for taxes owed since 1999, and the judge found in the city's favor. During the pendency of that lawsuit, however, the Missouri General Assembly passed HB 209, which required all Missouri cities — except Clayton and Jefferson City — to dismiss lawsuits for unpaid taxes on wireless phones. The bill also reduced the amount cities could collect in license taxes. The Supreme Court's ruling overturning the House Bill allows Springfield to pursue its lawsuit filed in 2004, which could be worth an estimated \$40 million in back taxes owed by telecommunications companies.

Mr. Mackey requested that the General Assembly reexamine the issue involving the business license tax issue. He noted that there is a huge disparity in the amount charged by cities on wireless companies compared with the business license taxes imposed on other types of businesses. He stated that this disparity stifles demand for wireless services and influences investment decisions made by wireless companies. Mr. Mackey would like to see the key provisions struck down in HB 209 to be reinstated, namely the provisions that afforded relief for past liability and restricted the rates that cities could impose on wireless services. Mr. Mackey contends that legislation addressing these issues would help bring a halt to litigation and bring certainty to the market.

Ric Telhorst, President of the Missouri Telecommunications Industry Association, gave an overview of the importance of the industry to Missouri. He noted that the telecommunications industry provides Missouri with approximately 45,000 jobs with an annual payroll of more than \$2 billion. The telecommunications industry also pays approximately \$300 million in state and local taxes.

Bill Rohde, General Manager for Mark Twain Rural Telephone Company, testified before the committee regarding broadband deployment by small telephone companies in rural Missouri. He stated that broadband penetration in the U.S. market is approximately 42 percent while only 34 percent of the market served by the Mark Twain Rural Telephone Company has been penetrated. Broadband is available to 100 percent of Mark Twain's customers, but he attributed the slow deployment rate of broadband in rural Missouri to age and income. He urged

the General Assembly to avoid passing policies that would create or widen the "digital divide."

Paul Lane, General Counsel for AT&T of Missouri, testified with respect to video franchising. AT&T and other companies would like the General Assembly to pass legislation allowing them to provide video services under a single statewide video franchise rather than having to negotiate franchise agreements with individual cities and towns. Mr. Lane stated that a bill similar to one debated in the 2006 legislative session would promote competition in video services and therefore decrease prices. He noted that Texas consumers experienced a 25 percent decrease in their cable bills after Texas passed a statewide franchise bill. He further stated that a nationwide video franchise bill would save consumers \$9 billion.

Doug Galloway, State Executive for Embarq Corporation, highlighted policy issues he thought the General Assembly should address with respect to providing Internet, video and other services to Missourians. First, the General Assembly should align the state's statutes with federal law to take advantage of federal money. Second, Mr. Galloway stated that political subdivisions should not compete with private industry in that government entities do not have the expertise to do the job. He would support extending the sunset on the statute that prohibits political subdivisions from providing video services in competition with private companies. Mr. Galloway also discussed the need for regulatory parity among competing providers. He also echoed Scott Mackey's comments that the General Assembly should abolish the unequal tax treatment among competing providers.

Lillian Rodriguez-Lopez, President of the Hispanic Federation and the Co-Chair of Broadband Everywhere, testified about the video franchising process. Specifically, she emphasized the importance of all communities having access to broadband and other forms of advanced telecommunications. She said it is imperative that any franchising reform legislation considered by the Missouri legislature must contain provisions to guarantee reasonable and equitable deployment in Hispanic communities. If telephone companies are going to enter the video market, then consumer protections must be built into the franchising process. She noted that current law entrusts local authorities with enforcing anti-discrimination laws so that every neighborhood is served. The current municipal franchise process is not a barrier to telephone companies from entering the marketplace in that telephone companies that can obtain them with little difficulty. Ms. Rodriguez-Lopez stated that exempting telephone companies from anti-discrimination rules would only widen the digital divide. Currently, only one in eight Hispanic households has broadband services. She further opined that companies like AT&T will "cherry pick" high-value customers, unless anti-discrimination provisions are maintained. Ms. Rodriguez-Lopez took issue with the suggestion that a statewide video franchising process will save consumers money. She stated that since telephone companies have broken promises in the past, any obligations placed upon the telephone companies must be enshrined into the law.

John Coffman, a representative from the American Association of Retired Persons (AARP), echoed many of Ms. Rodriguez-Lopez's points about providing consumer protections in any video franchising bill the legislature may pass. He stated that any video franchising bill passed by the Missouri General Assembly should include consumer protection provisions

(access) and build-out requirements (specific timelines and other specific requirements that will prevent the telephone companies from redlining). He stated that he did not particularly like the video franchising bills passed in Texas or Kansas, but noted that the bill passed by the New Jersey legislature contained some enforcement and build-out provisions.

Trey Davis, a representative from the Missouri Chamber of Commerce and Industry, stated that his organization supported a video franchising bill because it promotes competition.

Jo Walker, President of the Missouri Silver Haired Legislature, stated that her organization supports the need for increased competition in the cable television market and recommends that the Missouri legislature adopt rules that will allow new competitive video providers to more easily enter the cable market. Her organization recently approved a resolution lending its support for a streamlined, statewide video franchising process that removes barriers to entry by new voice, video and data competitors. She believes passage of a bill that creates a statewide franchise will promote competition, innovative services, and lower prices.

Mary Ratliff, President of the local chapter of the National Association for the Advancement of Colored People (NAACP), testified in support for a statewide video franchise bill if the bill would promote competition and narrow the digital divide in the urban and rural areas. She stated that any legislation passed by the Missouri legislature should prohibit the practice of redlining.

Brett Kilbourne, Director of Regulatory Affairs and Associate Counsel for United Power Line Council, presented an overview of broadband over powerlines (BPL). BPL uses technology to provide broadband Internet access through ordinary power lines. A computer (or any other device) would need only to plug a BPL "modem" into any outlet in an equipped building to have high-speed Internet access. One of the obvious benefits of BPL over regular cable or a DSL connection is that the extensive infrastructure is already available to allow more people in more locations to have access to the Internet. BPL also has several commercial applications such as high speed Internet access, voice communications, and video services. In addition, BPL also offers several utility applications such as equipment monitoring, energy management, and power outage notification. Mr. Kilbourne noted that the FCC has recently issued a rule for BPL operations to promote deployment while protecting radio licensees from interference. Mr. Kilbourne stated that Texas recently addressed the BPL issue through legislation and that California's public service commission recently issued a regulatory decision.

Mark Vantrease, Managing Supervisor for Strategic Planning and Corporate Development for AmerenUE, also addressed the issue of BPL. He stated that AmerenUE's interest in BPL is grid reliability, efficiency and security. He noted that BPL can help move companies like AmerenUE toward a "smart grid" or an "intelligent grid." Currently, AmerenUE is offering BPL as a technical trial to approximately 50 homes in Cape Girardeau. Mr. Vantrease stated that AmerenUE envisions using some variation of a landlord model to deploy BPL-enabled technologies whereby it would lease space on its electric grid to one or more third party ISPs. The landlord model is the basic model being pursued by most investor-owned utilities.

Under the landlord model, the ISP would pay an access fee to the utility and would be responsible for the investment needed to build the BPL network. The utility would receive bandwidth on the network to deploy internal utility applications, but generally would not be in control over non-utility applications. Mr. Vantrease noted that although he did not think legislation was necessary for BPL deployment, industries like AmerenUE would like to know the rules around how BPL investments will be treated before making investments in this type of technology. To that end, Mr. Vantrease thought that the recent actions in Texas and California could provide legislators insight.

Susan Littlefield, President of the Missouri Chapter of the National Association of Telecommunications Officers and Advisors, testified before the committee about the importance of video systems meeting public interest obligations such as providing public, educational and governmental (PEG) access channels. She stated that it is important to streamline the video franchising process without throwing out all the rules that have resulted in widespread deployment, media access for constituents, educational opportunities, emergency response, consumer protections, and electronic government services.

Gary Markenson, Executive Director for the Missouri Municipal League, testified on the issues of video franchising and telecommunication taxes. He stated that his organization would support a video franchising bill if it would protect consumers and local revenues currently received by local governments. For his organization to support a video franchising bill, the emergency alert system and the public, educational, and governmental access channels must be preserved in a meaningful fashion. He stated that the major stumbling block with the 2006 video franchising bill was the issue of service area. Mr. Markenson contends that the telephone companies only want to serve the profitable areas. He stated that the Missouri Municipal League will not support any video franchising bill that does not contain reasonable build-out requirements. The build-out requirements should be reasonably specific such as requiring the telephone company to deploy its video and broadband services in all neighborhoods within a community with a specific time frame (e.g. 7 years).

Greg Harrison, President for the Missouri Cable Telecommunications Association, testified that the current franchising system works and is not a barrier to entry for other providers. He stated that any company can enter the market since franchises are not exclusive. Mr. Harrison also stated that the Missouri legislature does not need to address the video franchising issue since Congress might pass a national video franchising bill. If the Missouri legislature decides to address the video franchising process, Mr. Harrison stated that the bill should include provisions that:

- 1) require companies to provide PEG and Access channels;
- 2) require new providers to follow the same customer service standards that cable providers must adhere to;
- 3) maintain local management of rights of way;
- 4) require new providers to adhere to reasonable build-out provisions, with penalties; and
- 5) allow incumbent cable companies to opt in or opt out of their current franchise agreements.

III. RECOMMENDATIONS

After reviewing the information presented to the committee during its four public hearings, the committee makes the following recommendations to the General Assembly:

1. The committee recommends that the General Assembly should avoid deregulating the electric utility industry based upon the experience of other states such as California and Illinois.
2. The committee recommends that the General Assembly adopt policies that encourage energy conservation. For example, the General Assembly should encourage municipalities to voluntarily adopt energy efficiency residential codes.
3. The committee recommends that the General Assembly adopt policies that will encourage the building of additional power generation plants.
4. The committee recommends that the General Assembly explore the issue of creating a state transmission infrastructure authority. Several states are considering a new kind of entity to encourage the construction of new electricity transmission lines. These entities, known as transmission or infrastructure authorities, would have authority to encourage new transmission, participate in financing of new transmission, and even build new transmission lines. Motivation for these authorities includes economic development and the exportation of electricity. In 2005, the Kansas legislature created the Kansas Electric Transmission Authority. The authority was created to ensure reliable operation of the integrated electrical transmission system, diversify and expand the Kansas economy, and facilitate the consumption of Kansas energy through improvements in the state's electric transmission infrastructure. The Kansas act permits the authority to accept federal agency grants for operation, and to borrow funds and make loans to finance construction of or make upgrades or repairs to third-party transmission facilities.
5. The committee recommends that the General Assembly explore the issue of expanding the base of the Relay Missouri monthly surcharge by including an assessment on wireless telephones. Under current law, only landlines are assessed the \$.13 monthly surcharge. Since the number of landlines has been steadily diminishing over the last several years, cell phones and other wireless devices should be included in the surcharge base so Missouri can continue its mission of providing a statewide dual party relay system for the deaf, hearing-impaired and speech-impaired.
6. The committee recommends that the General Assembly reexplore the issue of whether the public is willing to provide a stable funding source for Enhanced 911 services. Enhanced 911 services can help identify the location of where a 911 mobile phone call was placed. According to a recent General Accounting Office report entitled "Telecommunications: States' Collection and Use of Funds for Wireless Enhanced 911 Services", 48 states and the District of Columbia collect surcharges to cover the costs of implementing wireless E911. For these states, funds are collected by wireless telephone carriers from their subscribers. Missouri uses funds from the

local general revenue, local 911 taxes, and wireline funds for E911 implementation. In 2002, Missouri voters overwhelmingly rejected a fifty cent fee that would help fund wireless enhanced 911 services. According to the American College of Emergency Physicians, Missouri ranked last in the nation in providing residents access to Enhanced 911 services. The General Assembly should reconsider resubmitting the fifty cent ballot measure to the voters to improve Missourian's access to quality emergency care. If the General Assembly does not wish to submit the matter directly to the voters, it should consider authorizing counties to submit a tax to the voters to fund E911 services.

7. If the General Assembly passes a video franchising bill that allows telephone companies to offer cable television services, then the committee recommends that the bill should include provisions that:

- 1) require companies to provide public, educational and governmental (PEG) access channels;
- 2) require new providers to follow the same customer service standards that cable providers must adhere to;
- 3) maintain local management of rights of way;
- 4) require new providers to adhere to reasonable build-out provisions, with penalties; and
- 5) allow incumbent cable companies to opt in or opt out of their current franchise agreements.

8. The committee recommends that the General Assembly continue to adopt policies that encourage the use of technologies to improve telemedicine, \telepsychiatry and education. Innovative use of the Internet and other computer technologies

9. The committee recommends that the General Assembly examine its statutes and regulations to determine whether our laws serve as an impediment to the deployment of broadband over powerlines (BPL) technologies. Although several of the witnesses commented that Missouri law does not expressly prohibit the deployment of BPL, many utilities would like to know the ground rules before making major investments in this technology. Uncertainty of how BPL technology will be treated under the law hampers investment. Recently, the Federal Communications Commission removed some of the uncertainty surrounding BPL technology by declaring that BPL-enabled Internet access service is an information service. The FCC order places BPL-enabled Internet access service on an equal regulatory footing with other broadband services, such as cable modem service and DSL Internet access service. Missouri should similarly remove any uncertainties that would hamper investment in this technology.