# Testimony of Barry Hart
# Chief Executive Officer
# Association of Missouri Electric Cooperatives

## Committee on Environment and Public Works
## October 28, 2009

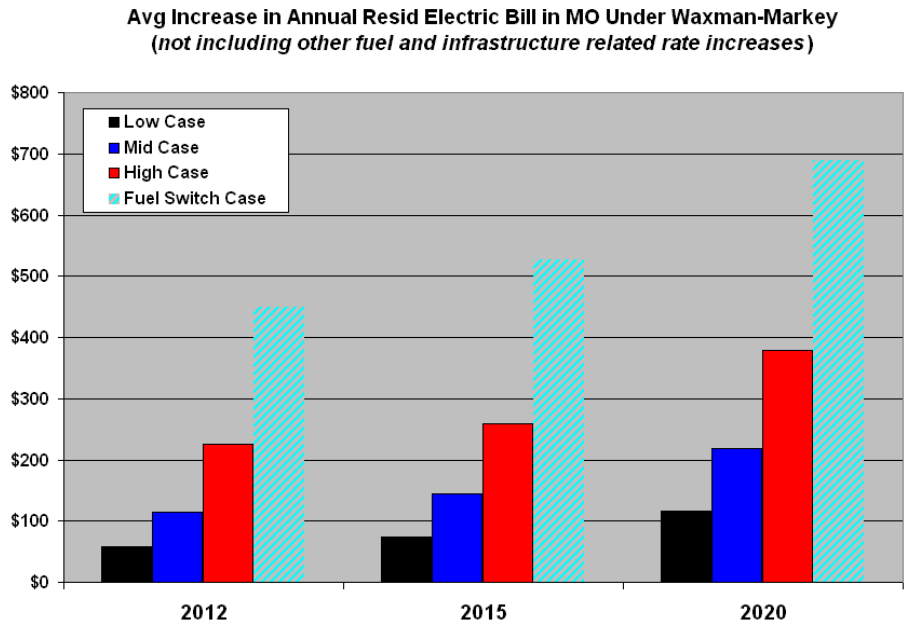
Thank you for inviting me to provide the views of electric cooperatives on pending climate change legislation before the Senate. I am Barry Hart, CEO of the Association of Missouri Electric Cooperatives. I represent more than 2 million people receiving electricity from 40 electric cooperatives serving more than 70 percent of the land mass in Missouri.

Without exception, our cooperatives are democratically governed, our business meetings are well attended and our cooperatives receive extremely high customer approval ratings.

While our members are a diverse group, we serve a high percentage of economically disadvantaged Americans. One-third of our members are 65 years or older, with 83 percent of that group retired and living on a fixed income. Nearly half of our member households earn annual gross incomes of less than $40,000.

Cap and trade proposals being considered would significantly increase costs to Missourians just as they are beginning to shed some of the financial challenges imposed by one of the deepest recessions in the last half century. There are numerous conflicting statements circulating about the cost of climate change legislation on consumers. Most studies use an average from across the nation. Missouri's electric utilities felt our consumers should know what these impacts are on our state specifically. For this reason, a joint study was commissioned by the cooperative, investor-owned, and municipal utilities to come up with cost impacts for their plants in our state.

This study shows the Waxman-Markey House bill will cause our customers to pay rate increases averaging between 12 percent and 26 percent starting in 2012 with the potential to reach as much as 50 percent should utilities be forced to switch from coal to natural gas for a significant portion of their fuel. Because the cap on emissions is reduced annually, rate increases of between 25 percent and 42 percent may be experienced as soon as 2020 and could reach as high as 77 percent under a switch to natural gas scenario. The study is included in my written testimony submitted to the committee.




Electric cooperative members in Missouri are very concerned about possible rate increases and their impact on their families and businesses as the Senate works to craft climate change policy. That fact is evidenced by the more than 750,000 messages sent to our elected officials by Missouri electric cooperative members asking them to keep electricity affordable and reliable. We have never seen this level of grassroots involvement on an issue in our cooperatives' history.

Our members have told us they cannot afford a massive hike in rates. Unemployment is on the rise, with unemployment rates as high as 12.7 percent in rural counties. Our state's economy is reeling from recent plant closings, particularly at the St. Louis Chrysler and Ford automobile assembly plants. Our electric co-op members are predominantly employed in agricultural or timber endeavors that do not let them recover increases in production costs such as electricity. Already wholesale rates have increased 49.5 percent due to a number of factors and our member-consumers have told us their budgets are being stretched thin.

To serve our members with affordable and reliable electricity, electric cooperatives in Missouri have built a diverse generating portfolio that includes coal, natural gas, hydropower and wind energy. In fact, we were the first utility to bring wind energy to the state, with 300 megawatts currently contracted for from wind farms in Missouri.

We also have allocated $31.2 million over five years for an energy efficiency plan with a goal of reducing demand by 1.9 million megawatt-hours. Through this plan, more than 2 million energy efficient CFL light bulbs have been distributed to members, along with energy audits and rebates to install Energy Star rated appliances.

However, we are dependent on coal to supply 81 percent of our members' needs. When our last baseload plant was put in service in 1982, coal was our only option because changes in federal policy took natural gas and nuclear power options off the table.

Twenty-seven years later, Missouri consumers see themselves about to be penalized for following federal policy and making the only decision that would meet our members' needs.

We are proud of the environmental record of Associated Electric Cooperative, which provides generation for most of our members. Over the past 14 years, Associated has invested more than $1 billion to reduce emissions. As a result, sulfur dioxide and nitrogen oxide emissions are down 90 percent. In the next 10 years, we expect to spend an additional $1.3 billion on environmental improvements.

Missouri's electric cooperatives are proactive in managing their carbon footprint and are at the forefront of research on reducing carbon emissions. Associated Electric Cooperative was one of the first utilities to join the Chicago Climate Exchange, the world's first and North America's only legally binding greenhouse gas emissions tracking program. We are partnering with several Missouri utilities to fund a three-year project to study the viability of storing $CO_2$ underground in Missouri's unique geology. In addition, Missouri's electric co-ops are working with two universities to determine whether algae can capture $CO_2$ from power plant flue gas and produce beneficial byproducts like biodiesel. However, those projects will require many years of research before they are commercially viable.

Today I am here as a representative of the electric cooperative program in Missouri to talk to you about a prudent carbon policy that protects consumers. In the cooperative spirit, Missouri electric cooperatives will work together with the nation's electric cooperatives, our Senators, and this Committee to craft a climate policy that both achieves emission reductions and keeps electricity affordable for our consumer-members. Climate legislation must be:

- **Fair** – Climate change legislation must take into account regional differences. Missouri's electric cooperative consumers should not be asked to pay more than consumers in other parts of the country because of regional differences in how electricity is produced.

- **Affordable** – Any climate change plan must keep electric bills affordable for all Americans. Missouri's rural electric cooperative consumers, with a median household income more than 11 percent below the national average, cannot afford the significant cost increases projected to result from the American Clean Energy and Security Act of 2009.

- **Achievable** – Climate change mandates must be realistic to ensure long-term success. Prudent climate policy must build a bridge to a low-carbon economy responsibly and carefully.

Following are some specific areas that electric cooperatives would like to see improved in climate change legislation.

**Achievable Emission Caps and Timelines**

Large-scale reductions in greenhouse gas emissions will require a transformation in the electric sector on an extraordinary scale. The Kerry-Boxer bill's target of a 20 percent reduction in greenhouse gas emissions by 2020 is far too aggressive. Missouri's electric cooperatives' generation portfolio is currently 81 percent coal. In the near term, we have relatively few technology choices available to reduce our greenhouse gas emissions. Our energy efficiency programs and additional renewable energy will yield some reductions. But in the absence of new, commercially available technologies, it is likely that we would need to switch from coal to natural gas to comply with the caps in the bill, at substantial cost to our consumers.

Long-term emissions reductions can be achieved if there is sufficient new research, development, and deployment of new technologies that reduce or avoid emissions of greenhouse gases. In the utility sector, this research program must include renewable energy, nuclear power, carbon capture and sequestration, energy efficiency, and other technologies that will give us the tools necessary to accomplish the long-term reduction goals. However, it is critical that the target during the first decade of a climate program reflects the expected availability of technology.

Legislation should also allow sufficient time for the EPA, other agencies, and covered sectors to establish regulations and prepare for the implementation of the program. Attempting to begin a carbon reduction program in 2012 may well create a "false start" that could seriously imperil the very beginning of this long-term effort to decarbonize the economy. Further, emission reduction targets and timetables that are too aggressive will make the cap-and-trade program unaffordable, unworkable, and technologically unachievable.

**Protection of Electricity Consumers by Allocating Allowances to Local Distribution Companies Based on Carbon Content of Fuel Mix**

Currently, the Kerry-Boxer bill retains the allocation methodology in the House bill—the so-called "EEI 50-50-50" formula—leading to significant regional disparities in how well electric utility consumers are protected from rate increases resulting from the cap-and-trade program. Under the House bill's formula, Missouri's electric cooperatives would receive about **68 percent** of their proportionate share of the cap in 2012 in contrast to some utilities that would receive 100 percent. This places a disproportionate burden on our consumers due to our higher than average percentage of coal generation. As a result, our consumers—with lower than average median income—get less protection from the cost impacts of this bill just because they live in Missouri. This regional disparity is patently unfair.

The root cause of the disparity—the 50-50-50 formula—should be fixed. The most efficient method of minimizing the costs of a carbon reduction program to our electric consumers is to freely allocate allowances to local distribution companies on the basis of emissions. The utility sector should receive allowances in proportion to its share of the overall cap established in the bill (approximately 40 percent), and those allowances should be provided for the duration of the program. Further, providing allowances to unregulated merchant coal generators dilutes the allowances provided to protect electricity consumers, instead providing additional profits to those companies. Those problems can and must be avoided by allocating allowances solely on the basis of emissions.

In the case of not-for-profit, member-owned electric cooperatives, it is impossible for us to profit from the free allocation of allowances. Our member-consumers directly bear all costs resulting from efforts to reduce emissions to cap levels and acquire allowances. Likewise, our member-consumers directly save on their electric bills when costs are avoided. A program design that requires cooperatives to purchase allowances will raise costs to our consumer-members for compliance, redirecting funds that they could have otherwise invested in low-carbon technologies. Allocating allowances based on the carbon content of the fuel mix recognizes regional differences in generation and will ensure fairness and affordable electricity for all American consumers.

**Robust Cost Containment Measures to Promote Economic Sustainability**

Cost certainty is critical in the early years of a greenhouse gas cap-and-trade program as covered sectors transform to low-carbon energy sources. Different analyses of cap-and-trade legislation have come to different conclusions about what it will cost consumers. Even government analyses contain several different scenarios with wildly differing results, depending upon the assumptions used in the scenarios. We believe that any legislation should include a guarantee that the cost of the legislation to our consumers would not exceed a pre-determined level.

The best method of assuring cost certainty is the inclusion of a strong cost containment mechanism, such as a safety valve or price collar. A safety valve limits the potentially destabilizing impacts of a cap-and-trade program on energy prices and ensures affordability of electricity to our member-consumers. The Kerry-Boxer bill contains a strategic reserve proposal similar to the House bill that does not place an upper limit on the cost of emission allowances. While some components of the strategic reserve have improved in this bill, additional improvements such as a real price collar are needed.

**Offset Credits to Provide Flexibility**

The inclusion of workable domestic and international offset credit programs will provide covered sectors flexibility in planning cost-effective investments in low-carbon technologies and reduce costs to consumers. Workable domestic and international offset programs are critical to protecting consumers, particularly in the early years of a climate

program. EPA, CBO, and others have concluded that the cost of emission allowances would rise by 70 to 100 percent if domestic and international offsets are not available.

This bill delays the establishment of an offset program—and thus its market value in controlling the costs of the cap-and-trade program and protecting consumers—by failing to assign the lead agency or agencies for domestic and international offset projects, and failing to include an initial list of eligible domestic project types. Cooperatives believe that the U.S. Department of Agriculture is in the best position to work with farmers and landowners on domestic offset projects. In addition, it is not necessary to cap the use of offsets by covered entities, as the size of the domestic and international offset programs will be limited by the available verified, cost-effective offsets.

**Establish a Single, Integrated Program**

A workable piece of legislation will ensure that regulated entities understand the "rules of the road" and know who the "traffic cop" is on that road. To make new legislation workable, it should not simply be layered upon existing law at the federal, state, or local level. Therefore, climate change legislation should establish a single, organic new law that establishes the sole legal and regulatory requirements for reducing greenhouse gas emissions, and should ensure that the Clean Air Act, Endangered Species Act, and other federal laws cannot be used to require reductions in greenhouse gas emissions. Additionally, given the nature of the climate change issue, there is no benefit to allowing states to establish "more stringent than" programs when there is a national cap established on emissions.

Unfortunately, the Kerry-Boxer bill would result in the worst-case scenario of simply layering a new set of requirements on top of existing laws that were never designed or intended to regulate greenhouse gas emissions. It also fails to effectively pre-empt states and other units of government from establishing their own cap-and-trade systems. Pancaking new and old laws and regulations must be avoided in new legislation.

**Technology Development and Deployment Incentives**

To make greenhouse gas reduction requirements achievable, we will need new, cost-effective technologies to reduce emissions. Incentives for new technologies (including carbon capture and sequestration, plug-in hybrid electric vehicles, renewable and nuclear power, etc.) are critical to the sustainability of any new legislation and the achievability of the emissions reductions. Developing new technology is critical to cooperatives' ability to use abundant, domestic resources like coal to continue to meet our energy needs.

With respect to carbon capture and sequestration, this bill contains several of the financial and regulatory incentives necessary to develop the technologies. However, to ensure the timely development of carbon capture and sequestration, regulatory and liability hurdles

must be addressed in the legislation. Without these provisions the program will not be achievable or affordable.

**Conclusion**

Thank you for the opportunity to testify at today's hearing. Electric cooperatives have concerns and suggestions regarding the details of climate change legislation in addition to the elements covered above. Mandatory efforts to reduce greenhouse gas emissions will have far-reaching impacts to the U.S. economy with the potential for disproportionate impacts to low- and fixed-income households, to specific economic sectors, and among regions. A well-designed climate change program will distribute the costs of the program fairly and equitably. Cooperatives look forward to working with Members of this Committee, other committees with jurisdiction over various aspects of this issue, and the entire Senate to develop a fair, affordable, workable, and technologically achievable program. I look forward to answering the Committee's questions.

























**August 31, 2009**

U.S. Senator Kit Bond
274 Russell Senate Office Building.
Washington, D.C. 20510

U.S. Senator Claire McCaskill
Hart Senate Office Building, SH-717
Washington, D.C. 20510

Dear Senator Bond and Senator McCaskill,

As leaders of Missouri's electric service providers, we are joining together to share our common concerns about the likely impacts of the climate legislation which will be considered later this year in the Senate. If it passes there, then Members of the House who voted on H.R. 2454 – the American Clean Energy and Security Act of 2009, a.k.a. the Waxman-Markey bill, may have an opportunity to vote again on similar issues.

As it exists today, this bill will significantly increase costs to Missourians just as they are beginning to shed some of the financial challenges imposed by one of the deepest recessions in the last half century. We believe this legislation will cause our customers to pay rate increases averaging between 12% and 26% starting in 2012 with the potential to reach as much as 50% should utilities be forced to switch from coal to natural gas for a significant portion of their fuel if natural gas prices are at the levels seen last summer. Because the cap on emissions is reduced annually, rate increases of between 25% and 42%, may be experienced as soon as 2020 and could

reach as high as 77% under the switch to natural gas case cited above. Lower rate increases could be recognized if the provisions detailed below were incorporated into the legislation.

It should be noted that these projected increases would be in addition to any other rate increases that utility providers would implement to pay for higher costs of fuel, additional or improved emission control devices, increased costs of transmission and distribution, etc.

These increases represent statewide averages, with some utilities having to charge more and others less. Because Missouri utilities, and most other states in the Midwest, have historically relied on coal to produce reliable and low cost electricity, residents and businesses here could experience among the highest rate increases in the nation.

Based on the current legislation, Missouri utilities will have to find a way to cover at least 40% of their expected carbon emissions in 2012 **in addition to** the free allocations provided in the legislation. To comply with the law we will have to make costly changes to our generation fleet, operate higher cost gas-fired generation, purchase domestic and/or foreign carbon offsets, purchase more expensive low- or zero-emission power, and switch fuels in existing plants. This will be in addition to the energy efficiency efforts that will reduce our customers demand for power. Even after taking these costly measures, we will be required to purchase carbon allowances in a market with highly uncertain prices.

If the current bill could be modified in the following six ways, rate impacts on Missouri residents and businesses could be significantly reduced and yet the key environmental policy objectives maintained.

- Reduce initial consumer price shock by providing sufficient allowances to meet allowed carbon emissions, recognizing that allowances can be withdrawn over time.

- Significantly extend the current timeline before reducing allocations to give utilities a reasonable time after federal regulators have designed the regulatory plan in order to achieve meaningful reductions in carbon emissions. A more gradual 'glide slope' for reductions of allocations is needed to avoid unprecedented and very expensive actions by the utility industry, which will be borne by their customers.

- A 'price cap' should be established to prevent price spikes caused by shortages or speculation that will ultimately shock consumers' pocketbooks.

- Create an enforcement 'off ramp' so that American industries aren't forced to choose between relocating operations to competitor countries (who require little or no carbon regulation), and going bankrupt in a world market. Without this provision we could see jobs going overseas which, counterproductively, would serve to *increase* worldwide carbon emissions.

- Electric utilities, and the electrification of vehicles, are the most obvious means of reducing U.S. dependence on foreign oil. The current provisions of this legislation penalize electric utilities and their customers for advancing this national interest. Instead utilities should be allocated *additional* allowances tied to electric vehicle penetrations to speed the transition to electric vehicles.

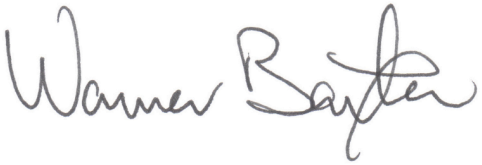
- The proposed legislation contemplates the use of domestic and international 'offsets' as a means of addressing carbon emissions. However, it is highly restrictive with no clear timeline or guidelines for issuing a final rulemaking. Restrictions and limitations on the use of offsets should be removed. Moreover legislation must ensure that offset rules are quickly finalized to ensure their immediate availability at the start of any carbon reduction program.

If you have any questions regarding these recommended modifications to the legislation or would like to receive additional data on how climate legislation will disproportionately impact Missourians, please do not hesitate to contact us.

Sincerely,



Jim Jura,
CEO & General Manager, Associated Electric Cooperative, Inc.

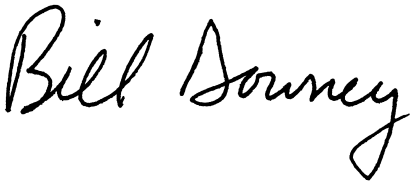


Warner Baxter
President & CEO, AmerenUE



John Twitty
General Manager, City Utilities of Springfield

Bill Gipson,
President & CEO, The Empire District Electric Company



William Downey,
President & COO, Great Plains Energy and Kansas City Power & Light



Barry Hart,
Exec. Vice President & CEO, Association of Missouri Electric Cooperatives



Duncan Kincheloe
General Manager & CEO, Missouri Public Utility Alliance



Warren Wood,
President, Missouri Energy Development Association

# Unified Missouri Electric Utilities Review

*of the*

## Impacts of H.R. 2454 – the American Clean Energy and Security Act of 2009

Electricity prices are a considerable factor in siting and retaining a vibrant manufacturing and commercial consumer base in any community. These industries then provide many of the jobs that are critical to the economic health of these communities. Low electricity prices also allow many individuals in our state to enjoy an improved quality of life.

Missouri's electric service providers (municipal, cooperative and investor-owned) share several concerns that legislation like the Waxman-Markey bill will dramatically drive up the cost of electricity unless several issues are addressed. Following passage of the Waxman-Markey bill by the U.S. House of Representatives, all of Missouri's electric service providers met and worked through the major provisions of this legislation in order to understand the impacts of the legislation on our customers. These utilities then developed a reasonable set of common assumptions so that total state impact data could be developed. The observations and charts that follow were developed by this group and represent the collective thinking of the analysts most familiar with Missouri's electric generation and delivery infrastructure and how the Waxman-Markey bill would impact its operation.

Numerous reports with national 'average' data are being distributed on an almost daily basis. What these reports typically fail to address is the disparity of impacts between Midwestern and coastal states. Missourians are disproportionally impacted by this legislation due to our higher than average percentage of coal generation and lower than average median income.

The following charts illustrate low, mid, and high cases for which all the signators to this letter have provided data. In addition the signatories provided data to identify impacts associated with the need to switch fuels if other compliance options are not available in a timely manner.

The low case assumes an initial carbon price of $12 per metric ton consistent with the prices modeled by the U.S. Environmental Protection Agency. This case is only considered achievable if the concerns in the cover letter are addressed such that needed technologies are commercially available and deployable, international and domestic offsets are readily available, and economic growth is below historic levels. Given that the U.S. EPA, Energy Information Administration, and others have indicated uncertainty on these conditions, the only way to assure the carbon price in the low case is to set a price cap on the price of allowances that will likely be required to be purchased.

The mid case assumes an initial carbon price of $25 per metric ton. This closely matches much of the modeling by other organizations studying the impacts of Waxman-Markey. This scenario reflects assumptions similar to those used by several organizations whose analysis yielded 'average' impacts that do not reflect the disparity of impacts to Missourians.

The high case assumes an initial carbon price of $50 per metric ton. This carbon price level is reflected in many models used by other organizations under scenarios where offsets are not readily available and/or large-scale carbon reduction technologies are not commercially deployed until after 2020.

The fuel switch analysis captures the effect of achieving compliance with carbon reduction requirements through fuel switching (typically by reducing output from coal-fired plants and turning to natural gas-fired plants). This analysis was conducted to determine the rate impacts on customers that would occur if compliance could not be achieved through areas such as offsets and technology deployment in the short term. If utilities are forced to comply with this legislation through fuel switching for some period of time, this analysis gives scale to the customer impacts that could be observed. For this analysis, we used natural gas prices similar to those experienced last summer.

Consumer behavior, economic conditions, availability of international and domestic offsets, allowance prices, allowance allocations, and the commercial availability of large scale greenhouse gas reduction technologies (e.g. large scale carbon capture and storage) will determine what costs electric consumers will experience.

It should not be assumed that any one scenario will be observed exclusively. One plausible outcome is that initially the lower cost scenario would be observed but tightening emission caps, low availability of offsets, and slow technology deployment and the higher allowance prices that would result could push cost toward the high case.

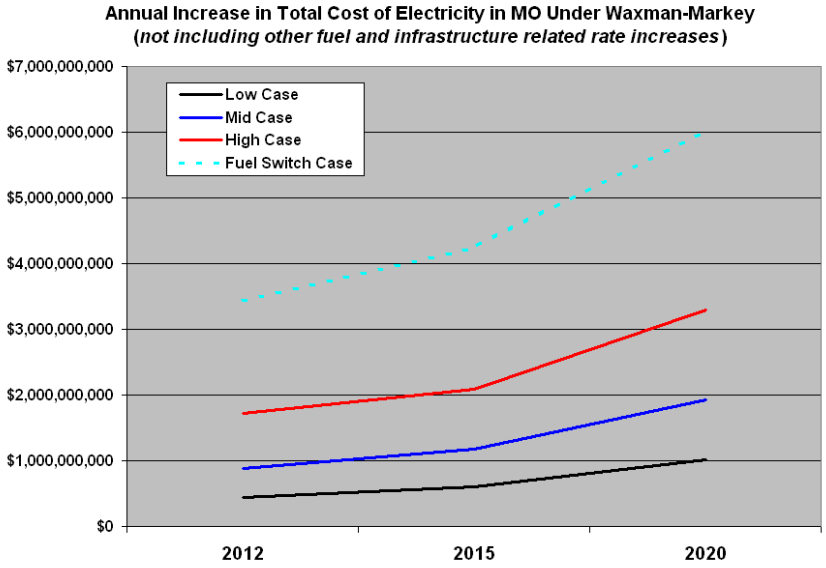
If we assume that the Waxman-Markey bill is changed so that there is a cap on the price of allowances (limiting the price to one within our assumptions) and further if we assume that the bill is changed to allow for more carbon offsets, both domestic and foreign, such that we can be assured of enough allowances at a given price, then the prices will likely be close to the low and mid cost scenarios.

If, however, the bill is not changed, and there is no cap on allowance prices nor the ability to bring in sufficient outside offsets to continue operating our coal-based units, then it is much more likely that companies will experience the high cost scenario with potential price spikes resulting from fuel switching from coal to natural gas until other cost effective greenhouse gas reduction technologies (e.g. carbon capture and sequestration) are deployed. These price spikes could be consistent with the range of prices seen in the fuel switch analysis.

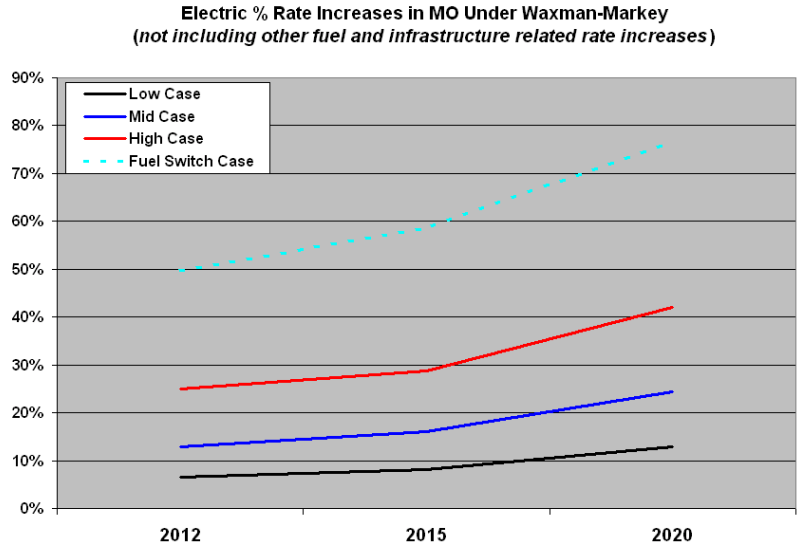
The costs impacts from this analysis are likely conservative or lower than will actually be experienced by customers under each of the analyzed scenarios. This is because none of the analysis included additional impacts from costs of operation associated with other requirements such as the Clean Air Act that are beyond that of compliance with Waxman-Markey. Additionally, the risk is greater that costs will be higher than the amounts projected because sufficient and affordable carbon offsets may not be available, new technology may not be either developed or deployed in a timely manner, and capital for plant investment may not be available in time to meet the enforcement deadlines. Finally, this analysis only addresses the impact on direct electricity costs to the consumer and does not make any effort to project the impact of higher energy prices on other goods and services that consumers purchase.

Also, it is important to note that these observations and charts are only for the timeframe from now to 2020. It was widely recognized by the analysts developing the information in this report that impacts after 2020 would only be more significant – especially when the free emission allocations phase out after 2025. Providing data between 2020 and 2030 was discussed at length but the number of uncertain variables with dramatic impacts on outcomes was viewed to be so significant as to make any one scenario just as likely as any other. Suffice it to say, we believe impacts between 2020 and 2030 will be much greater than those between 2012 and 2020 especially given the greater level of emissions reductions and the lower allocation of allowances.

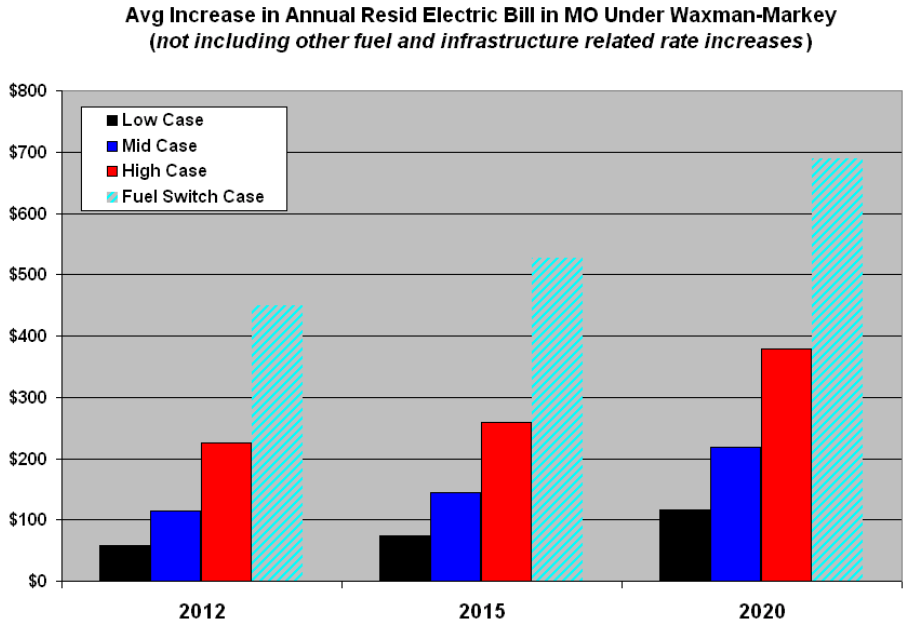
As illustrated below, just the carbon emission compliance portions of the current Waxman-Markey bill would drive up the annual cost of electricity in Missouri between $2 billion and $3.3 billion by 2020 and under conditions that force large-scale fuel switching to achieve compliance an annual impact of $6 billion could be observed. As previously noted, the availability of low cost offsets, the commercial availability of large scale greenhouse gas reduction technologies that do not yet exist, emission allowance prices, allowance allocations, and economic conditions drive the uncertainties in these estimates.




By 2020 the carbon emission provisions in the current legislation would drive electric rates 25% to 42% higher than they would be absent this legislation. If significant fuel switching is required to achieve compliance the rate impacts could approach 77%.




As shown here, this would result in a per-household annual increase in electric bills of $220 to $380 by 2020 and under conditions that force large-scale fuel switching the impact could be $690.




Unfortunately this increase in electricity cost will show up in everything you buy, not just your electric bill. Virtually all products either use energy in their production or transportation. Products like aluminum, concrete, and automobiles, which require large amounts of energy to produce, would be particularly hard hit.

In Missouri, 82% of our generation comes from coal and the median household income is more than 11% below the national average. Climate legislation must provide the country with an appropriate amount of time to gradually upgrade our mix of resources toward low and no carbon

emitting plants, the cost of which in itself will be significant, and achieve greater energy efficiency in the communities we serve.

Our state cannot afford an immediate imposition of significant costs on power plants and manufacturers at prices set in a highly volatile and uncertain market. Climate legislation must take into account regional differences. Additionally, climate legislation should not provide an avenue to "pay for" issues unrelated to the environment such as health care reform or tax cuts for middle to low-income workers. Those issues must be addressed separate from environmental legislation, which impacts the country on a disproportionate basis.

As discussed previously one of the important variables affecting the impacts of this legislation on Missourians is the availability and price of domestic and international offsets. While we support greater access to offsets, it is important to note that one of the likely unintended consequences of this aspect of the legislation is that it may result in a large transfer of wealth from our region to other countries (to purchase international offsets). While this may be desirable in terms of minimizing rate impacts on Missourians, it is questionable policy to spend billions of dollars to purchase offsets and send this money to countries that may be doing nothing to reduce their carbon emissions and may in fact be competing with us economically.

We have enclosed a map illustrating the top coal generating states. We hope that you can make this available to all of the policy makers participating in this debate. Thank you for your consideration of our concerns. We look forward to following this debate in the weeks and months ahead.

