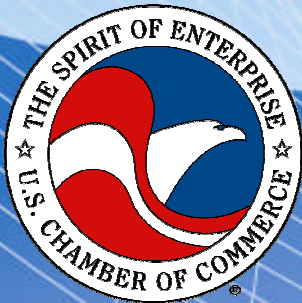


Regulating Greenhouse Gases: Impact of Using the Clean Air Act

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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!

NAAQS and NSPS

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

