AEP and Climate Change



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Sanford Bernstein-CERES Investor Seminar September 20, 2006

AEP_®

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Key Questions

- How does "climate" affect business strategy, capital investment, choice of generation?
- What does AEP assume re: A cost/price for CO2 in the future? What about allocations?
- Will there be credit for early reductions?
- Given dramatic increases in CO2 related to new coal plant development, what does AEP believe is the best way to address climate change and what role does the electric sector play?
- How should the investment community weigh economic impacts of climate change in valuations given long term time frame?



AEP Climate and Business Strategy

- AEP does not support mandatory U.S. GHG requirements unless they are part of a new international agreement that limits GHGs in the long term including developing countries such as China and India.
- AEP has had a GHG strategy for a number of years, acknowledging the issue, accepting the science and believing in early proactive action. Our strategy includes:
 - Proactive on GHG policy -IETA, EPRI, Pew, e7, Business Roundtable, etc.
 - Science/technology R&D- Future Gen, Sequestration, EPRI, MIT, etc.
 - Taking voluntary action now (e.g. CCX, EPA Climate Leaders and SF-6
 Program, Asia-Pacific Efficiency, DOE1605B, BRT Climate Resolve) -- Demonstrating voluntary programs can work and setting policy precedents thru CCX
 - Long-term planning (post-2010) to reduce or limit GHGs:
 - IGCC and FutureGen
 - Retirement of less efficient capacity
 - Emission offsets (e.g., forestry, SF-6)
 - Renewables (e.g. biomass firing, wind PPAs)
- Capital Allocation and New Generation—
 - Coal Builds IGCC in East; Ultra Supercritical Coal in West
 - A Portfolio of New Generation Including Gas and Renewables



CCX Overview

- An unprecedented voluntary greenhouse gas emission reduction and trading pilot program administered by 100+ companies and organizations
- Total member emissions= About 240 MM metric tons CO2 equivalent (~ 4% US CO₂ emissions)
- Member commitment to reduce GHG emissions below a "baseline" (average 1998-2001 levels):
 - 1% in 2003
 - 2% in 2004
 - 3% in 2005
 - 4% in 2006
 - 4.25% in 2007*
 - 4.5% in 2008*
 - 5% in 2009*
 - 6% in 2010*



AEP Info:

- Current Baseline = 155 MM metric tons (adjusted for divestitures)
- Reduction or offset of about 46 MM metric tons of CO2 during 2003-10
- AEP one of 14 founding members
- AEP first company to commit to extension period

^{*}Extension Period

AEP

Price of CO2?

- Fed. law unlikely through 2008. In 2009 and after, prospects for legislation will likely increase, depending on the next President.
- Price of CO2--
 - If legislation passes -- likely a "cap and trade" program (at a minimum including industrial and electric sectors, like the EU).
 Thus, CO2 will have a price.
 - Today -- price of CO2 in the US voluntary (e.g CCX) markets reflecting a "market" view that future legislation is probable.
 - AEP investments (such as IGCC) -- evaluated using a range of values (as shown in the August 31, 2004 Board Report titled "An Assessment of AEP's Actions to Mitigate the Economic Impacts of Emissions Policies", available on AEP.com).
 - More recently, we have included Bingaman bill's safety valve prices (\$7 per ton CO2 increasing by 5% per year) as a moderate price path assumption.

Allocation/Auctions and Early Action Credit?



Allocation/Auction

- Support for large auctions often reflects the incorrect economic assumption that the industry is fully deregulated and co. auction credit purchases are recovered in "market" prices.
- In fact, about 80% of US coal-fired generation is price regulated today. Auctions in price-regulated states will increase electricity rates, probably very substantially. (e.g. even a 10% auction will more than double the costs/electricity rate impacts of a 10% reduction program).
- Given this, will major auctions survive politically in any ultimate federal legislation?

Early Action Credits

- Some early action credit is probable (in most current legislative proposals), though 100% credit is very unlikely.
- Probability of credits will increase if they are verified/audited, etc.
 (One reason AEP is in CCX and EPA Climate Leaders).



Best Way to Address Climate Change?

AEP has a GHG strategy, which includes:

- Taking voluntary proactive action in the short and intermediate term (e.g. Chicago Climate Exchange commitment is from 2003-2010);
- 2. Being engaged in the development of climate policy so that it is as cost-effective as possible;
- 3. Evaluating longer term investment decisions such as new generation (e.g. IGCC) in light of the climate issue and the possibility of future mandatory legislation;
- 4. Investing in R&D for the technologies which may ultimately substantially reduce CO2 emissions (e.g FutureGen, carbon sequestration).

How should investment community weigh climate change in valuation?



- Though long-term in nature (even if legislation passes in 2010, it is unlikely to result in impacts prior to 2015), the cost implications and stakes of climate change legislation could be large.
- Companies that have a strategy that considers climate change now in their investment decisions and are taking voluntary actions to reduce their CO2 footprints should be a better value for investors than companies that do not.