



SEBESTA
BLOMBERG

A Survey of GHG Programs

December 15, 2009



MEETINGS

NONE OF US IS AS DUMB AS ALL OF US.

Agenda

- IDNR GHG Actions
- Iowa's Climate Action Plan
- Federal Developments
 - Endangerment Finding
 - Tailpipe Emission Standards
 - Implications for PSD
- Copenhagen Update
- Possible Costs of Cap and Trade



IDNR GHG Actions



- Annual emission reporting with EIQ
- Include in construction permit applications
- Voluntary Registry
 - The Climate Registry
- Assist ICCAC

Iowa's Climate Action Plan

- ICCAC Completed Plan Options 2008
 - 56 Plan Options = 165 mil tons reduced 2020

Plan Option	% Total Reduction
CRE-2 Technology Initiatives Incl. Biomass	20.29%
AFW-3 Biomass in Steam	12.15%
CRE-4a Decarbonization Fund	6.92%
CRE-5 Performance Standards (CO2/kWh)	6.92%
AFW-6 Cellulosic Ethanol	5.95%
CRE-7 Nuclear	5.89%
AFW-5b Conservation Tillage	5.47%
EEC-3 Financing Programs for Efficiency	3.71%
CRE-13 Pricing Promote Renewables	3.40%
TLU-10 Low Carbon Fuel Std	3.10%
EEC-1 Demand Side Energy Efficiency	2.66%

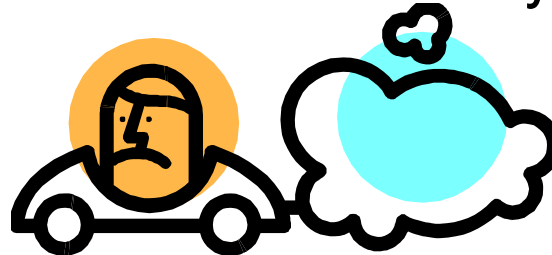
Federal Developments

- *Massachusetts v EPA*, April 2, 2007
 - Supreme Court = GHG are pollutants subject to Clean Air Act
 - If EPA determines that GHG endanger the public, then regulation of vehicle emissions
- Endangerment Finding – 12/07/2009
 - Murkowski resolution

Federal Developments



- Tailpipe Emission Standards
- NHTSA and EPA proposed 09/15/2009
 - Years 2012 – 2016 light duty vehicles
 - MPG requirements under CAFÉ
 - 2016 – meet 250 gCO₂/mile
~ 35.5 mpg fleet avg
- Must be finalized by 03/31/2010

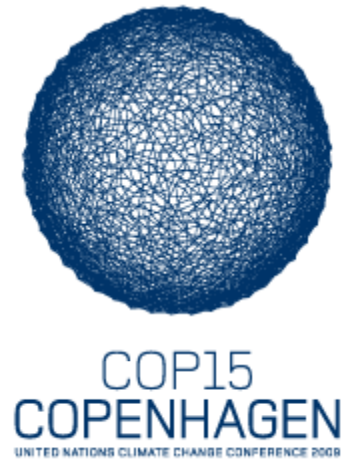


Federal Developments

- Regulation under PSD!!!
- Once CO₂ is regulated for vehicles, it becomes a regulated pollutant subject to NSR
- EPA Tailoring Proposal
 - Attempt to change PSD SER for CO₂
 - 25,000 TPY rather than 250 TPY
 - Questions of legality...
- IDNR is concerned that between passage of vehicle rules and IDNR package, the 250 TPY threshold would apply

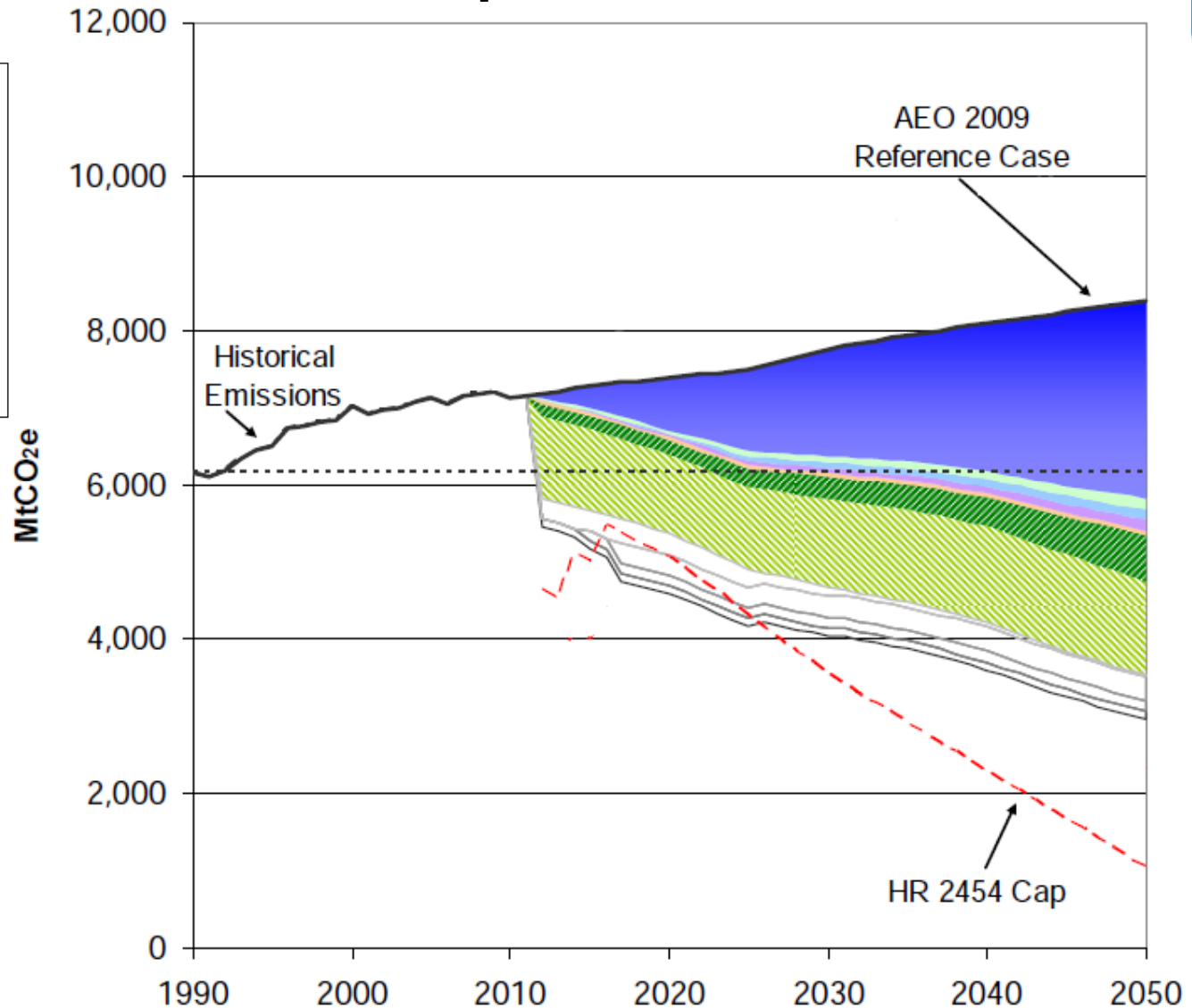
Copenhagen Update (COP-15)

- No new binding agreement until 2010
- *Fast Action Agenda*
 - Immediate \$10 billion fund 2010-2012
 - UK calls for \$100 billion *annual* fund after 2012
- China playing active role
- US proposed renewable technology program



Cap and Trade Proposal

- CO2 - Electricity
- CO2 - Transportation
- CO2 - Energy Int. Manufacturing
- CO2 - Other
- NonCO2 - Covered
- Offsets - Domestic
- Offsets - International
- Int'l Forest Set-Asides
- Discounted Offsets
- NSPS - CH4
- HFCs (separate cap)



Source: EPA Analysis of H.R. 2454, 6/23/09

Waxman-Markey H.R. 2454

– Gross Compliance Costs

- Cost of allowances
- Cost of purchasing offsets
- Resource costs associated with reducing emissions

– CBO Estimates

- \$110 billion by 2020
- Estimates allowance cost of \$28/ton in 2020



Allowance Prices

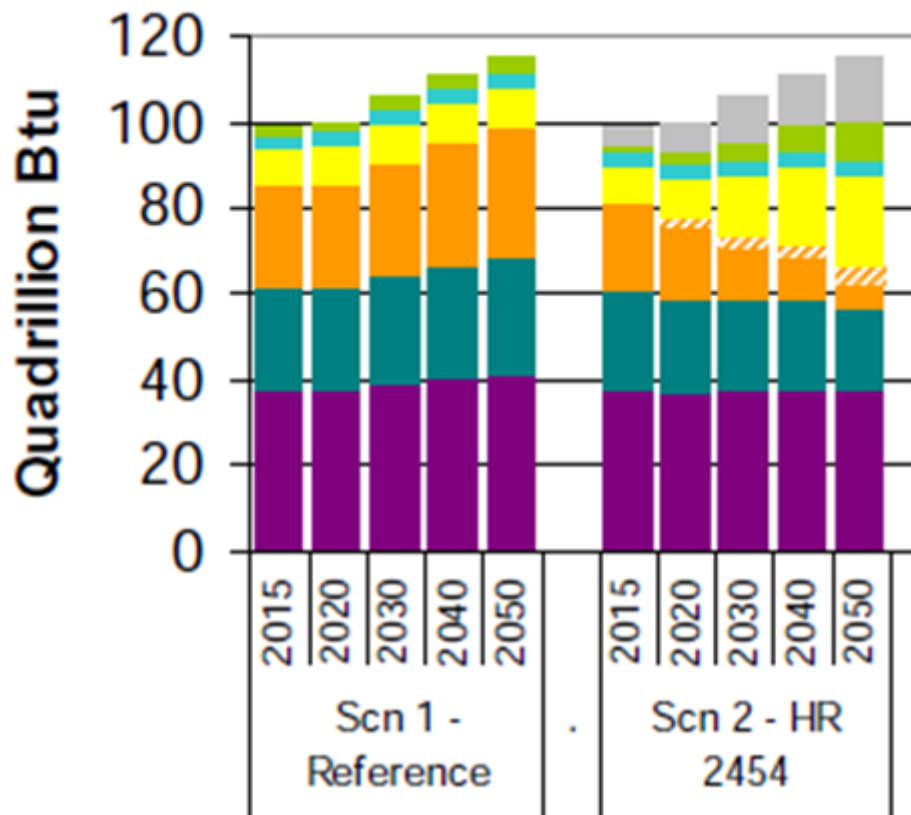
EIA, EPA, and CBO, among many others, have completed economic modeling of the bill to predict impacts.

		2020	2030	2050
Allowance Price (\$/mton)	EPA	\$16	\$26 - 27	\$69 - 70
	CBO	\$28	NA	NA
	EIA	\$32	\$65	NA
Annual Household Cost (\$)	EPA	\$49 - 61	\$99 - 312	\$123 - 174
	CBO	\$174	NA	NA
	EIA	\$134	\$399	NA

Waxman-Markey H.R. 2454

- Consumers pay the cost through higher prices
- Bill provides relief:
 - \$28 billion of credit values set aside for homeowner assistance
 - \$47 billion set aside for businesses
 - \$14 billion to vulnerable intensive industries
 - \$27 billion to electricity and gas distributors (pass thru)
 - \$11 billion for state and federal government
 - \$8 billion for use overseas assistance
- With flow-back, net cost estimated \$22 billion

Macro Comparison to Base Case



Scenario 1 = Energy mix forecast from the standard EIA product Annual Energy Outlook

Scenario 2 = Base forecast of energy mix with adoption of the Waxman-Markey bill H.R. 2454

Shrinking coal use (Orange)

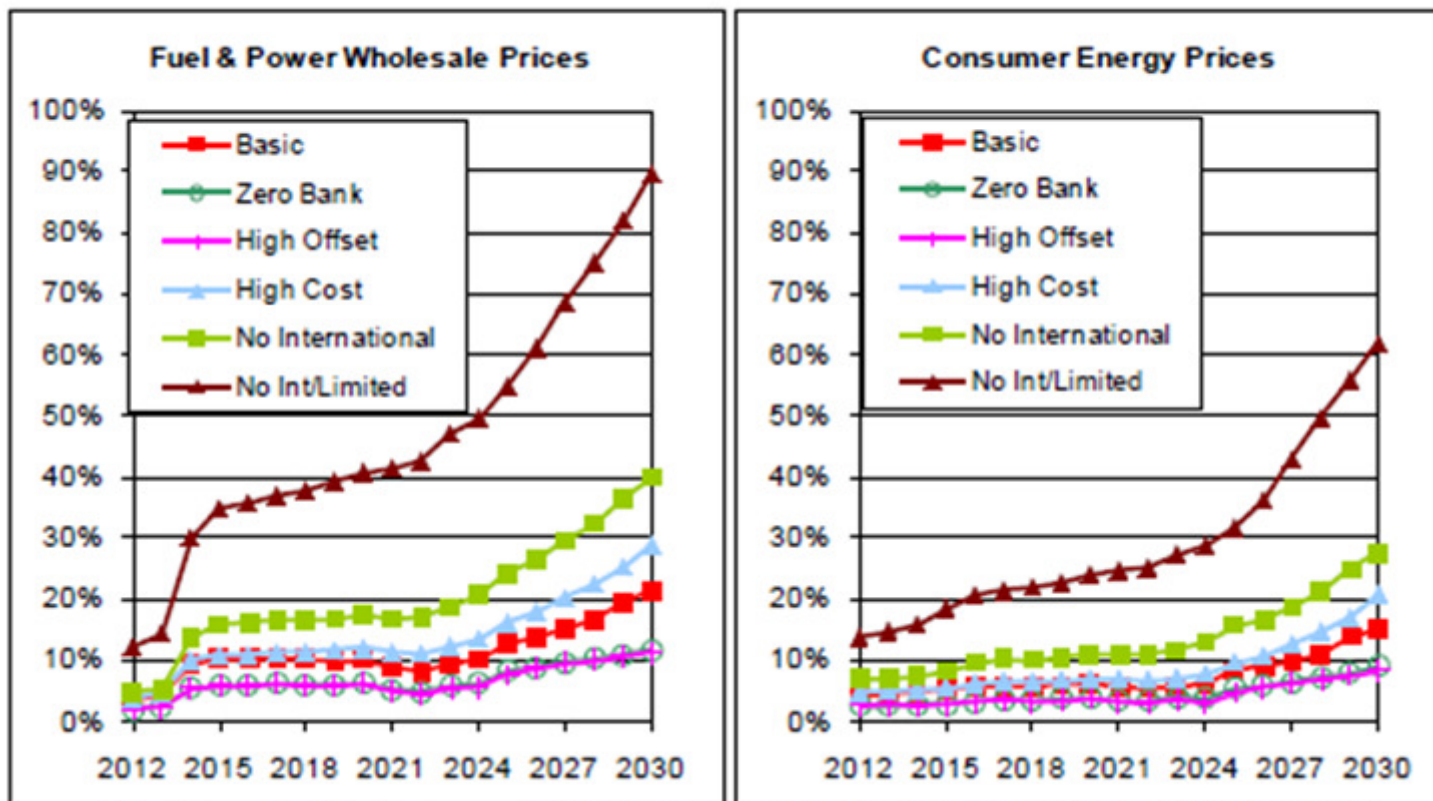
Growth in nuclear (Yellow)

Decrease in gas use over time (Teal)

Significant energy use reduction (gray)

Waxman-Markey H.R. 2454

Indirect costs = Increased prices, particularly for energy



Source: National Energy Modeling System runs, STIMULUS.D041409A, HR2454CAP.D072909A, HR2454NOBNK.D072909A, HR2454HIOFF.D072909A, HR2454HC.D072909A, HR2454NODNT.D072909A, and HR2454NIBIV.D072909A.

Source: EIA Analysis of HR2454, August 2009

Cap and Trade - Indirect Costs

Fuel	Units	Unit Price Increase Excluding Allowances
Electricity	kWh	\$0.004
Natural Gas	therms	\$0.097
Coal	tons	0
Petroleum	gallons	\$0.21

Prices pulled from EIA Analysis of H.R. 2454, August 2009. Diff between base case and reference case

How's This for Irony?

- The reporting requirements, emission cap, and allowance requirements will not be levied against your electricity consumption
- Could reduce compliance costs by switching from on-site fuel combustion to electricity???
- Irony is that this is much worse for the environment, yet policy could lead that way



Key Points to Keep an Eye On

- EPA threatening regulation
- Cap and Trade Developments
 - Watch the emission threshold carefully
 - Will allowances be auctioned or free?
 - Will early action be rewarded?
 - Important for those who have taken the lead
 - Will an escape route be used – capping costs?



Thank you

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