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**How to get to a national All of the Above Energy Policy:
State experience can make it a reality**

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- It's great to be here with you all this morning in the National Press Club. I'd like to thank Barry Worthington, USEA Executive Director for inviting me to be part of this year's energy supply forum and for posting a longer version of my remarks on the USEA web site that provides greater depth to the thoughts I will share now.
- It's important for us to have forums such as this where we can share experience and ideas on the energy production and delivery challenges our nation faces and solutions for them. I've come today from Shreveport, Louisiana, the corporate headquarters of my electric utility company to share how Texas, Louisiana and Arkansas served by SWEPCO are benefiting from affordable, reliable power as the engine for creating jobs and stronger economies. I'll conclude by recommending some action items for achieving and implementing a national All of the Above Energy Policy.
- SWEPCO serves over 520,400 customers in East and North Texas, Western Arkansas and Central and Northwest Louisiana. Last year we had revenues of \$1.7 billion from sales of over 28 million MWH in retail and wholesale markets. We generated that power from a fuel mix of 48 and 51 percent natural gas and coal/lignite respectively, totaling 5,200 MW in capacity and delivered the energy over 31,000

miles of transmission and distribution lines. We will continue to be one of the lowest cost providers in our states when the \$1.7 billion, 600 MW John W. Turk Plant of which we own 73%-- and we're very proud that it is North America's first Ultra-supercritical coal unit-- comes on line at the end of this year and 400 MW of wind is added to our portfolio. In Texas for example, our rates are about 19% below the average for comparable Texas utilities and 37% below the national average.

- We are executing an energy deployment plan that SWEPCO developed in collaboration with our states in 2004. This reliance on coal and natural gas is supported by our states because it provides abundant, reliable continuous power for industrial and commercial users that in turn increase the economic output in states, increase revenues to states for social programs and adds new jobs that they expected and wanted. This fuel diversity also moderates seasonal and annual fuel price volatility and helps SWEPCO maintain its position as a reliable and low cost provider, which is important to our residential customers as well. Without the 500 MW Stall gas fueled plant we installed in 2010, we would have been unable to meet customer demand during the summers of 2010 and 2011 and would have been forced to purchase electricity at a much higher cost from a tight wholesale market.
- Our financial regulators work to balance the interests of all parties to ensure that we are providing safe, adequate and reliable service at reasonable prices, while allowing us an opportunity to earn a fair rate of return on these investments.
- We all are mindful that our residential customers are paying much more of their after tax income for energy these days—

even with very low natural gas prices recently, prices for natural gas for heating, gasoline and electricity have risen over the last 10 years. We've seen great volatility in natural gas prices too. Electricity prices during this time have not increased as much because historically low cost coal in baseload power plants have kept electricity costs low and stable compared to natural gas and oil fueled generation. In 2011, 30 states which on average generated 60 percent of their power from coal, had retail rates of 8.7 cents per KWH, compared to the national average retail price of 9.99 cents per KWH. Recent research from federal databases for the American Coalition for Clean Coal Electricity shows that 60 million American households with annual incomes below \$50,000 will spend 21 percent of the after tax income on energy this year, compared to 12 percent in 2001. Arkansas per capita income levels rank very low compared to other states so it is no surprise that those households with annual incomes below \$50,000- 62% of the population-- spend an estimated 23% of their take home pay on energy. Energy costs are 69% of the annual earnings for households earning less than \$10,000. I am convinced that they would be paying much more for their electricity if SWEPCO and our state policymakers decided in 2004 not to diversify our fuel mix and to not build plants that run 24 hours a day to serve demand that exists all the time.

- To help soften the impact of these costs and the recession, SWEPCO and our states are helping all electricity customers use their electricity more wisely with energy efficiency programs so they can save energy and money as well.
- It is my responsibility to know and understand the needs of my private sector customer, policymaker, investor, labor and NGO stakeholders in my states and to try to satisfy, if not

exceed their expectations. I imagine that some of them believe that our federal government could do much better supporting the progress that they have made to climb out of the recession and to begin to create new employment opportunities. Federal policy actions need to recognize that a corner stone of economic prosperity created by states is the abundant, reliable and affordable electricity produced and delivered in compliance with environmental and health regulations.

- We are in the midst of an extraordinary period of transformation and investment, which will affect how we produce and deliver electricity – and what customers pay for it – for decades. And companies like mine, and state policymakers especially need the federal government to help, not hinder, state efforts to be successful. Let’s take a look at some ways the state-federal partnership could work better.

EPA Regulations should not preclude fuel diversity options

- Our states are proud of the progress they have made to improve the health of their citizens through emissions reductions at power plants and other stationary sources and cars and trucks, but this has come at a cost that is not just measured in dollars to comply with EPA regulations.
- Through the end of the decade, our industry will spend an estimated \$300 billion just to comply with new Environmental Protection Agency regulations affecting power plants.
- This is on top of the billions that have already been spent to reduce power plant emissions significantly over the last few decades.

- AEP has invested more than \$7 billion since 1990 to cut sulfur dioxide and nitrogen oxide emissions by nearly 80 percent.
- It will cost us an additional \$6-\$7 billion to reduce emissions another 15 percent. Our customers will see rate increases of 10-30 percent, at a time when many will struggle to afford it.
- We are not opposed to further emissions reductions. But we believe that they must be necessary, technologically achievable to maintain fuel diversity and reliable power supply, and can be implemented on a schedule that is practical and optimizes cost savings for residential, commercial and industrial electricity consumers. Here are recent examples that illustrate a lack of thoughtful policy development and execution.
- EPA's Cross State Air Pollution Rule was vacated in September by a court decision so EPA needs to redo the regulation. But one reason a number of state Attorney Generals opposed the rule was that states were given only a relatively few months to comply with it, taking away the states' ability to decide how best to make emission reductions.
- What also is not so well known is that air quality has improved so much as a result of previous EPA regulations that the goals of the Cross State rule were already achieved in 2010, according to EPA-approved monitoring stations. Five environmental commissioners from Indiana, West Virginia, Ohio, Texas and Louisiana asked this question in an Op Ed they co authored in the December 22 edition of the Fort Wayne, Indiana Journal Gazette last year: "Should

Americans spend nearly \$1 billion a year to solve a problem that no longer exists? They further wrote: “This fact demonstrates that CSAPR only piles further costs on industry and subsequently American citizens without regard for the successful beneficial investments already being made to further reduce pollution. How could EPA projections be so wrong [to justify the rule]? In addition to improperly focusing on atypical 2005 air quality, EPA chose not to consider actual emission controls installed at power plants after 2004.”

- EPA’s aggressive compliance schedule to achieve additional emission reductions by 2015 under its Mercury and Air Toxics Standard regulation will needlessly increase costs for consumers and create local or regional reliability risks in many parts of the country – when at least 20 percent of our nation’s coal-fueled power plants are forced to shut down prematurely. The schedule does not reflect previous industry experience that it takes more than the three years EPA says it should to comply. It has taken power plant owners almost twice that time to receive permits and financial approvals from public service commissions and to design and install retrofits. EPA’s time extension options don’t give our industry the certainty we need to comply without being sued by environmental groups or violating the Clean Air Act.
- But the MATS regulation, which is under litigation brought by power companies, electricity consumers, and many state Attorney Generals, also sets limits on emissions from new coal-fired plants. These limits, which are supposed to reflect a group of best performing units are so low that none of 40 plants including our super clean Turk Plant that have just been permitted with very stringent limits, could meet all of the limits all of the time. Vendors will not guarantee

performance at those levels so new coal plants are not likely to be built in the future.

- We have been advocating for a more reasonable approach. Research from the Electric Power Research Institute shows that extending the compliance timeline by just a couple of years can achieve the same environmental benefits while saving at least 28,000 megawatts of existing coal-fueled generating capacity and cutting approximately \$100 billion in compliance costs – that’s one-third of the total cost.
- EPA’s proposed greenhouse gas emission reduction regulations for new coal and gas fueled plants will further limit energy development options in states if they are not changed in the final regulation. The CO₂ limits are so low that new coal fired plants could not operate without capturing the gas, but no commercially available technology exists now or will in the near future. The CO₂ limits are pegged at the levels that are being emitted from natural gas fired plants that are typically 50 percent lower than for coal plants. This is a legal issue in itself. But a review of the comments on the proposed rule shows that there is concern that even gas fired plants may not be able to comply with the limits through their lifetimes under various operating conditions.

Significant Infrastructure Investment is needed

- Experience has demonstrated the strong linkage between energy and economic productivity. At the state level, we and our stakeholders want energy to continue to power these economies far into the future. It must also be a national imperative to not just maintain, but to increase our productivity to be able to compete globally for quality and price, and to therefore grow our economies.

- In addition to environmental compliance costs, our industry will need to invest roughly \$2 trillion over the next 20 years to refurbish and replace existing infrastructure, and to build new facilities to meet the country's future energy needs.
- We're still facing a sluggish economy, though we continue to see growth in the industrial sector and some modest employment growth. As the economy picks up, these infrastructure investments become even more critical to reduce bottlenecks that can affect the reliable supply of electricity.
- We need to think about these investments long-term, moving beyond piecemeal fixes to determining what the system needs to look like for the future. Our country desperately needs a more robust transmission grid to bring cleaner, more efficient energy to our homes and businesses.
- These investments will need to be made even though we know many customers are still struggling from the recession. So what can we do to try to minimize the impact?
- It starts with companies like SWEPCO and AEP, strong companies with good credit ratings who can continue to make smart decisions about the investments that need to be made.
- Just as we did in 2004, we need to continue to collaboratively plan how much electricity will be needed to support the economic output and job creation goals our state government agencies and our communities set and then to make sure we have all our options available to optimize 24/7 reliability and costs and execute those projects. Today's commercially

available analytical tools like those developed by Management Information Services and other companies can show us how much electricity is needed and costs from different fuel mix scenarios to help optimize generation choices.

- In most states, generation is financially regulated, and the best option for customers and utilities is for cost recovery to begin right away, while construction is in progress. This costs customers less in the long run because it lowers the cost of capital.
- The past few years have been especially difficult because of the recession, but in general, the longer we draw out cost recovery and put deferrals in place, the worse it is for everyone's bottom line.
- On the policy front, the type of transmission infrastructure we will need to develop will go across state lines, so we will have to find a way that states and the federal government can work together to move these projects forward.
- A good step was last year's Order 1000 from the Federal Energy Regulatory Commission that is redefining the way transmission is being planned and how costs will be allocated across the country.
- We agree with many of the elements of Order 1000, including the requirement that there be a regional transmission planning process that looks at more than just reliability and takes into account the economic benefits that transmission can provide.

- It makes the most sense to look at these transmission projects regionally. Again, these are long-term infrastructure investments and we need to evaluate them with a long-term viewpoint.

Overdependence on Natural Gas is a risk to avoid

- Another challenge – and a risk we face – is becoming over dependent on one fuel for our electricity generation. We truly need an “all-of-the-above” approach to secure our energy future.
- Right now, low natural gas prices combined with a surplus of supply are lowering power prices and making other fuels less competitive.
- As I’ve illustrated earlier, well-funded anti-coal campaigns and the aggressive regulatory stance of the U.S. EPA have essentially killed the prospect of any new coal plants.
- The recession, high costs, expiration of federal tax credits, and the fallout from Solyndra are dampening support for renewables.
- And with concerns about the Fukushima accident and low natural gas prices, building new nuclear generation will continue to be a challenge. Licenses for four new nuclear units in Georgia and South Carolina have been approved, but whether any other units will be built in the United States in the coming years remains to be seen.
- Production from the existing generation fleet is also rapidly changing. When the Turk Plant is operating, SWEPCO’s mix

will be 51% from coal and lignite, 48% from natural gas and about 1% from wind. Today, AEP's natural gas plants are routinely producing electricity ahead of our lowest-cost coal units. That hasn't happened very often in AEP's 100-year history.

- The amount of electricity being produced by our gas plants jumped last year, and we expect it to increase further this year.
- Renewables and energy efficiency will be play a role in SWEPCO's and AEP's future portfolio but how much depends on how our states particularly think that they should they contribute to economic growth, employment increases and costs to ratepayers. The federal government can play an important supportive role to improve the grid so for example, states that are blessed with high quality wind resources that produce reasonably priced power can share with states that don't. We are able to buy wind energy from Texas, Kansas and Oklahoma for this reason.
- If directional drilling and fracking are the game changers that everyone predicts, our nation may be flush with plentiful, inexpensive domestic natural gas for decades.
- Without an energy policy supporting diversity, it will be difficult to build any other type of electricity generation. As financially regulated companies, we are typically required to choose the lowest-cost option for new capacity unless there are mandates that require other considerations.
- Betting on just one fuel to power our energy future isn't smart. Natural gas has long been a fuel with a highly volatile

price profile. Just six short years ago, spot natural gas prices hit a high above \$15 per thousand cubic feet. Just four years earlier in 2002, the price was below \$2.

- Whether that volatility has changed permanently, remains to be seen. Future natural gas price volatility could result if the growth in demand exceeds the availability of pipeline infrastructure.
- Our Turk Plant escaped attempts from the environmentalists to be killed. There is now a campaign to stop or slow shale oil and gas production as they raise questions about environmental safety and geologic soundness. States are addressing these issues, but there will probably be additional questions about all the new natural gas pipelines that need to be built to bring the gas to power plants.
- Higher gasoline prices may convert natural gas to a transportation fuel, particularly for fleet transportation.
- And surplus U.S. supply could mean natural gas exports.
- All of these scenarios could cause the same price swings that we have seen with natural gas in the past.

The Need for Visionary Financial Regulators

- In the absence of a national energy policy, state policymakers, especially financial regulators need to step up to the challenge, get beyond the flavor of the day, and continue looking long-term at what is going to be in the best interest of customers.
- We always need to keep in our minds our overarching purpose – to ensure there is safe, reliable and affordable

energy to power our economy – and make our decisions accordingly.

- We can't let the "just say no" crowd continue to delay or suspend the new investments we need to make in infrastructure, or stop the environmentally responsible exploration and production of our nation's domestic energy resources.
- We can't let politics and the flavor of the day influence how we manage electricity production in this country.
- What we can do is to continue working together. SWEPCO has done this for years. As I mentioned before, as our industry transforms, the regulatory models will need to change with it.
- As we work to meet new environmental mandates and expand and replace infrastructure for our customers, we need methods of recovering our costs that reduce the financial burdens for those customers while protecting the financial well-being of the utility companies.
- As you all know, it is a delicate balancing act.
- Today, many of the states have begun using alternative mechanisms to help ease regulatory lag, enabling companies to make the needed investments while minimizing the burdensome debt customers have to shoulder.
- As the industry continues to change, these regulatory tools also may need to evolve to help meet the challenges.

- But their willingness to adopt new models to address the gap between needed investments and available funding will be critical as we deploy huge amounts of capital and operate in the face of fluctuations in the economy, the cost of fuel, environmental requirements and other matters.
- We must have an energy development plan and frameworks in place that allow us to operate effectively in all different kinds of circumstances.
- In the end, it's all about keeping the lights on in the safest, most reliable and affordable manner possible – allowing electricity to continue being the engine that propels our states' - and nation's economy forward.

Recommendations on How to get to an All of the Above National Energy Policy that supports energy development in states

- The fact that gas has so quickly become the solution for all of our nation's energy challenges illustrates the bigger issue for our industry and the nation – the lack of a long-term, comprehensive energy policy and plan that helps states.
- We're making huge capital investment decisions today that will dictate the future cost and availability of electricity for all of our homes and businesses, without a clear, shared vision nationally for that future or how we should accomplish it. And I don't think that it is right to count EPA's environmental policies that are filling the void by serving as defacto federal energy policy.

- A long-term, stable, comprehensive national energy policy should be aimed at supporting state actions to improve their economies and job numbers, while allowing us to minimize rate shock for customers and continue improving the environment.
- Perhaps the best way to get to an All of the Above National Energy Policy is to consider the states' current successes, as well as their planning and deployment initiatives for the amount of electricity they need to meet their future economic output and job creation goals. This research could show whether creating a state-based energy development and deployment plan makes sense. It could also identify important roles for the federal government in the process.
- I hope that the US Energy Association would be willing to accept the challenge of leading the effort I've outlined.
- I believe that USEA is well positioned to do this research to help support the development of a comprehensive plan that accomplishes these objectives:
 - provide a reasonable transition for our nation's coal power plants.
 - enable us to align the natural gas and electricity markets to address issues like pipeline capacity and location, pricing, and scheduling protocols, which need to be coordinated to prevent reliability concerns.
 - prevent overdependence on one fuel, allowing us to maintain fuel diversity.

- support infrastructure investment, as well as clean energy research and development and
- allow us to take full advantage of our domestic energy resources, in an environmentally responsible manner.

Thank you very much.