

Energy and Climate Change: A Washington Perspective

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Name That Bill, part 1

- “This is about our national security, it’s about jobs and the economic security of our country, it’s about the environment, therefore it’s a health issue, and it’s a moral issue.”
- “We have the opportunity to invest in clean, renewable energy and energy efficiency, to grow our economy, creating new jobs, lower energy costs, strengthen national security, and reduce global warming.”
- “New jobs in an economy transformed by this legislation’s new investments in health, education, science, innovation, and in clean, efficient American energy.”
- “This brings together so many elements of what we want to do to grow our economy, to help our workers, to protect our environment, and to do so in a very focused way that works.”
- “Today, we have an opportunity to lead America toward an effective and affordable transition to a clean energy future. It is a moment we cannot afford to miss. We have a responsibility to create jobs and make America more secure, protect the health of our citizens, and honor our moral responsibility to our children and our future generations.”

Name That Bill, part 2

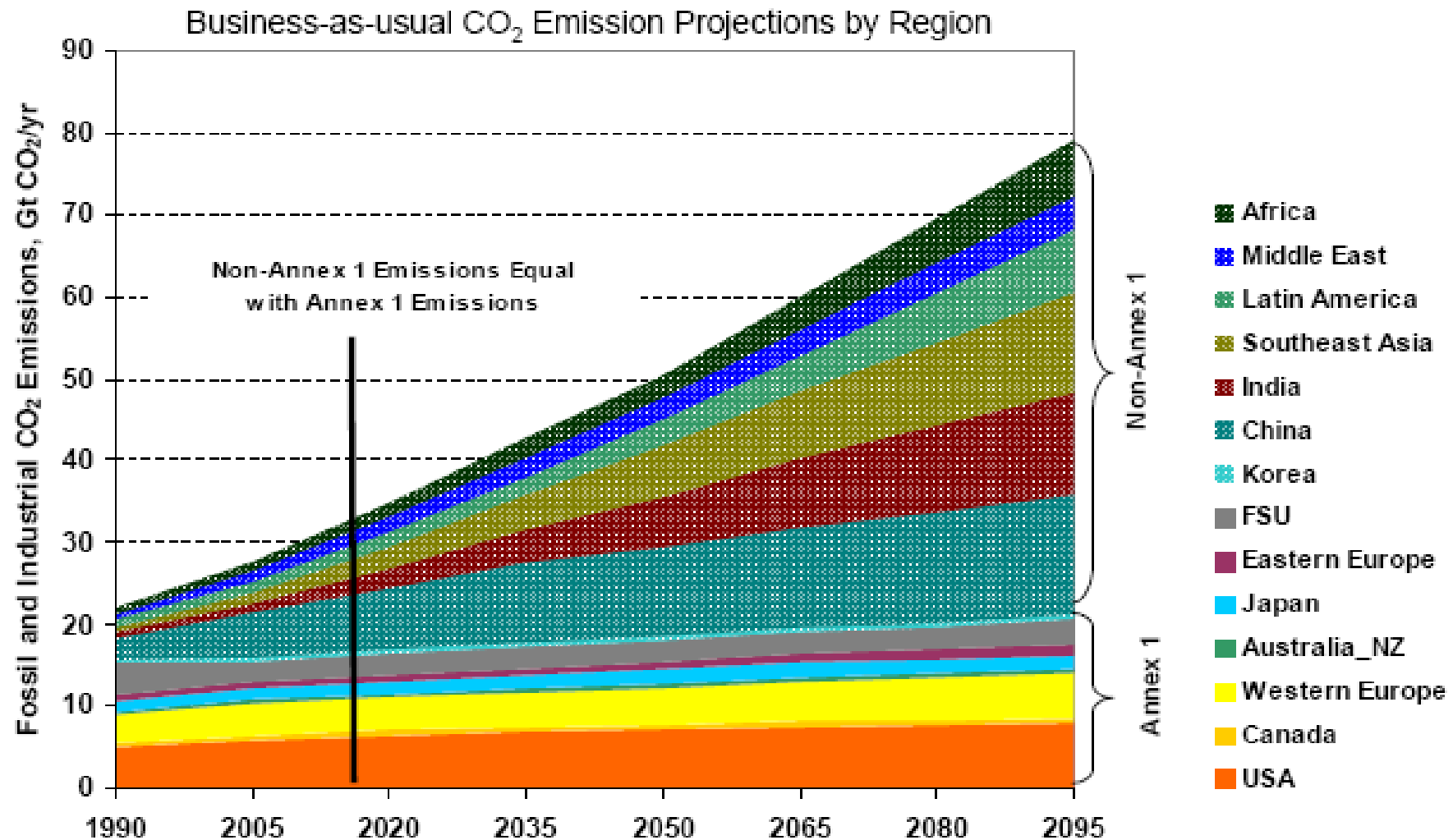
- “This is about our national security, it’s about jobs and the economic security of our country, it’s about the environment, therefore it’s a health issue, and it’s a moral issue.”
 - **Energy Independence and Security Act, 12/6/07**
- “We have the opportunity to invest in clean, renewable energy and energy efficiency, to grow our economy, creating new jobs, lower energy costs, strengthen national security, and reduce global warming.”
 - **Renewable Energy and Conservation Tax Act, 2/27/08 (codified as part of Oct. 2008 bailout)**
- “New jobs in an economy transformed by this legislation’s new investments in health, education, science, innovation, and in clean, efficient American energy.”
 - **American Reinvestment and Recovery Act, 2/13/09**
- “This brings together so many elements of what we want to do to grow our economy, to help our workers, to protect our environment, and to do so in a very focused way that works.”
 - **Cash for Clunkers Extension, 7/31/09**
- “Today, we have an opportunity to lead America toward an effective and affordable transition to a clean energy future. It is a moment we cannot afford to miss. We have a responsibility to create jobs and make America more secure, protect the health of our citizens, and honor our moral responsibility to our children and our future generations.”
 - **American Clean Energy and Security Act (Waxman-Markey), 6/26/09**

According to its supporters, ACES will:

- Create clean energy
- Create jobs
- Improve national security
- Slow global climate change
- Cost very little – a “postage stamp per day”

Is any of this true? Stay Tuned!

Climate Change: a Global Issue That Requires a Global Approach



Data derived from *Global Energy Technology Strategy, Addressing Climate Change: Phase 2 Findings from an International Public-Private Sponsored Research Program*, Battelle Memorial Institute, 2007.

Two Paths to Controlling GHGs

Path 1: Legislation

- Cap and trade appears to be the vehicle Congress has decided on; carbon tax remains in the background.
- Key legislation is the “American Clean Energy and Security Act of 2009,” passed by the House of Representatives by a vote of 219-212.
- In 2008, the Senate considered a cap and trade bill, the “Lieberman-Warner Climate Security Act.” This bill was defeated on the floor by a vote of 48-36.

Path 2: Regulation

- EPA is weighing options for regulating GHGs under the existing framework of the Clean Air Act.
- *Massachusetts v. EPA*, an April 2007 opinion of the U.S. Supreme Court, required EPA to determine whether GHGs from new motor vehicles cause or contribute to air pollution that endangers public health or welfare.
- EPA issued a proposed finding of endangerment and is taking public comments until June 23, 2009.

Path 1: Legislation

The “American Clean Energy and Security Act”

Procedural Background

- HR 2454: Introduced May 15, 2009 (932 pages – now at almost 1500)
- Drafted by Reps. Waxman (D-CA) and Markey (D-MA); supported by President Obama and Democratic Congressional Leadership
- Passed by Energy and Commerce Committee (33-25), May 21, 2009
- Passed by the House of Representatives (219-212) June 26, 2009
 - 44 Democrats voted against the bill; 8 Republicans voted for it
- Senate plans to take up companion legislation in September; Sen. Boxer will introduce her part on Sept. 8; all committees have a Sept. 28 deadline to complete their markups

The “American Clean Energy and Security Act”

Main Parts of the Bill

Cap and Trade Program

- GHG reduction targets below 2005 levels:
 - 17 percent by 2020
 - 42 percent by 2030
 - 83 percent by 2050

Renewable Electricity Standard

- 20 percent by 2020
 - 15% from renewables, other 5% from efficiency
 - Governor can reduce to 12% with 8% from energy efficiency if state can't meet mandate

Energy Efficiency Mandates and Building Standards

The “American Clean Energy and Security Act”

Dividing the Pie

- The bill allocates the following percentage of free credits to affected industries as follows:

<u>Sector</u>	<u>2012</u>	<u>2016-25</u>	<u>2029</u>
Electricity Consumers	43.75	35	7
Natural Gas Consumers	0	9	1.8
Home Heating Oil / Propane	1.875	1.5	0.3
“Trade Vulnerable industries”	2	15**	TBD
Clean Vehicles	3	1	0
Refiners	0	2.25	0
CCS Technology	2	2	5
Renewables / Efficiency	9.5	1 to 6.5	4.5

**Trade vulnerable industries receive up to 15% in 2014, declining annually until 2050

The “American Clean Energy and Security Act”

A Quick Snapshot: The Good, the Bad, and the Ugly

➤ The Good

- Free credits to many industry sectors
- In the early years, price spikes will not be as bad as in prior legislation – this is due to the free allocations to electric utility sector, natural gas, etc.
- Many existing CAA provisions (e.g., NAAQS, Title V, New Source Review, Hazardous Air Pollutants) are preempted
- Dingell amendment – Clean Energy Bank will help bring nuclear and other technologies online

The “American Clean Energy and Security Act”

A Quick Snapshot: The Good, the Bad, and the Ugly

➤ The Bad

- Nuclear energy still under-represented – problematic when most of the economic studies rely on huge new nuclear builds (e.g., 96 new GW)
- GHG caps are still very aggressive (83% by 2050) and will result in a massive shift in our energy production and use
- FERC has oversight authority over the cap and trade market, EPA the strategic allowance reserve – but neither has the expertise. (CFTC has jurisdiction over derivatives.)
- “Greenhouse gases” is open-ended, so activists can petition EPA to add other gases under the cap and trade system
- Although an entity must emit 25,000 tons of CO₂ annually to be covered by the cap, this can eventually be changed without an act of Congress. Starting in 2020, EPA may lower the threshold for coverage by the cap and trade program.

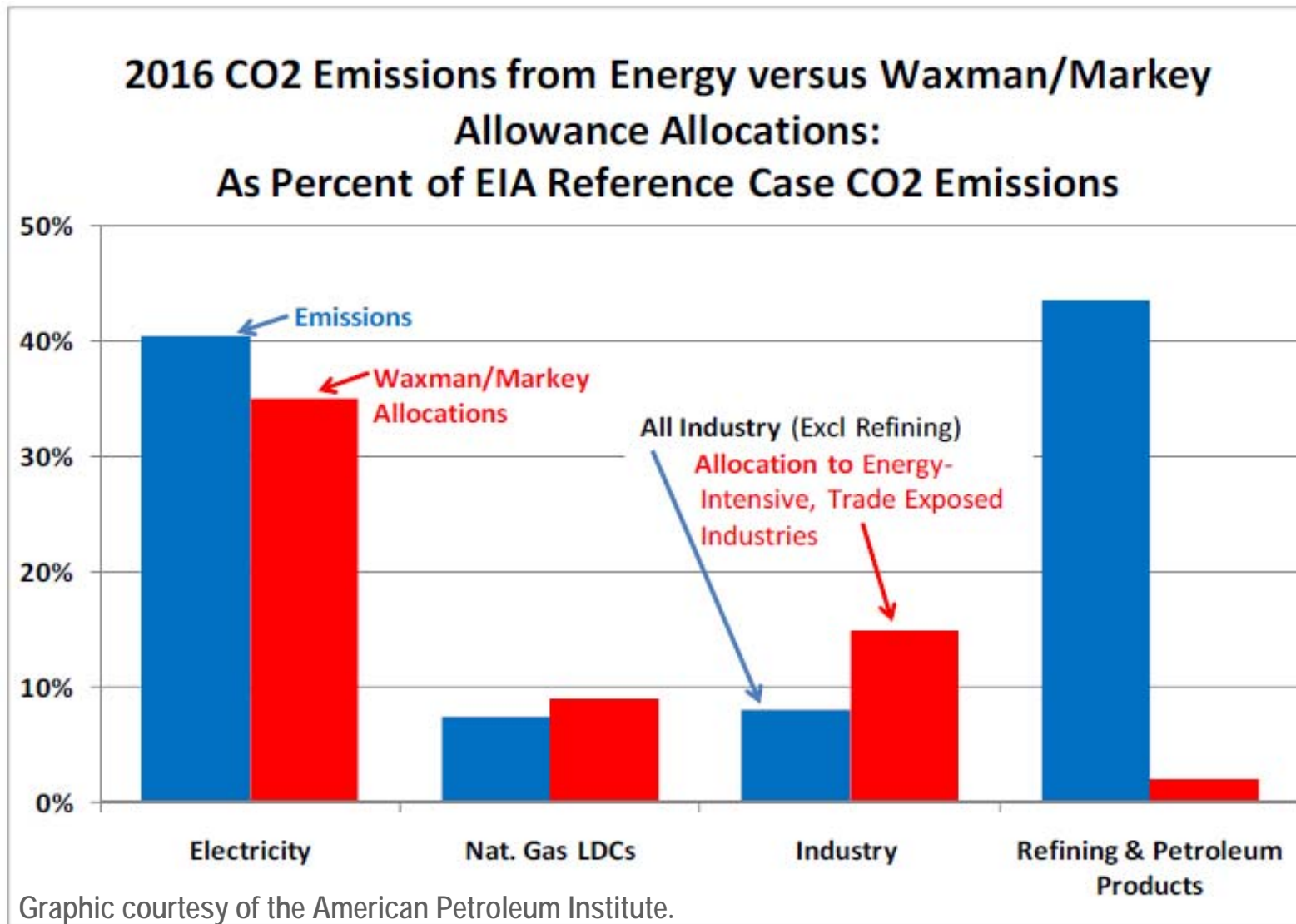
The “American Clean Energy and Security Act”

A Quick Snapshot: The Good, the Bad, and the Ugly

➤ The Ugly

- No assurance that renewable or alternative energy sources will be brought online quickly to replace the fossil-based energy that the bill's declining CO₂ caps would force out of the system
- Is not international in scope, will not materially affect CO₂ concentrations
- 1,500 new mandates and regulations
- Only prohibits NSPS under CAA for sources under cap-and-trade – conceivably NSPS could be applied to the other 27 million businesses that emit CO₂
- State GHG programs are only delayed until 2017 – not preempted!
- “Findings and Purpose” section states that GHGs are man-made and cause injury to persons, property, environment, etc.; boon for trial attorneys
- Border tariff provisions could spark a trade war
- *Don't kid yourself – this bill will have a cost!*

Winners and Losers on Allocations

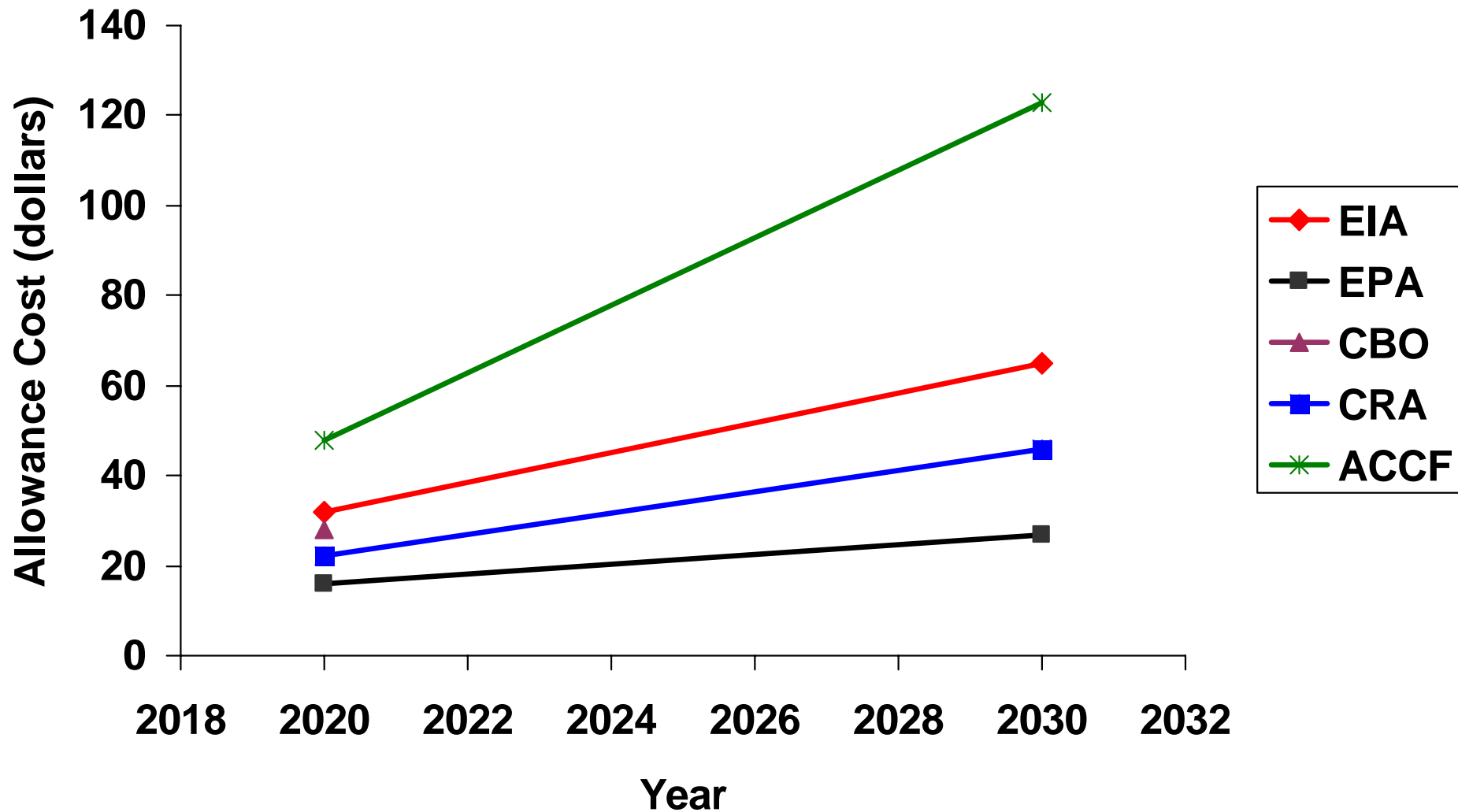


Allocations based on 5/15/09 version of the bill; emissions data from 2009 EIA Annual Energy Outlook

Economic Studies: Assumptions Matter

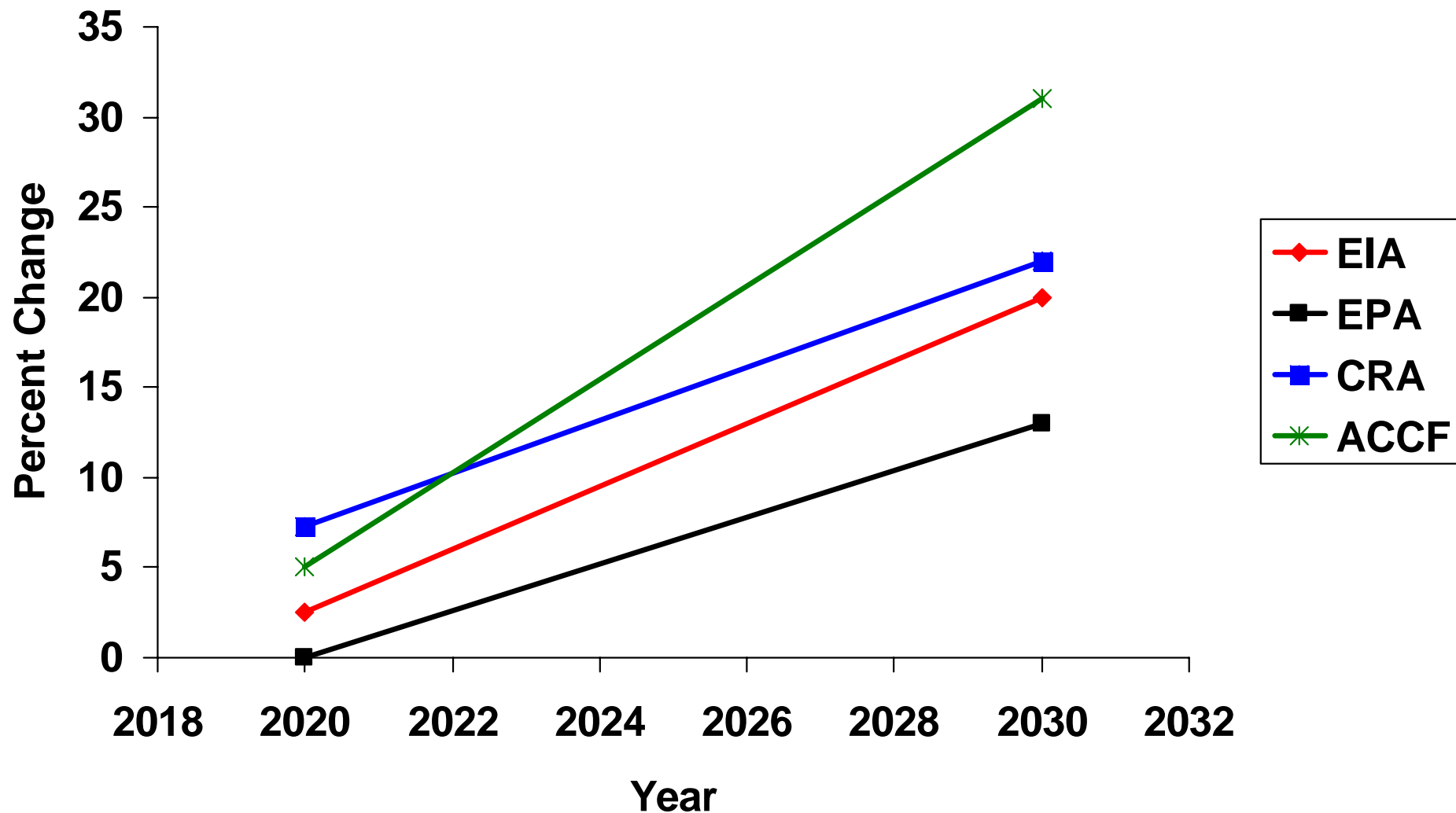
Modeler Name	EIA	EPA	CBO	CRA/NBCC	NAM/ACCF
Baseline	<i>Annual Energy Outlook 2009</i>	<i>Annual Energy Outlook 2009</i>	<i>Annual Energy Outlook 2009</i>	<i>Annual Energy Outlook 2009</i>	<i>Annual Energy Outlook 2009</i>
Forecasted to	2030	2050	2020	2050	2030
Nuclear Assumptions	96 GW of new nuclear capacity by 2030	Grows 150% from 2005 levels by 2050 (roughly 150 new plants)	Not discussed	266 GW by 2050 in low cost case (BAU is 206 GW); 103 GW by 2050 in high cost case.	10 GW by 2030 in high cost case; 25 GW in low cost case.
CCS Assumptions	69 GW of coal with CCS by 2030	25 GW total CCS available in 2020 (10 from coal), 43 GW in 2030, 60 GW in 2050 (check this). 2050 quantity is the equivalent of 109 CCS units at 550 MW each.	Not discussed	270 GW by 2050 in low cost case (BAU is 180 GW); 180 GW by 2050 in high cost case.	15 GW each (coal and gas) by 2030 in high cost case; 30 GW each (coal and gas) in 2030 in low cost case.
Offsets Assumptions	Very large use of offsets. 1.2 billion metric tons of offsets generated in 2020 (286 million domestic, 966 million international). 1.8 billion metric tons of offsets generated in 2030 (501 million domestic, 1.3 billion international).	Assumes international offset price is lower than CO2 credit price (\$10 in 2015, \$13 in 2020, \$21 in 2030, \$34 in 2040, \$55 in 2050)	Assumes businesses will purchase \$8 billion worth of international offsets and \$3 billion worth of domestic offsets.	Full use of international offsets	15% offsets in both cases (split 95% domestic, 5% international)
What happens if assumptions are changed?	When technology is 50 percent costlier than base case and no international offsets are available, allowance price is \$190 in 2030, meaning 77% increase in electricity prices, 33% rise in gas prices	Restricting the use of international offsets increases allowance price by 89%. Holding nuclear to BAU levels increases allowance price by 15%	In a follow-up report on offsets, CBO estimates that if offsets are not used, the 2030 net cost would jump from \$101 billion to \$248 billion -- a 150 percent increase. Similarly, the 2030 allowance price would rise from \$40 to \$138 if no offsets were available/used	If offsets are not available, prices skyrocket even further.	Costs increase even more in the "high cost" scenario.

Impact of ACES on Allowance Prices



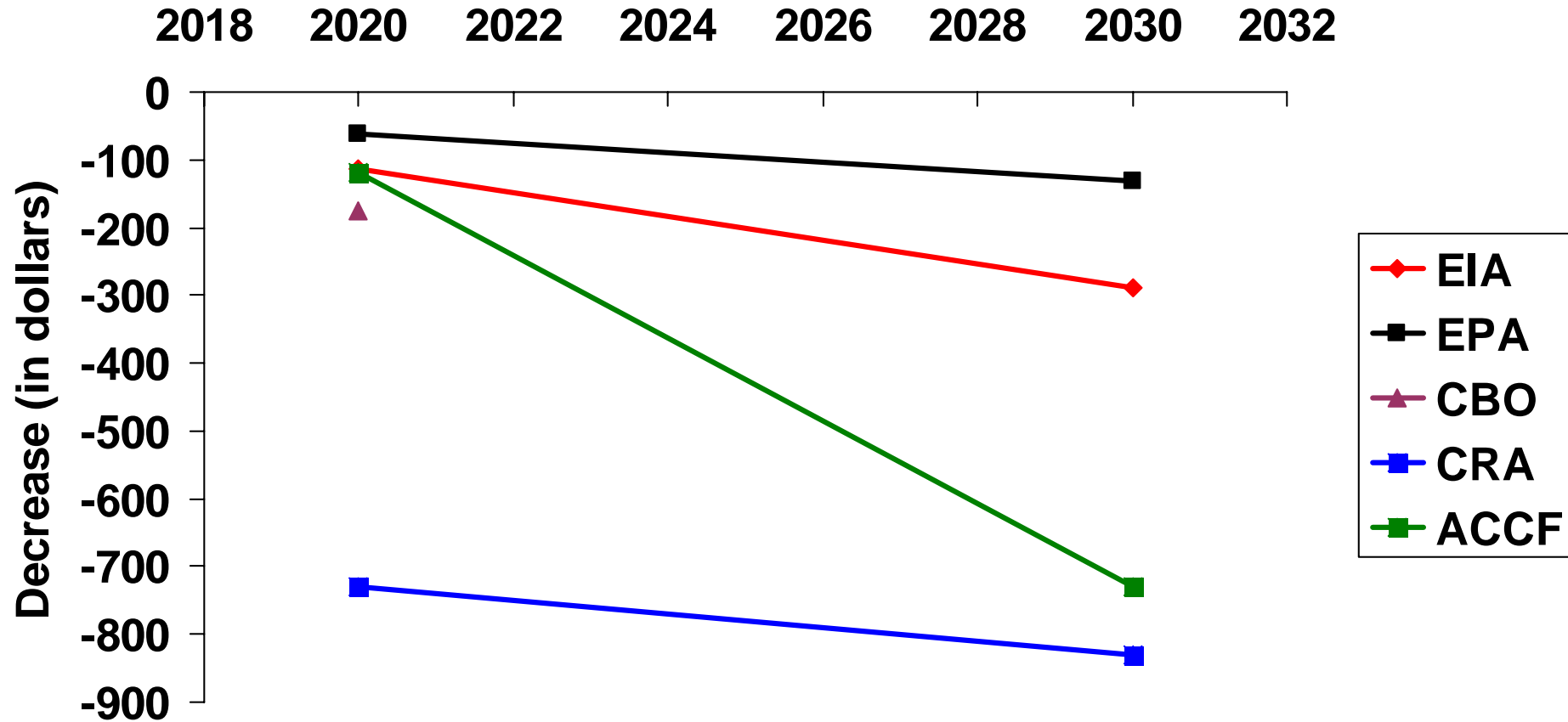
No Matter the Assumptions, Prices Go Up

Impact of ACES on Electricity Prices



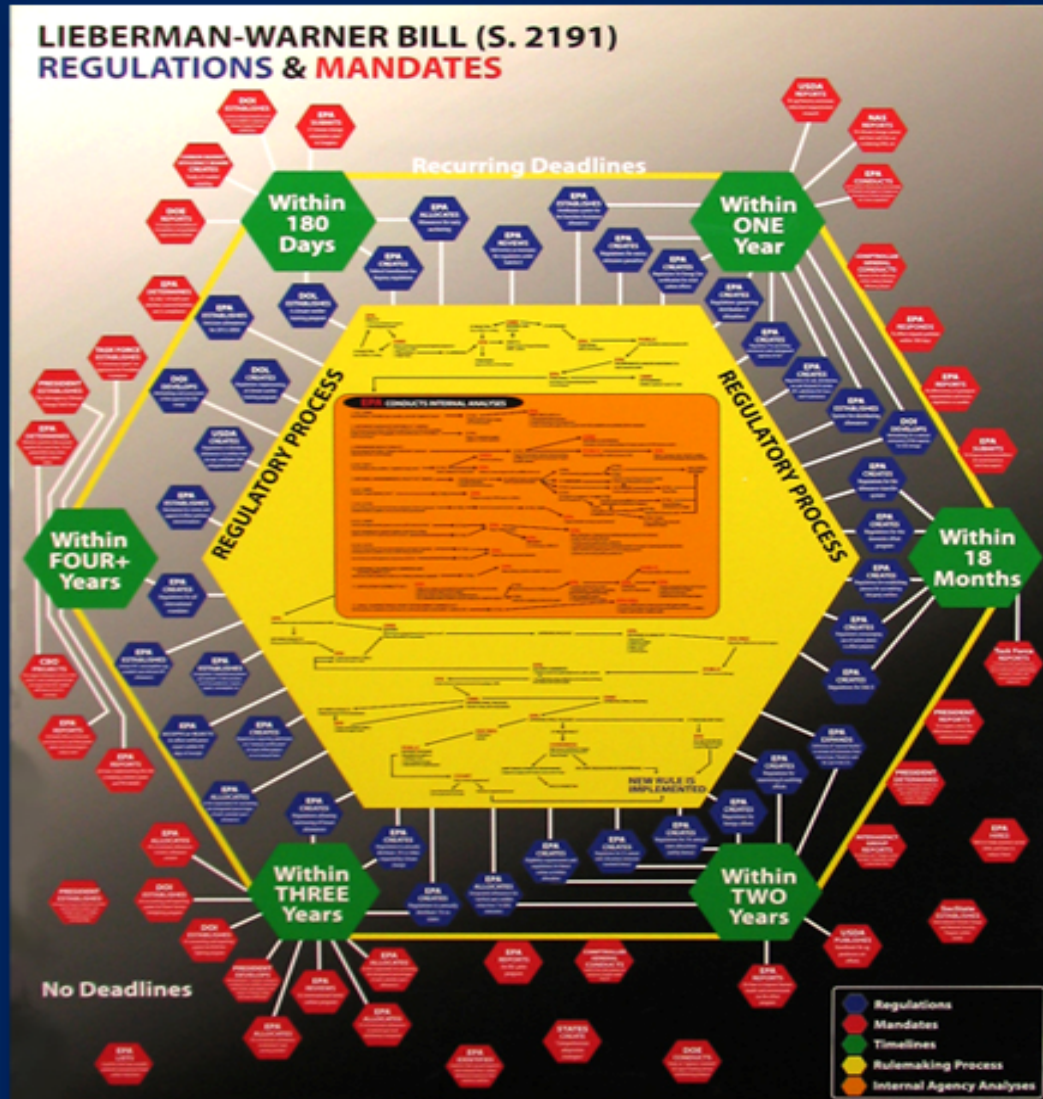
No Matter the Assumptions, Prices Go Up

Impact on Annual Household Consumption



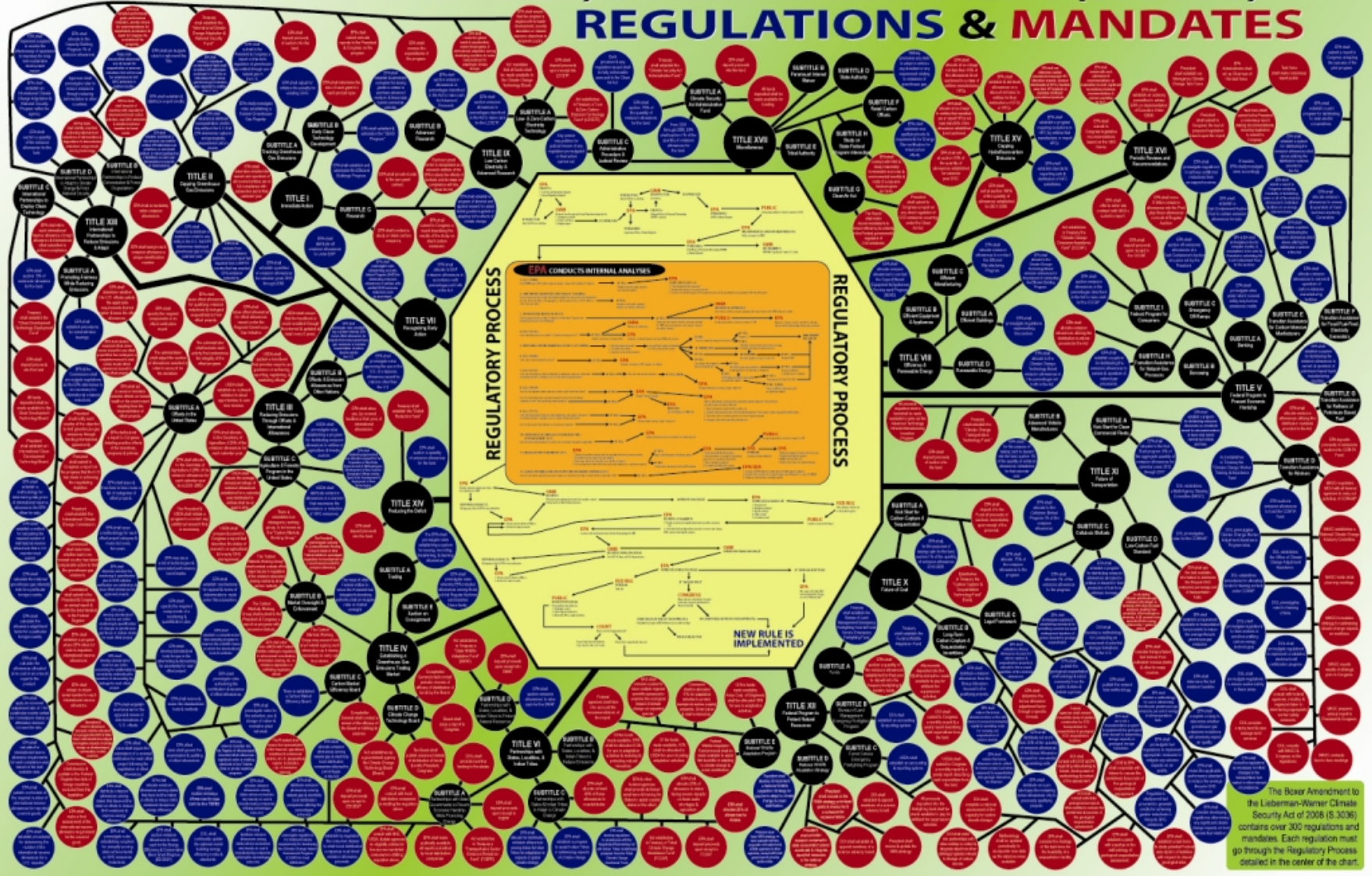
No Matter the Assumptions, Consumption Goes Down

Bureaucracy Expansion Act?

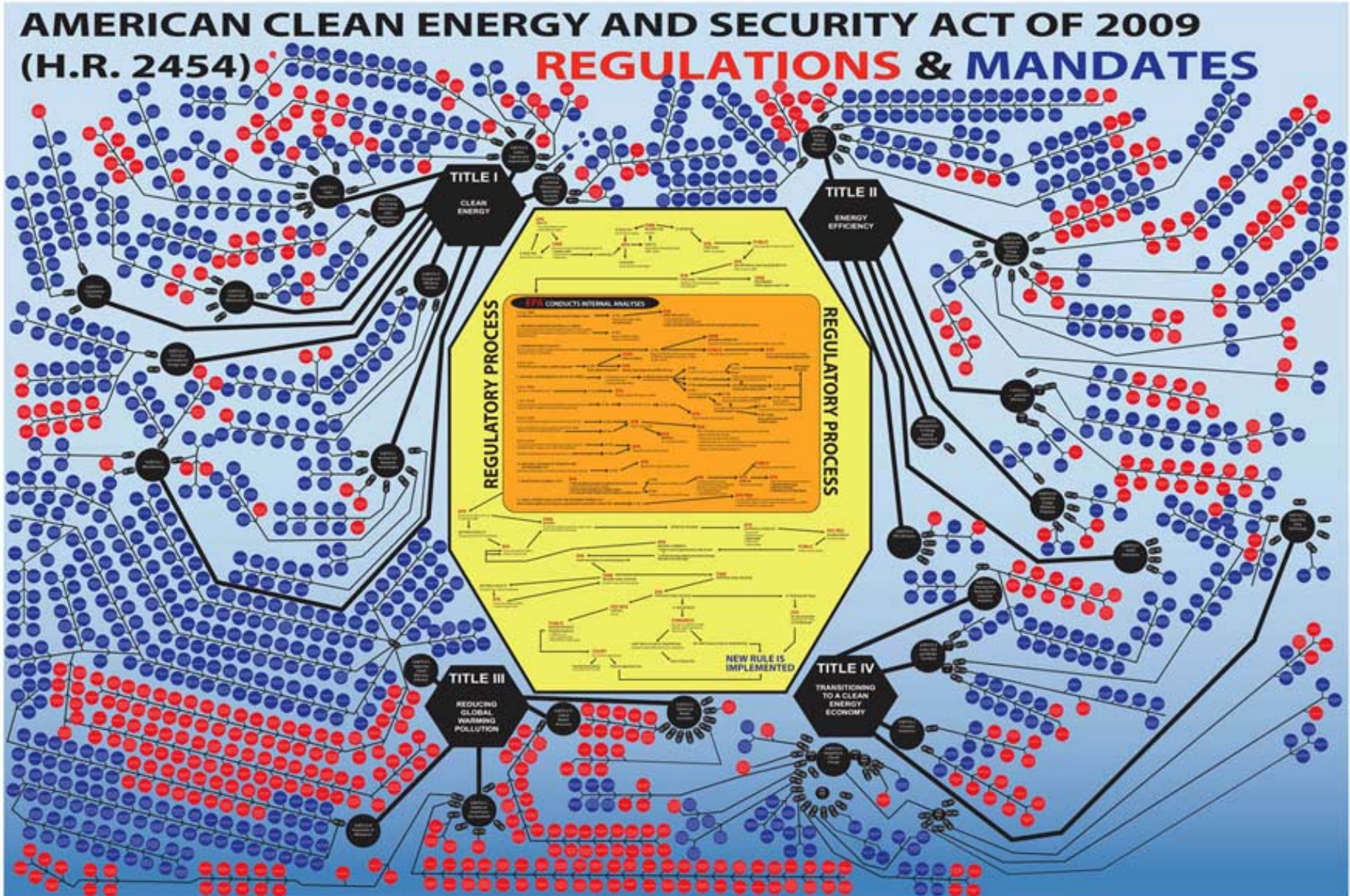


Bureaucracy Expansion Act?

LIEBERMAN-WARNER BILL, BOXER AMENDMENT (S. 3036) REGULATIONS & MANDATES



Bureaucracy Expansion Act?



Should the Government be Picking Winners and Losers?

- **U.S. SYNTHETIC FUELS CORPORATION** – “Manhattan” type project envisaged; established in 1980 by the *Synthetic Fuels Corporation Act* to create a market for alternatives to imported fossil fuels; abolished 1985; was to partner with industry to create a market for domestically-produced synthetic liquid fuels; goal of producing 2 million barrels of liquid fuel/day within five years; cost billions; missed all benchmarks; cancelled by end of 1985.
- **NUCLEAR FUSION** – Congress initiated and passed The Magnetic Fusion Energy Engineering Act of 1980 (MFEE), which envisioned \$20 billion for an “Apollo-like” project envisaged; hundreds of millions of dollars spent; none of the benchmarks of the legislation have ever been met.
- **PARTNERSHIP FOR A NEW GENERATION OF VEHICLES** – Initiated in 1993; goal: development of a commercially viable car having ultra-low emissions and average 80 miles per gallon — almost four times the 1993 national fleet average; timetable set required a production prototype by 2004; National Research Council (2001): “The Committee believes that no reasonable amount of funding would ensure [affordable] achievement of 80 Mpg;” public subsidy cost about \$1.5 billion.
- **ENERGY POLICY ACT OF 2005 (EPACT 2005)** – Government mandated research, development and technology demonstrations - more than 60 provisions that specifically address new energy production and efficiency technologies; most were never funded, even fewer were actually implemented.
- **NATIONAL TRANSMISSION CORRIDOR BACKSTOP AUTHORITY** – EPACT 2005 authorized the U.S. Federal Energy Regulatory Commission (FERC) to issue permits for the siting, construction or modification of transmission facilities in areas designated as national interest transmission corridors; FERC promulgated backstop siting authority regulations in 2006; U.S. Court of Appeals for the Fourth Circuit vacated the final rule in 2009.
- **ENERGY INDEPENDENCE & SECURITY ACT (2007) / ETHANOL PROGRAM** – Embodies characteristics of past programs for synfuels, fusion and the high mileage automobile (benchmarks, performance, timetable mandates); mandates technological progress according to a timetable with a goal of commercialization; as passed in late 2007 stipulates that by 2022 the U.S. will consume 36 billion gallons of ethanol annually, but this requires rapid commercialization of ethanol from cellulosic feedstocks — the technology exists, but is not cost competitive with conventional fossil fuel based resources and requires breakthroughs of the type that stymied previous alternative energy efforts.
- **2009 STIMULUS PACKAGE** – \$60 billion for renewable energy. Other laws block implementation and Senators actively push to put land out of use; e.g., Feinstein to place 42,000 acres of Mojave Desert off limits to development. Adversely impacts 19 projects, all solar or wind. Similar activity in Nantucket Bay.

Distilling the Snake Oil

According to its supporters, ACES will:

- **Create clean energy**
 - Verdict: it should – as long as NIMBY and other factors do not stand in the way. But for the costs of ACES to stay down, enormous amounts of nuclear, coal with CCS, and renewables must be brought online soon.
- **Create jobs**
 - Verdict: False. Even EIA's rosiest scenario concedes there will be close to 0.5 percent *less* jobs in 2030 than if the bill were not enacted. CRA estimates net *reduction* in employment of 2.3 million to 2.7 million jobs in each year of the policy through 2030. These reductions are net of substantial gains in "green jobs."
 - Sections 425 and 426 of the bill provide additional unemployment and health benefits for workers who lose their jobs as a result of the bill.
- **Improve national security**
 - Verdict: Jury is still out. National Intelligence Council Chairman Dr. Thomas Fingar testified 6/25/08 that "'climate change alone is unlikely to trigger state failure in any state out to 2030, but the impacts will worsen existing problems—such as poverty, social tensions, environmental degradation, ineffectual leadership, and weak political institutions."
- **Slow global climate change**
 - Verdict: Not without international action, it won't.

U.S. Senate: The Magic Number is 60

➤ **Makeup of the Senate**

- Democrats: 58
- Republicans: 39
- Independents: 2

➤ **Committee Jurisdictional Issues?**

- Boxer vs. Baucus
- Boxer vs. Bingaman?

➤ **TIMING**

How Michigan Voted in the House (8 Yeas, 7 Nays)

➤ Democrats

- Rep. John Conyers, Jr. – YES
- Rep. John Dingell – YES
- Rep. Dale Kildee – YES
- Rep. Carolyn Kilpatrick – YES
- Rep. Sander Levin – YES
- Rep. Gary Peters – YES
- Rep. Mark Schauer – YES
- Rep. Bart Stupak – YES

➤ Republicans

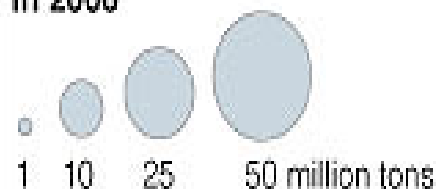
- Rep. Dave Camp – NO
- Rep. Vernon Ehlers – NO
- Rep. Peter Hoekstra – NO
- Rep. Thaddeus McCotter – NO
- Rep. Candice Miller – NO
- Rep. Michael Rogers – NO
- Rep. Fred Upton – NO

Brown-Green Divide: Coal

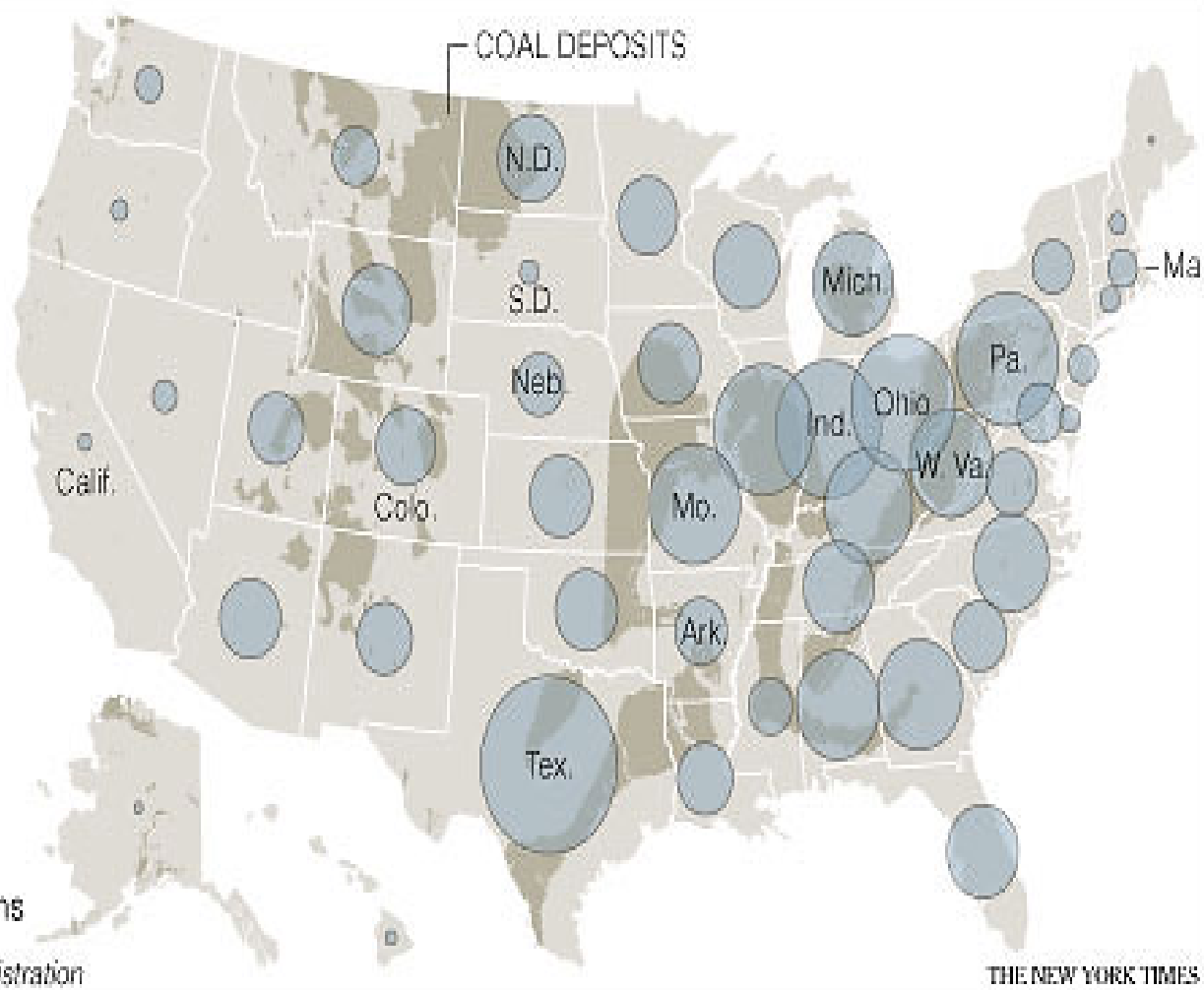
A Divide: Brown-Green

Although many of the lawmakers in charge of regulating greenhouse gas emissions come from the West and East Coasts, most manufacturing jobs are in the Midwest.

Amount of coal used to generate electric power in 2006



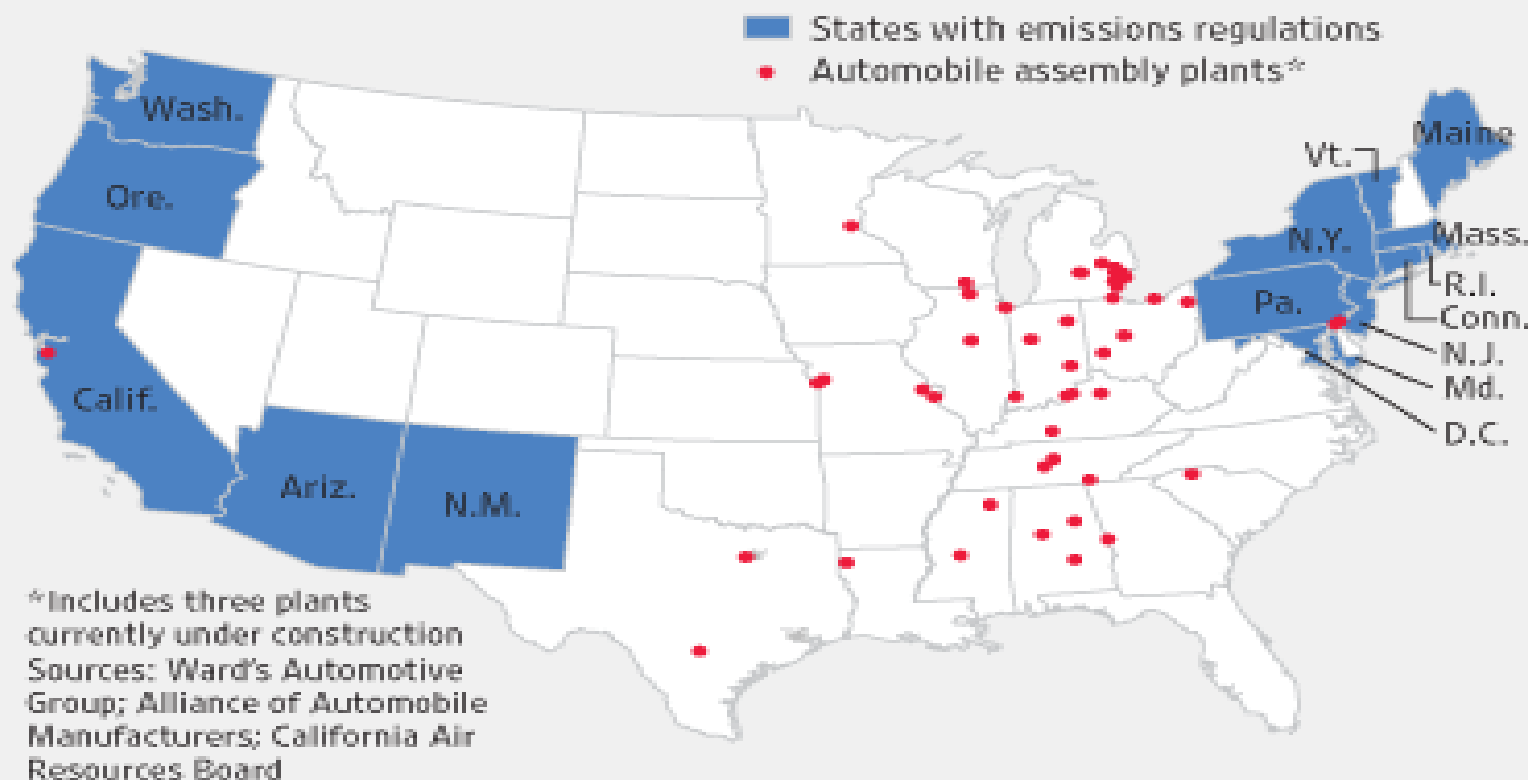
Source: Energy Information Administration



Brown-Green Divide: Autos

Car Wars

The Obama administration is under pressure to decide whether states may regulate automobile greenhouse-gas emissions; states that have adopted such regulations typically have little or no auto-manufacturing employment.



Path 2: Regulation

Understanding the Challenge

Why this is happening:

- Regulation under the Clean Air Act (CAA) is the single greatest piece of leverage supporters of climate legislation have over industry.
 - Imposition of the wide range of CAA programs and standards to greenhouse gases would almost certainly be more costly, and likely more burdensome, than any piece of legislation.
 - The argument goes: " [Insert bill name here] may be expensive, but it's a heck of a lot better than letting EPA use the Clean Air Act."

The “Sales Pitch”

- EPA and most environmental groups believe, at least publicly, that the Clean Air Act can be applied piecemeal. Here’s how they want to do it:
 - Step One: Endangerment Finding
 - GHGs from motor vehicles or new motor vehicle engines are “air pollutants” that cause or contribute to “air pollution” (i.e., climate change) which may reasonably be anticipated to endanger public health or welfare.
 - Step Two: Motor vehicles rule
 - CAA § 202(a)(2) allows EPA to phase in regulations to permit the development and application of requisite technology, giving consideration to the cost of compliance.
 - Raise/alter threshold for PSD to allow EPA to go after coal but leave everyone else untouched (temporarily)
 - Step Three: Targeted New Source Performance Standards
 - Start with the big guys, work toward the little guys

WHAT IF THEY'RE WRONG?

Triggering Events for Regulation

1. Endangerment

- Section 202(a) requires, in pertinent part:
The Administrator shall by regulation prescribe (and from time to time revise) in accordance with the provisions of this section, standards applicable to the emission of any air pollutant **from any class or classes of new motor vehicles or new motor vehicle engines**, which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.
- The problem: the endangerment language in Section 202(a) is also found in sections 108 (NAAQS), 111 (NSPS), 112 (HAP), 115 (international air pollution), 211 (fuels), 213 (nonroad engines), 231 (aircraft) and 615 (ozone protection).
- What this means: It wouldn't take more than a lawsuit to trigger NAAQS or NSPS. The argument would be simple: if GHGs from cars endanger public health and welfare, then GHGs from [insert source] do as well.

2. GHGs become “subject to regulation” under the Act

- Triggers Prevention of Significant Deterioration (PSD) and Title V permitting
- To date, GHGs are not subject to regulation
- Mainstream environmental groups want to use this to stop new (and ultimately existing) coal plants by forcing them to go through PSD permitting
- The Problem: Fringe environmental groups want to use PSD to regulate all sources of GHGs, large and small
- What this means: No more construction!

How the Cascade Works

1. EPA makes endangerment finding for motor vehicles
2. Environmental group (probably Center for Biological Diversity) sues to trigger endangerment provisions in Sections 108 (NAAQS) and 111 (NSPS)
3. Once the regulatory needle is pushed far enough—either through litigation or by EPA's own actions—GHGs become “subject to regulation” under the Act.
4. Once GHGs are subject to regulation, PSD and Title V apply.

NAAQS and NSPS will take years (or decades) to resolve through litigation. However, PSD and Title V will apply instantly!

1. National Ambient Air Quality Standards (NAAQS)

- NAAQS compliance has traditionally been measured locally, but EPA admits it will have to take national average concentrations for CO₂.
- The result: depending on where the NAAQS are set, the entire nation will either be in or out of attainment.
- Because concentrations will not wane, no matter what we do (due to international emissions), we will never be able to escape nonattainment.
- *In addition to the severe penalties levied for states in nonattainment (loss of highway funds, strict pollution controls), construction in nonattainment areas can only be done with an offset – in other words, for each new source brought online, one or more sources must be taken offline to compensate. The ratio is normally more than 1:1. This is called “Nonattainment New Source Review.”*
- Because the technology does not exist to perform many normal business functions (e.g., heat, manufacturing) without necessarily producing CO₂, NAAQS for CO₂ means a *permanent* scaling-down of society.

2. New Source Performance Standards (NSPS)

- NSPS requires EPA to promulgate and enforce standards of performance for both new and existing stationary sources.
- For CO₂, the categories are limitless – because everything emits CO₂.
- Potentially everyone using a source of CO₂ emissions may have to install “best available technology” to control their emissions.
- The federal government and states will have to create a CO₂ “police force” to handle all the new categories.
- EPA theorizes it can use cap-and-trade to make NSPS work, but the CAIR decision (*North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir. 2008)) implies that cap-and-trade may not be available under the Clean Air Act.

Prevention of Significant Deterioration (PSD)

- **What it is:** PSD is a preconstruction permitting requirement for new construction or modifications to *stationary sources* (buildings) that emit over 250 tons per year (tpy) of a regulated pollutant (100 tpy for 28 listed industrial categories). It currently does not apply to greenhouse gases. However, the minute GHGs become “regulated” under the Clean Air Act, PSD will apply. EPA issued 282 total PSD permits last year.
- **What it means:** If GHGs are regulated under the Act, *over 1.2 million buildings* in the U.S. will become exposed to PSD.
- **Why it is important:** PSD for GHGs will delay virtually all construction in the U.S. and will cost staggering amounts of money. According to EPA, the PSD process in 2008 imposes 866 hours of burden on the industry applicant and costs \$125,120. Applicants are required to determine and install Best Available Control Technologies (BACT) to limit emissions. The entire process takes 6 to 12 months to complete. Construction on covered sources may not commence without a PSD permit.

PSD: Who would be regulated by EPA

**Table 5: Summary of Industrial-Manufacturing Sector CO₂ Emissions:
Ranked by Minimum Size of Establishment to Reach 250 TPY CO₂**

Business type	Size to emit 250 TPY	Average floor space per establishment	Site CO ₂ emissions	Estimated # establishments regulated @ 250 TPY	Total # establishments
	sq ft	sq ft	lbs/sq ft		
Lime*	14	31,000	15,000	65	65
Cements*	41	110,000	4,900	190	200
Petroleum Refineries*	80	590,000	2,500	210	220
Iron and Steel Mills*	160	330,000	1,200	770	770
Pulp Mills*	330	490,000	610	34	34
Petroleum and Coal Products	360	58,000	1,400	1,900	1,900
Chemicals	940	110,000	530	8,900	8,900
Primary Metals	1,100	170,000	440	4,200	4,200
Nonmetallic Mineral Products	2,100	75,000	240	11,000	12,000
Paper	2,300	180,000	220	4,200	4,300
Primary Aluminum*	2,500	900,000	80	41	41
Food	3,400	100,000	150	15,000	15,000
Textile Mills	8,800	200,000	60	2,200	2,200
Beverage and Tobacco Products	9,000	160,000	60	1,600	1,600
Semiconductors, Related Devices	19,000	180,000	30	550	580
Transportation Equipment	22,000	220,000	20	7,300	7,700
Plastics and Rubber Products	24,000	94,000	20	9,200	11,000
Electrical Equip., Appliances	25,000	120,000	20	3,500	3,900
Fabricated Metal Products	25,000	48,000	20	26,000	35,000
Wood Products	26,000	65,000	20	8,400	10,000
Apparel	29,000	43,000	20	3,600	5,500
Textile Product Mills	33,000	100,000	10	2,900	3,500
Leather and Allied Products	35,000	38,000	10	360	690
Printing and Related Support	40,000	37,000	10	9,300	20,000
Machinery	43,000	72,000	10	12,000	17,000
Computer and Electronic Products	43,000	96,000	10	7,200	9,200
Miscellaneous	54,000	40,000	9	5,100	16,000
Furniture and Related Products	82,000	61,000	6	3,600	11,000
Total**				190,000	202,500

* Calculations are for 100 TPY

**Total different from column due to rounding

**Table 8: Summary of Commercial Sector CO₂ Emissions:
Ranked by Minimum Size of Establishment to Reach 250 TPY CO₂**

Business type	Size to emit 250 TPY	Mean building size	Site CO ₂ emissions	Estimated # buildings regulated @ 250 TPY	Total # buildings
	sq ft	sq ft	lbs/sq ft		
Food Service	34,000	5,600	15	58,000	297,000
Health Care	51,000	25,000	10	92,000	129,000
Lodging	81,000	36,000	6	71,000	142,000
Other	83,000	22,000	6	7,900	79,000
Public Order and Safety	110,000	16,000	4	7,100	71,000
Public Assembly	120,000	14,000	4	26,000	277,000
Service	120,000	6,500	4	67,000	622,000
Education	120,000	26,000	4	100,000	386,000
Food Sales	130,000	5,600	4	23,000	226,000
Religious Worship	150,000	10,000	3	37,000	370,000
Mercantile	160,000	17,000	3	140,000	657,000
Office	170,000	15,000	3	260,000	824,000
Warehouse and Storage	290,000	17,000	2	150,000	597,000
Total				1,000,000	4,859,000

**Table 10: Summary of Agricultural Sector CO₂ Emissions:
Ranked by Minimum Size of Farm to Reach 250 TPY CO₂**

Farm type	Size to emit 250 TPY	Average farm size	Site CO ₂ emissions	Estimated # farms regulated @ 250 TPY	Total # Farms
	Acres	Acres	lbs/acre		
Greenhouse, nursery, floriculture	640	75	780	1,400	64,000
Poultry and egg	780	140	640	1,100	44,000
Vegetable, melon	1,600	320	310	1,500	35,000
Fruit and tree nut	2,000	120	250	880	96,000
Hog and pig	2,000	250	250	560	34,000
Dairy cattle, milk production	2,900	380	170	910	73,000
Cattle feedlots	5,800	470	90	630	55,000
Other Crop Farming Total	6,300	270	80	2,600	440,000
Oil seed, grain	6,400	690	80	3,400	350,000
Animal aquaculture, other	8,700	200	60	420	230,000
Beef cattle ranching	21,000	630	20	920	660,000
Sheep and goat	23,000	410	20	50	44,000
Total				17,000	2,100,000

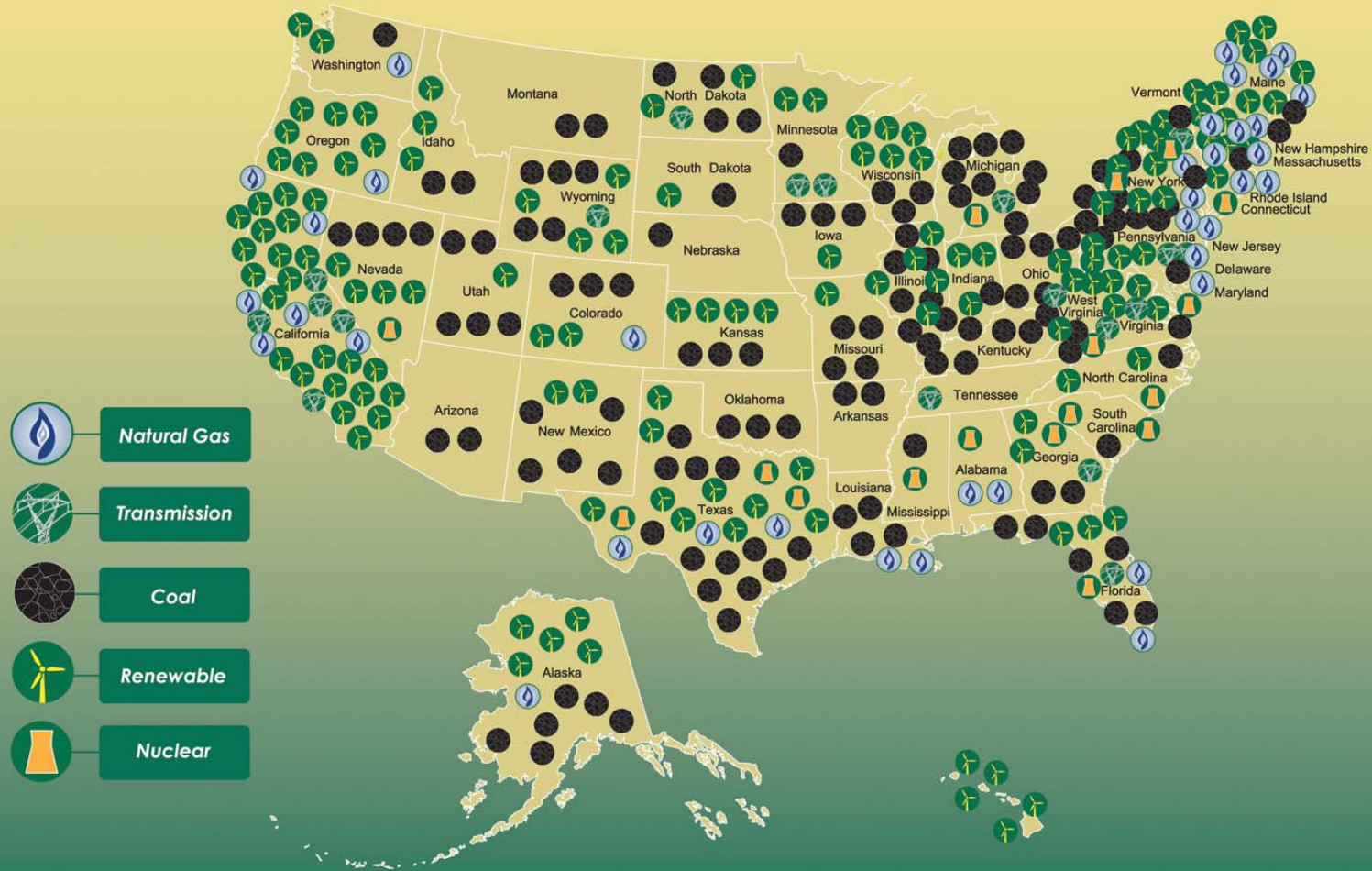
Breakdown of PSD Costs

<u>Activity</u>	<u>Hours</u>	<u>Cost</u>
Determination of Compliance Requirements	170	\$16,592
Obtain Guidance on Data Needs	120	\$11,712
Preparation of BACT Analysis	102	\$9,957
Air Quality Modeling	200	\$19,521
Determination of Impact on Air Quality Related Values	100	\$9,762
Post-Construction Air Quality Monitoring	50	\$4,879
Preparation and Submittal of Permit Application	60	\$5,858
Public Hearings	24	\$2,343
Revisions to Permit	40	\$3,904
Other Related Costs		\$40,000
TOTAL	866	\$125,120

Opening the Toolchest to the NIMBYs



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The background is a solid blue gradient. Overlaid on this are several white, semi-transparent geometric patterns. On the left, there are concentric circular grid lines. On the right, there are vertical lines and a grid pattern. In the lower right corner, there is a white silhouette of an industrial facility, including two tall smokestacks, a complex network of pipes, and a tall tower with several satellite dishes or antennas attached to it.

Where does that leave us?

Ask Yourself This: What Will Fill the Void?

- ACES takes (fossil fuel) energy out of the mix, but what does it realistically put back in?
- Renewables?
 - Consider the RES:
 - Half of the electricity generated in the U.S. comes from coal
 - Less than 2% comes from renewables
 - » 0.01 from solar
 - » 0.44 from wind
 - » 0.36 from geothermal
 - Waxman changed the definition of renewables to broaden it considerably...but still left out nuclear (our largest carbon-free baseload energy supply) and CCS!

Be Realistic!

- If you take out fossil fuels, allow nuclear and CCS!
- Must be international in scope!
 - “Lead by example and others will follow” is a questionable approach at best.
- Streamline facility siting and environmental permitting
- Call off the hounds!
 - NIMBYS and activist and anti-coal lobby have stalled or killed countless energy projects around the country and in Indiana
 - And not just fossil fuel projects!

U.S. Chamber's Five Principles

- 1. Preserve American jobs and the competitiveness of U.S. industry**
- 2. Provide an international solution that includes developing nations**
- 3. Promote accelerated development and deployment of greenhouse gas reduction technology;**
- 4. Reduce barriers to the development of climate-friendly energy sources**
- 5. Promote energy conservation and efficiency.**

How We Would Do It

Any new national climate change policy should be conditional on an international agreement that requires full international participation. Here's how the Chamber would do it:

- World leaders agree to a treaty that sets real—and realistic—enforceable targets for all nations, while allowing each nation the flexibility to meet these targets through whichever policy device it chooses.**
- As a new treaty is being negotiated, the Obama administration should continue with its aggressive corporate average fuel economy (CAFE) program, make robust investments in research, development and deployment of clean energy and energy efficiency technologies, and continue to implement the fuels and efficiency laws already on the books, such as the Energy Policy Act of 2005 (EPA 2005) and Energy Independence and Security Act of 2007 (EISA).**
- Finally, measures should then be taken domestically that are consistent with the international agreement.**

Conclusion:

Make Your Voice Heard!

Michigan has a lot to gain or lose in this game. The most important thing is that your Senators and Congressmen hear from you.