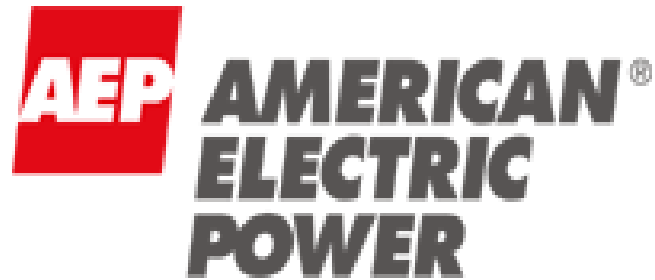


# Review of Waxman-Markey Climate Bill (ACES)



Mountaineer Plant - New Haven, WV



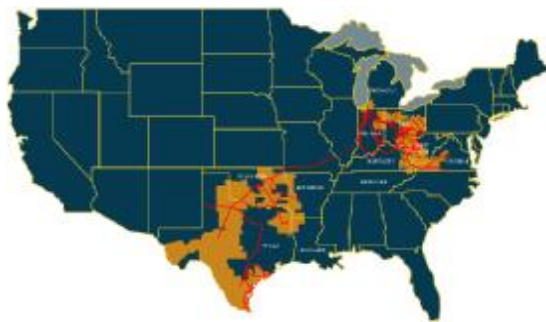
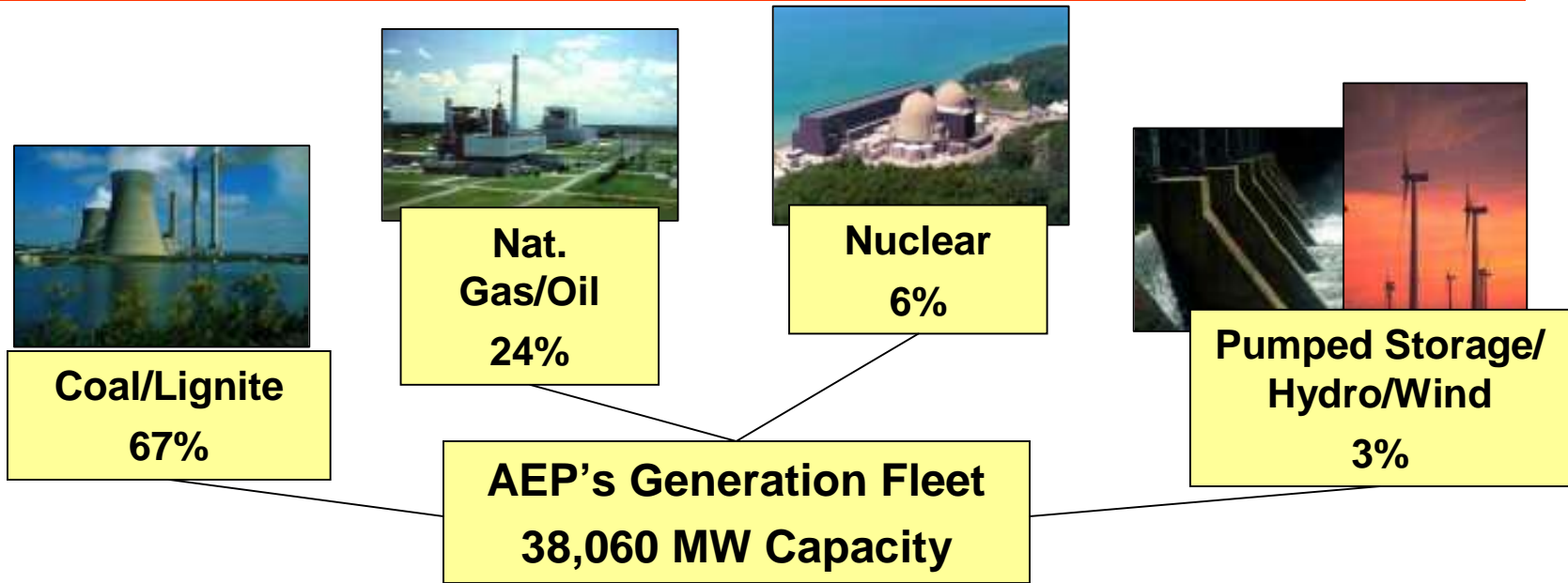
Desert Sky Wind Farm - Pecos County TX

Bruce Braine, Vice President

EMA Webinar

June 4, 2009

# Company Overview



5.1 million customers in 11 states  
Industry-leading size and scale of assets:

<u>Asset</u>	<u>Size</u>	<u>Industry Rank</u>
Domestic Generation	~ 38,300 MW	# 2
Transmission	~ 39,000 miles	# 1
Distribution	~ 208,000 miles	# 1



# Background: Climate Policy Status

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- § **House Climate AND Energy Bill Passes**--Under leadership of Waxman and Markey, American Clean Energy and Security (ACES) bill has passed out of the Energy and Commerce Committee. Uncertain jurisdiction issues with Agriculture (e.g. offsets and farm sector regulations) and Ways and Means (e.g. auction revenue). Floor debate/action expected June/July.
- § **Senate is waiting on House activity** –Bingaman and others are active on renewables/energy efficiency legislative side, but not on climate yet.
- § **Moderate Democrats in House led by Boucher played a key role** in the structure of the bill (particularly on allocation). Moderate democrats are vital swing votes needed for overall passage in the House as almost all Republicans are likely to oppose. Similar dynamic exists in Senate.
- § **Administration Still Indicates Climate as a “Priority.”** Using EPA Regulatory Action on CO2 as a potential “stick.”
- § **Passage possible though probably difficult in 2009, but still believe it is “likely” by 2010.**

# **AEP Position: A “Reasonable” Approach to Climate Legislation**

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- **Reductions and Timing** - Moderate with Adequate Lead Times
- **Scope of Program** - Economy Wide
- **Flexibility of the Program** - Trading, Banking, Unrestricted Offsets, Early Action Credits
- **Allowance Allocation And Other Cost Issues** - Full Allocation to Electrics and “Low” auctions
- **Technology Development/Deployment** - Bonus allowances or other support for carbon capture and storage
- **International Linkage** - e.g. AEP-IBEW Proposal

**AEP Supports Waxman-Markey Bill As Revised and Supports  
Constructive Revisions Needed in the Future**

# Summary of Major Provisions of ACES

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## Targets and Timetables

- § 2012: 3% below 2005 levels
- § 2020: 17% below 2005 levels (Original Bill: 20%)
- § 2030: 42% below 2005 levels
- § 2050: 83% below 2005 levels

## Allowance Allocations (2016-25)

- § Electric Sector- 35% (approx. 90% of sector "share" of cap)
- § Industrials-13.5%
- § Natural Gas LDCs-9%
- § Domestic Refiners-2%
- § Autos for Advanced Technology-1%
- § CCS Set Aside-5% (2% prior to 2017)
- § Auctioned (for Low Income/Adaptation/Intl./Other)-35%

## Industry Allocation Phase-Out

- § Almost all allocations phased out 2025-2030/ 90% auction by 2030

# Summary of Major Provisions of ACES (continued)

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## Carbon Capture and Storage-

- § Includes Boucher Wires Charge \$1 billion a year for demonstration and deployment
- § Extra allowance subsidies for up to 72 GW of CCS (from allowance "set aside")

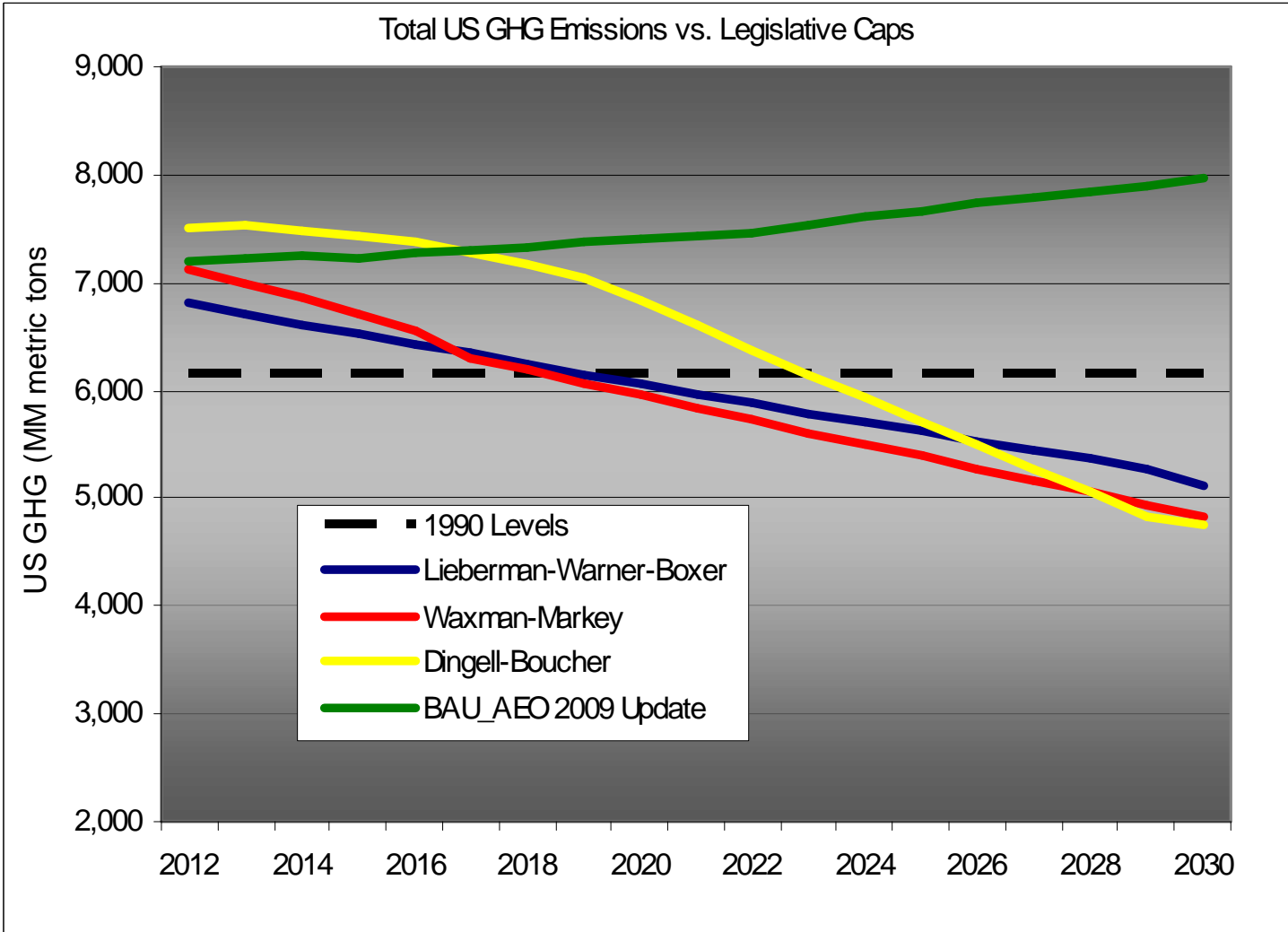
## Offset Provisions

- § Overall Limit of 2 Bill. Tons/ Yr. Up to 1.5 Bill. Tons Internationally
- § No discounting for Domestic Tons
- § 20% Discount on International Tons beginning in 2018
- § No coal mine or landfill methane offsets in US
- § International REDD (i.e. avoided deforestation) allowed. 5% set aside to help fund and some sub-national REDD allowed.

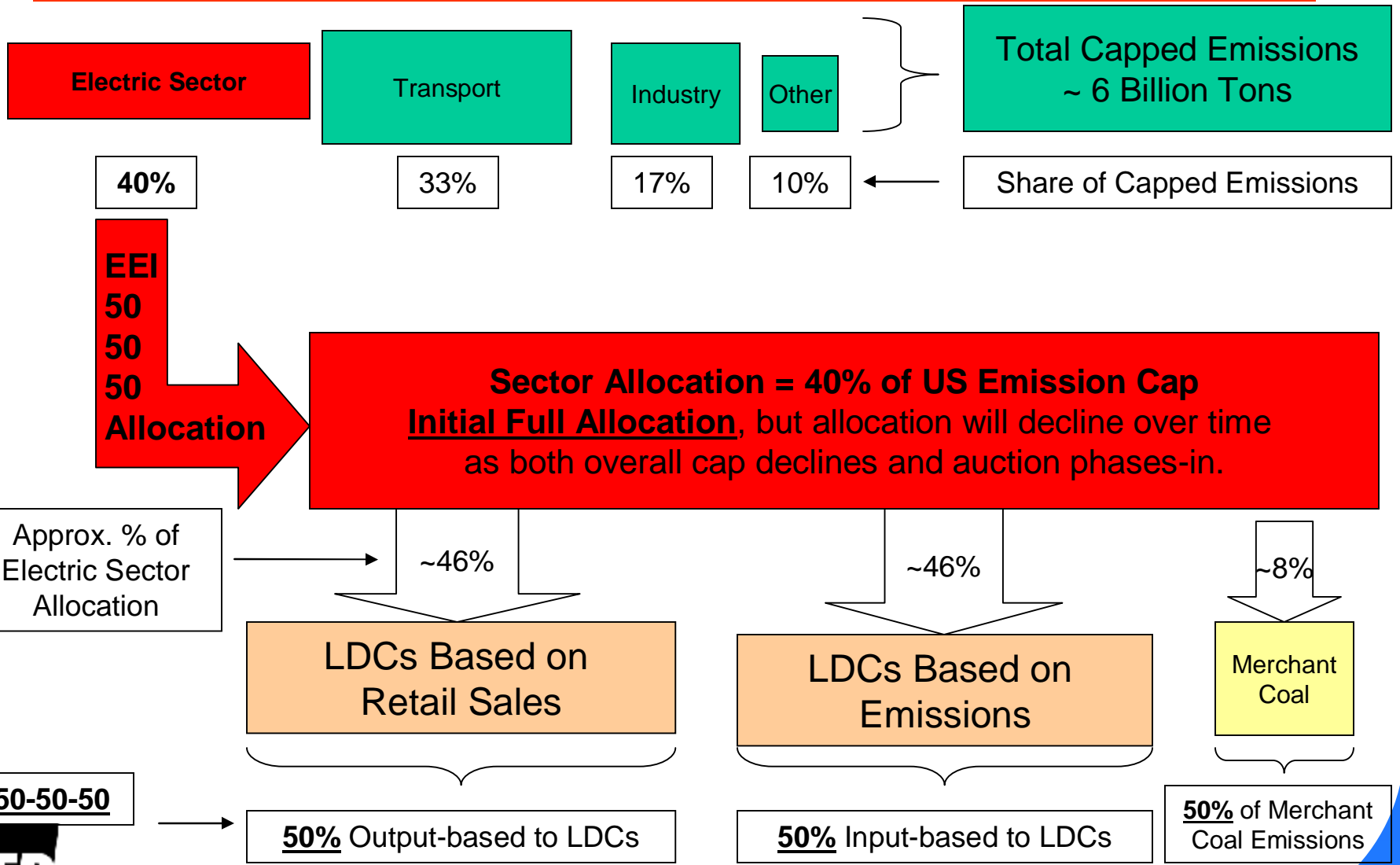
## Renewable Energy (RE) and Energy Efficiency (EE) Standard

- § Combined 20% of retail sales requirement by 2020
- § Up to 5% thru EE; up to 8% w/ governor approval

# Waxman-Markey Caps

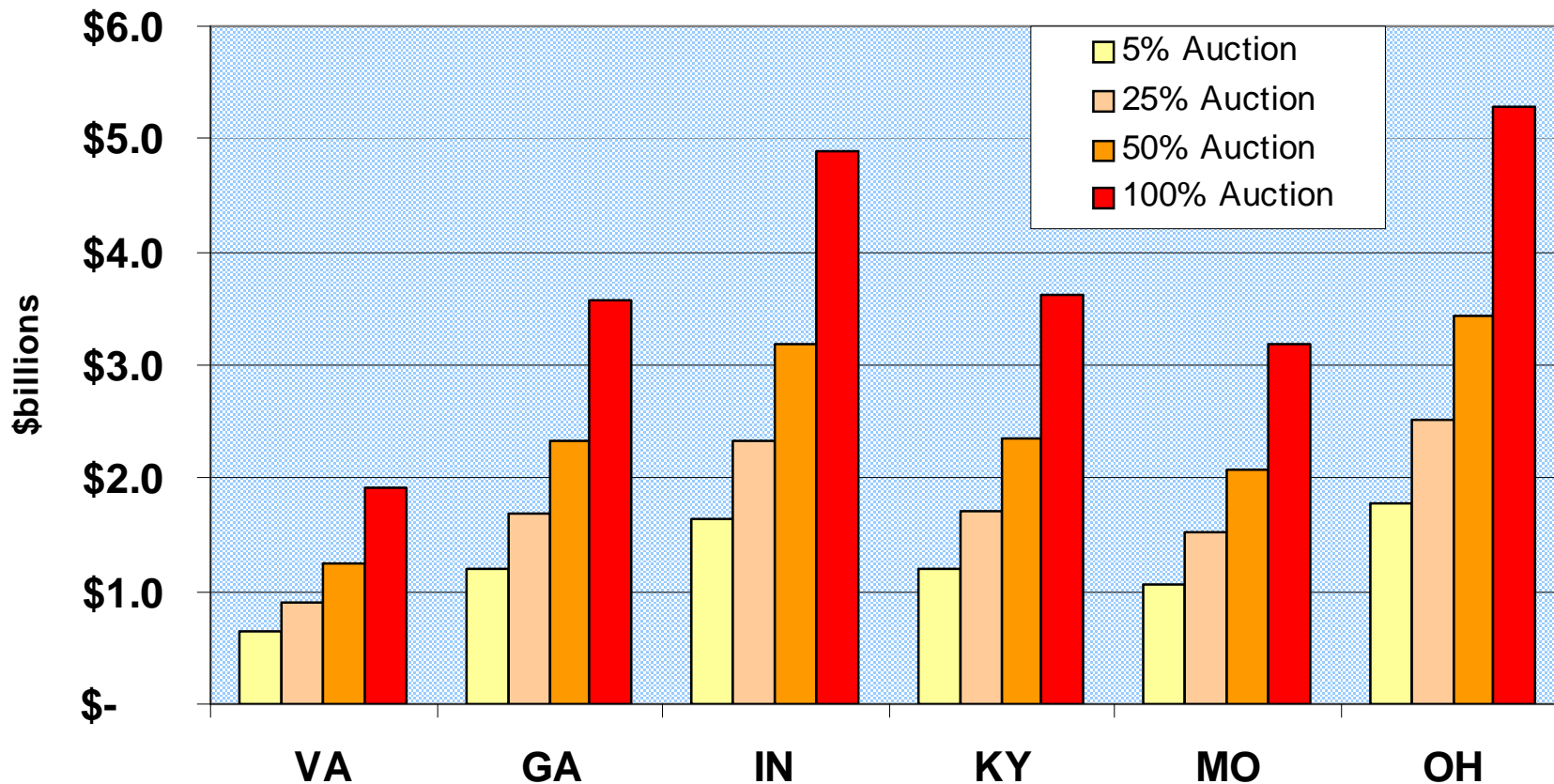


# EEl Allowance Allocation Proposal



# No. 1 Cost Issue--Auction vs Allocation: Increase in Customer Electricity Costs

Annual Increase in Electricity Costs (in Billions of Dollars)



Based on a 30% reduction in electric sector GHG emissions with CO<sub>2e</sub> reductions/allowances costing \$40/ton

# CCS Development and Deployment Mechanisms in W-M

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## § CCS “Wires Charge”

§ Provides \$1 billion in funding annually for 10 years to develop and deploy CCS technology.

## § CCS Allowance Set Aside

§ 5.5 billion allowances available through 2050. Total Value: \$0.2-0.4 Trillion

§ Phase 1: Fixed funding for first 6 GW of commercial deployment.

§ Sliding scale allowance subsidy based on project capture rate.

§ \$50/ton @ 50% capture up to \$90/ton @ 85%+ capture

§ Awards are for the first 10 years of CCS operation.

§ Phase 2: “Reverse Auction” Funding for up to next 66 GW of deployment.

§ Projects bid for subsidy based on economic support needed to justify project.

§ Theoretically the value between the market CO2 price and the cost of CO2 capture.

§ Awards are for the first 10 years of CCS operation.

# ACES Bill: Key Issues Going Forward

## Allocation of Allowances

- § **Key Issue:** 5 Yr. (2025-30) Phase Out for Electrics= 2030 Rate Shock
- § **Analysis:** Though longer term, still a priority for AEP and electrics since a majority of costs driven by allocations versus auctions.
- § **Potential Solution:** 15 Yr. Phase Out (2025-40) Phase Out Instead.

## Emission Cap Levels and Timing

- § **Key Issues:** Emission cap of 17% below 2005 levels in 2020 is 3% more stringent than the original Obama target of 14% and much more stringent than Boucher/Dingell target. Concern about availability of CCS and coal production losses. 2012 start date is very aggressive.
- § **Potential Solution:** Emission cap levels revised downward to 14% in 2020 and first year of compliance delayed.

## Offset Provisions

- § **Key Issue:** Though much improved, bill is still too limited on offsets
- § **Potential Solutions:** Remove 20% "haircut" for long term international offsets (i.e. 1 offset tone = 1 emission allowance). Distinctions on types and percentages of offsets used for compliance should be removed or loosened. Domestic landfill and coal mine methane offsets should be allowed.

# Bottom Line: Long Run US Climate Targets are Aggressive and Require a Portfolio

