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AB 416 Vehicle Emissions Testing (Biennial Smog Check)

3/31/2003

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AB 416 – by request from District 26 constituents – make smog check biennial & exempt newer cars

- It is expensive – up to \$31.56 per year
- It is unnecessary and excessive – Vehicles 8 years old still do not reach the 1% level of failures
- It is inconvenient – all registering can be done electronically but I have to get the smog check
- It is a hidden tax
- It is inconsistent – not all states have I/M, not all counties have I/M, not all areas within counties have I/M

3/31/2003

2

Constituent letters

"I know the arguments for smog checks even before you get into it. It is a tax, period. It is a revenue stream for auto mechanics. If the local government would fix the stop lights so you don't have to stop and idle at every one there would be less smog. If people in the valley would stop burning wood the air quality would be just fine." *John Fisher*

“I want to thank you for bringing this bill to the legislature. I fully support the bill. My interest is probably different than most, in that I own 3 older vehicles (2 classics). I am an engineer and have the skills to rebuild most things. Please change the law that all cars newer than 1968 models need to be smogged to a flat 30 years. Hot August Nights tries to promote classic vehicles. The DMV's answer to this is to get a classic vehicle plate. But this limits the car's mileage to 1500 miles per year. Again, not very efficient. Anyway, thanks again. I appreciate the effort.

Best Regards,”

Stephen Brennan

• “Dear Assemblywoman Angle, I wonder why we must get a “smog” certificate, each year, on most vehicles that were new in 1968 and newer? California is a leader in air quality research and only requires smog checks on vehicles newer than 30 years old. That means that any vehicle older than a 1974 model year is exempt and that year is increased by one each year, maintaining the 30 year exclusion. It seems to me that Nevadans could benefit from the same type of rule. Thank you.” Roger Parker

AB 416 overview

- Section 1:3 – provides for frequency to change from every year to every two years.
- Section 2 – Compliance evidence is submitted in even and odd years according to first registration.
- Section 3:2 a & b – exemptions for vehicles 3 years old or newer or 4 years old and older if there is less than 36,000 miles on odometer

- Only 10 states have annual smog checks (17 states don't have checks – Michigan the car capital doesn't) Chart 1 shows that 23 states of the 33 who do smog checks, smog biennially.
- 11 states exempt vehicles three years old or newer (under 4 years old, 2 states exempt up to 5 years old)

Brief Background

- 1990 EPA Clean Air Act –required manufacturers to build cleaner burning vehicles
- 70 cities and several states had I/M programs
- 1990 law required I/M programs in 40 additional metropolitan area
- States required to have State Implementation Plans
- 15 exemptions among them – Vehicles less than 5 years old or more than 25 years old.
- Nevada –NRS 45B.770 provides mandatory annual I/M programs for counties 100,000 or greater. However, Clark and Washoe exempt some areas.
- Only Clark has prepared SIPs awaiting EPA approval.
- Both Clark and Washoe have Smoking Vehicle Program 686-SMOG
- NRS 484.611 requires mufflers and prevention of excessive fumes and smoke

The Statistics - 1970-2000

- emission of 6 criteria pollutants regulated by EPA decreased 29%
- Population increased 36%
- Vehicle miles traveled increased 143%
- Total energy consumption increased 45%
- Technological advances “decoupled” air pollution from energy production.

NEW CARS 1997 or newer

- 98% fewer Volatile Organic Compounds
- 96 % less carbon monoxide
- 89% less NOx (nitrogen oxides) per mile

AMBIENT CONCENTRATIONS FELL 1980-1999

- Lead down 94%
- Carbon monoxide down 57%
- Sulfur dioxide down 50%
- Nitrogen dioxide down 25%
- Ozone down 20%
- Fine Particles down 18%

The frequency of smog checks is excessive and inconsistent

- Fees paid for an annual service are not necessary. Charts 2 & 3 show very little failure if vehicle is a 1990 or newer and most vehicles on the road are newer.
- Law does not stop the vehicle smog from other areas that come to work, shop and do business in the cities. It is only required in urban areas of Clark and Washoe vehicles. Those not registered in this area still drive in the area.
- The beautiful Lake Tahoe basin has no smog check requirements on the Nevada side and is biennial on the California side.
- Waivers may be granted if vehicles fail the I/M and cost over a certain amount to repair.

SHOW ME THE MONEY! (hidden tax)

- \$5 Smog certificate – Air Pollution Control account
- \$24.50 maximum to stations based on hourly rate
- \$2.06 electronic transmission surcharge fee
- \$10.00 fee for those who offer registration renewals

These are maximums and fees vary

Questions?

1. What about those who will tamper to defeat emissions devises?
 - Certified mechanics will not disable smog and systems are so complex owners won't do it. The don't want to risk voiding the warranty.
2. What if some newer cars fail?
 - Warranties on newer vehicles require the owners to maintain the vehicle to keep the warranty valid. Fewer then 1% fail.

3. What about impacts to the smogging industry?

- This industry has operated since the late 1970's before the government mandate. The mandate is still there. Smog checks provide diagnostics for peak efficiency of fuel, performance, and engine life.

4. What if the smog device fails between checks?

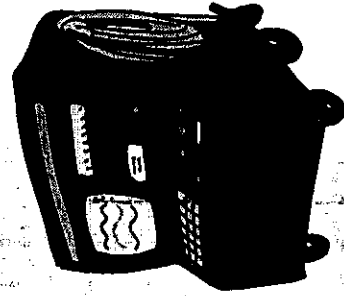
- Report smoking vehicles. The check engine will warn the vehicle owner. Smog failures can happen after an annual check as well.

Summary

AB 416

- Biennial smog checks save time & money
- Better technology not smog checks account for improved environmental conditions
- 17 states don't require smog checks, 23 states have biennial checks
- Hidden tax is excessive and unnecessary

C L A R K



Vehicle Year	Total Tests	Overall Failures	Overall % Fail
2003	1	0	0
2002	286	2	0.7
2001	4,188	18	0.4
2000	17,494	55	0.3
1999	18,413	40	0.2
1998	16,897	32	0.2
1997	16,551	50	0.3
1996	14,462	128	0.9
1995	13,444	254	1.9
1994	12,405	298	2.4
1993	10,965	385	3.5
1992	9,561	402	4.2
1991	10,158	609	6
1990	9,922	748	7.5
1989	9,832	1,015	10.3
1988	8,600	948	11
1987	7,958	1,185	14.9
1986	7,078	1,281	18.1
1985	5,614	1,165	20.8
1984	4,487	982	21.9
1983	2,527	616	24.4
1982	1,747	423	24.2
1981	1,663	414	24.9
1980	1,571	391	24.9
1979	2,573	633	24.6
1978	2,479	602	24.3
1977	1,948	454	23.3
1976	1,428	377	26.4
1975	797	209	26.2
1974	1,054	236	22.4
1973	1,065	252	23.7
1972	1,151	296	25.7
1971	792	201	25.4
1970	845	234	27.7
1969	854	227	26.6
1968	697	168	24.1
TOTALS	221,507	15,330	6.9

W A S H O E

Vehicle Year	Total Tests	Overall Failures	Overall % Fail
2003	9	0	0.0
2002	804	4	0.5
2001	17,042	20	0.1
2000	86,114	133	0.2
1999	79,384	160	0.2
1998	69,149	167	0.2
1997	68,263	428	0.6
1996	57,819	473	0.8
1995	49,882	1,101	2.2
1994	43,324	1,341	3.1
1993	37,257	1,671	4.5
1992	32,403	1,838	5.7
1991	32,421	2,182	6.7
1990	30,691	2,569	8.4
1989	29,890	3,220	10.8
1988	25,241	3,189	12.6
1987	21,085	3,323	15.8
1986	18,819	3,299	17.5
1985	15,118	3,095	20.5
1984	10,956	2,363	21.6
1983	6,491	1,428	22.0
1982	4,695	1,165	24.8
1981	4,080	993	24.3
1980	3,580	826	23.1
1979	6,011	1,558	25.9
1978	5,076	1,283	25.3
1977	4,120	1,035	25.1
1976	2,951	804	27.2
1975	1,717	473	27.5
1974	2,006	516	25.7
1973	2,269	616	27.1
1972	2,142	625	29.2
1971	1,388	374	26.9
1970	1,555	440	28.3
1969	1,606	416	25.9
1968	1,300	377	29.0
TOTALS	776,658	43,505	5.6

2002 Washoe County Failure Analysis.xls

Vehicle Year	Total Tests		Overall		CO		HC		HC/CO		Tampering		Visible Smoke		Tamper & Smoke		Tmp/Ske	
	Tests	Failures	% Fail	Failures	Failures	% Fail	Failures	% Fail	Failures	% Fail	Failures	% Fail	Failures	% Fail	Failures	% Fail	Failures	% Fail
2003	1	0	0.0	0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2002	286	2	0.7	2	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2001	4,188	18	0.4	0	0	0.0	1	5.6	0	0.0	1	5.6	1	5.6	0	0.0	0	0.0
2000	17,494	55	0.3	9	9	16.4	8	14.5	6	10.9	17	30.9	5	9.1	1	1.8	0	0.0
1999	18,413	40	0.2	17	17	42.5	17	42.5	14	35.0	6	15.0	12	30.0	0	0.0	0	0.0
1998	16,897	32	0.2	11	11	34.4	11	34.4	6	18.8	4	12.5	8	25.0	0	0.0	0	0.0
1997	16,551	50	0.3	30	30	60.0	25	50.0	18	36.0	9	18.0	6	12.0	0	0.0	0	0.0
1996	14,462	128	0.9	37	37	28.9	51	39.8	25	19.5	61	47.7	10	7.8	0	0.0	0	0.0
1995	13,444	254	1.9	74	74	29.1	147	57.9	56	22.0	77	30.3	23	9.1	2	0.8	0	0.0
1994	12,405	298	2.4	112	112	37.6	207	69.5	81	27.2	53	17.8	25	8.4	3	1.0	0	0.0
1993	10,965	385	3.5	160	160	41.6	285	74.0	120	31.2	54	14.0	29	7.5	0	0.0	0	0.0
1992	9,561	402	4.2	180	180	44.8	280	72.1	131	32.6	40	10.0	35	8.7	0	0.0	0	0.0
1991	10,158	609	6.0	281	281	46.1	436	71.6	196	32.2	62	10.2	63	10.3	3	0.5	0	0.0
1990	9,922	748	7.5	386	386	51.6	529	70.7	265	35.4	76	10.2	87	11.6	13	1.7	0	0.0
1989	9,832	1,015	10.3	569	569	56.1	687	67.7	361	35.6	120	11.8	62	6.1	3	0.3	0	0.0
1988	8,600	948	11.0	549	549	57.9	659	69.5	347	36.6	90	9.5	62	6.5	4	0.4	0	0.0
1987	7,958	1,185	14.9	803	803	67.8	776	65.5	483	40.8	91	7.7	81	6.8	5	0.4	0	0.0
1986	7,078	1,281	18.1	880	880	68.7	832	64.9	532	41.5	101	7.9	86	6.7	2	0.2	0	0.0
1985	5,614	1,165	20.8	823	823	70.6	746	64.0	479	41.1	102	8.8	69	5.9	5	0.4	0	0.0
1984	4,487	982	21.9	741	741	75.5	609	62.0	421	42.9	102	10.4	60	6.1	5	0.5	0	0.0
1983	2,527	616	24.4	459	459	74.5	384	62.3	259	42.0	68	11.0	28	4.5	4	0.6	0	0.0
1982	1,747	423	24.2	312	312	73.8	263	62.2	172	40.7	41	9.7	13	3.1	0	0.0	0	0.0
1981	1,663	414	24.9	309	309	74.6	233	56.3	150	36.2	47	11.4	27	6.5	4	1.0	0	0.0
1980	1,571	391	24.9	319	319	81.6	136	34.8	77	19.7	7	1.8	20	5.1	0	0.0	0	0.0
1979	2,573	633	24.6	504	504	79.6	239	37.8	128	20.2	14	2.2	32	5.1	1	0.2	0	0.0
1978	2,479	602	24.3	459	459	76.2	223	37.0	94	15.6	18	3.0	24	4.0	0	0.0	0	0.0
1977	1,948	454	23.3	371	371	81.7	155	34.1	85	18.7	20	4.4	13	2.9	0	0.0	0	0.0
1976	1,428	377	26.4	302	302	80.1	140	37.1	74	19.6	13	3.4	8	2.1	1	0.3	0	0.0
1975	797	209	26.2	164	164	78.5	88	42.1	45	21.5	6	2.9	7	3.3	0	0.0	0	0.0
1974	1,054	236	22.4	187	187	79.2	97	41.1	47	19.9	8	3.4	5	2.1	0	0.0	0	0.0
1973	1,065	252	23.7	189	189	75.0	89	35.3	35	13.9	10	4.0	9	3.6	0	0.0	0	0.0
1972	1,151	296	25.7	233	233	78.7	125	42.2	65	22.0	2	0.7	12	4.1	0	0.0	0	0.0
1971	792	201	25.4	161	161	80.1	84	41.8	49	24.4	4	2.0	12	6.0	0	0.0	0	0.0
1970	845	234	27.7	189	189	80.8	83	35.5	45	19.2	12	5.1	9	3.8	0	0.0	0	0.0
1969	854	227	26.6	178	178	78.4	93	41.0	48	21.1	5	2.2	9	4.0	0	0.0	0	0.0
1968	697	168	24.1	131	131	78.0	67	39.9	35	20.8	4	2.4	6	3.6	0	0.0	0	0.0
TOTALS	221,507	15,330	6.9	10,131	10,131	66.1	8,815	57.5	4,949	32.3	1,345	8.8	958	6.2	56	0.4	0	0.0

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2002 Clark County Failure Analysis.xls

Vehicle Year	Total Tests	Overall Failures	Overall % Fail	CO Failures	CO % Fail	HC Failures	HC % Fail	HC/CO Failures	HC/CO % Fail	Tampering Failures	Tampering % Fail	Visible Smoke Failures	Visible Smoke % Fail	Tamper & Smoke Failures	Temp/Ske % Fail
2003	9	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
2002	804	4	0.5	4	100.0	4	100.0	4	100.0	1	25.0	0	0.0	0	0.0
2001	17,042	20	0.1	7	35.0	5	35.0	5	25.0	6	30.0	5	25.0	0	0.0
2000	86,114	133	0.2	51	38.3	24	18.0	19	14.3	43	32.3	21	15.8	1	0.8
1999	79,384	160	0.2	72	45.0	65	40.6	53	33.1	64	40.0	15	9.4	0	0.0
1998	69,149	167	0.2	49	29.3	63	37.7	37	22.2	73	43.7	20	12.0	0	0.0
1997	68,263	428	0.6	188	43.9	184	43.0	127	29.7	164	38.3	33	7.7	0	0.0
1996	57,819	473	0.8	217	45.9	240	50.7	151	31.9	130	27.5	41	8.7	1	0.2
1995	49,882	1,101	2.2	463	42.1	665	60.4	301	27.3	231	21.0	84	7.6	3	0.3
1994	43,324	1,341	3.1	513	38.3	825	61.5	365	27.2	274	20.4	156	11.6	3	0.2
1993	37,257	1,671	4.5	675	40.4	1,078	64.5	506	30.3	343	20.5	155	9.3	3	0.2
1992	32,403	1,838	5.7	824	44.8	1,284	69.9	637	34.7	280	15.2	213	11.6	4	0.2
1991	32,421	2,182	6.7	1,034	47.4	1,515	69.4	779	35.7	314	14.4	256	11.7	7	0.3
1990	30,691	2,569	8.4	1,416	55.1	1,746	68.0	1,007	39.2	355	13.8	229	8.9	6	0.2
1989	29,890	3,220	10.8	1,823	56.6	2,127	66.1	1,247	38.7	457	14.2	317	9.8	22	0.7
1988	25,241	3,189	12.6	1,818	57.0	2,160	67.7	1,261	39.5	498	15.6	288	9.0	22	0.7
1987	21,085	3,323	15.8	2,182	65.7	2,233	67.2	1,429	43.0	452	13.6	216	6.5	29	0.9
1986	18,819	3,299	17.5	2,184	66.2	2,129	64.5	1,388	42.1	563	17.1	225	6.8	23	0.7
1985	15,118	3,095	20.5	2,062	66.6	1,964	63.5	1,309	42.3	558	18.0	208	6.7	28	0.9
1984	10,956	2,363	21.6	1,630	69.0	1,419	60.1	965	40.8	460	19.5	149	6.3	24	1.0
1983	6,491	1,428	22.0	1,006	70.4	895	62.7	628	44.0	306	21.4	91	6.4	15	1.1
1982	4,695	1,165	24.8	867	74.4	691	59.3	504	43.3	246	21.1	61	5.2	14	1.2
1981	4,080	993	24.3	754	75.9	536	54.0	383	38.6	192	19.3	45	4.5	8	0.8
1980	3,580	826	23.1	643	77.8	313	37.9	184	22.3	61	7.4	59	7.1	3	0.4
1979	6,011	1,558	25.9	1,246	80.0	559	35.9	311	20.0	107	6.9	71	4.6	7	0.4
1978	5,076	1,283	25.3	981	76.5	509	39.7	268	20.9	92	7.2	70	5.5	4	0.3
1977	4,120	1,035	25.1	773	74.7	416	40.2	209	20.2	95	9.2	40	3.9	6	0.6
1976	2,951	804	27.2	645	80.2	313	38.9	185	23.0	58	7.2	42	5.2	3	0.4
1975	1,717	473	27.5	375	79.3	190	40.2	107	22.6	26	5.5	19	4.0	0	0.0
1974	2,006	516	25.7	403	78.1	216	41.9	125	24.2	46	8.9	25	4.8	1	0.2
1973	2,269	616	27.1	450	73.1	249	40.4	117	19.0	64	10.4	32	5.2	3	0.5
1972	2,142	625	29.2	481	77.0	232	37.1	120	19.2	55	8.8	23	3.7	2	0.3
1971	1,388	374	26.9	287	76.7	156	41.7	88	23.5	32	8.6	12	3.2	0	0.0
1970	1,555	440	28.3	326	74.1	200	45.5	99	22.5	38	8.6	23	5.2	2	0.5
1969	1,606	416	25.9	323	77.6	174	41.8	93	22.4	29	7.0	30	7.2	4	1.0
1968	1,300	377	29.0	275	72.9	155	41.1	78	20.7	35	9.3	18	4.8	1	0.3
TOTALS	776,658	43,505	5.6	27,047	62.2	25,536	58.7	15,089	34.7	6,748	15.5	3,292	7.6	249	0.6

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INSPECTION AND MAINTENANCE (IM) PROGRAMS AND REQUIREMENTS

STATE	PROGRAM TYPE	FREQUENCY	MODEL YEARS AND EXEMPTIONS
1 Alabama	None		
2 Alaska	Basic	Biennial	Anchorage 1968 and newer Fairbanks 1975 and newer Under 2 years exempt
3 Arizona	Phoenix-Enhanced	Biennial 1981 and newer	1967 and newer
	Tucson - Basic	Annual 1967 -80	Under 4 years exempt
4 Arkansas	None	Annual	1967 and newer
5 California	Basic (older program areas) Enhanced	Biennial	Under 4 years exempt
6 Colorado	Denver/Boulder -Enhanced	Biennial	1974 and newer
7 Connecticut	Enhanced	Biennial 1982 and newer	All
		Annual 1981 and older	Under 4 years exempt
		Biennial 1981 and newer	
8 Delaware	Enhanced	Annual 1980 and older	Up to 25 years old
		Biennial	1968 and newer
9 Florida	none		Under 5 years exempt
10 Georgia	Enhanced	Annual	All
11 Hawaii	none		Under 3 years exempt
12 Idaho	Basic	Annual	1965 and newer
13 Illinois	Enhanced	Biennial	Under 3 years exempt
			1968 and newer
14 Indiana	Enhanced	Biennial	Under 4 years exempt
			1976 and newer
15 Iowa	none		Under 4 years exempt
16 Kansas	none		
17 Kentucky	Basic	Annual in Louisville Biennial in Northern KY	1968 and newer
18 Louisiana	Enhanced (low)	Annual	1980 and newer
19 Maine	Enhanced (low)	Annual	1974 and newer
20 Maryland	Enhanced	Biennial	1977 and newer
21 Massachusetts	Enhanced	Biennial	Under 2 years exempt
			1984 and newer
22 Michigan	none		Under 2 years exempt
23 Minnesota	none		
24 Mississippi	none		
25 Missouri	Enhanced	Biennial	1971 and newer
			Under 2 years exempt
26 Montana	none		

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27	Nebraska	none				
28	Nevada	Enhanced (low)	Annual	1968 and newer		
				Under 2 years exempt		
29	New Hampshire	Enhanced (low)	Annual	1980 and newer		
30	New Jersey	Enhanced (low)	Biennial	1971 and newer		
				Under 4 years exempt		
31	New Mexico	Basic	Biennial	1975 and newer		
				Under 2 years exempt		
32	New York	Enhanced	Annual	Up to 25 years old		
				Under 2 years exempt		
33	North Carolina	Basic	Annual	Up to 25 years old		
				Under 1 year exempt		
34	North Dakota	none				
35	Ohio	Enhanced	Annual	Up to 25 years old		
				Under 2 years exempt		
36	Oklahoma	none				
37	Oregon	Basic	Biennial	1975 and newer		
				Under 2 years exempt		
38	Pennsylvania	Enhanced	Annual	1975 and newer		
39	Rhode Island	Enhanced	Biennial	Up to 25 years old		
				Under 2 years exempt		
40	South Carolina	none				
41	South Dakota	none				
42	Tennessee	Basic	Annual	1975 and newer		
43	Texas	Enhanced	Annual	Up to 24 years old		
				Under 2 years exempt		
44	Utah	Basic	Annual	1968 and newer		
45	Vermont	Enhanced (low)	Annual	1968 and newer		
46	Virginia	Enhanced	Biennial	Up to 24 years old		
				Under 2 years exempt		
47	Washington	Basic	Biennial	Up to 25 years old		
				Under 5 years exempt		
	Washington D.C.	Enhanced	Biennial	1968 and newer		
				Under 4 years exempt		
48	West Virginia	none				
49	Wisconsin	Enhanced	Biennial	1968 and newer		
50	Wyoming	None				
Totals		17 no I/M				
		33 have I/M				

23 Biennial **11 Under 4 years exempt**
Only 10 states have annual Smog checks, 22 states check vehicles under
3 years old, 5 states have an annual check in certain areas or on certain ages

More critically, the Jeffords and Waxman bills would require power plants to reduce emissions of CO₂ to 1990 levels by 2007. But CO₂ has nothing to do with "air quality." Whatever one may believe about the theory of catastrophic global warming, CO₂ is neither an "ambient" air pollutant, like SO₂ and NO_x, nor a "hazardous" air pollutant, like mercury. It is non-toxic to humans at 20 times current concentrations. It does not foul the air, impair visibility, contribute to respiratory disease, or bio-accumulate as a toxin in fish. Indeed, CO₂ is plant food, and rising concentrations enhance the growth of most trees, crops, and other plant life -- an environmental benefit.¹²

What this means is that science offers no clue how to coordinate CO₂ controls with regulatory requirements for bona fide pollutants like NO_x, SO₂, and mercury. Putting CO₂ and those substances in the same regulatory pot makes for an arbitrary hodge-podge, not an "integrated" strategy.

The Jeffords and Waxman bills are nothing if not shrewd politics. Any stand-alone CO₂-control bill would instantly be tagged as a "Son of Kyoto" ploy and shunned by most Members of Congress. But, fold the CO₂ requirement into a regulatory structure targeting three noxious substances, package the resulting mish-mash as "integrated air quality management," and, Voila! The Kyoto connection all but disappears. Next, throw in some regulatory flexibility and certainty, and it begins to look like a good deal.

In reality, what Jeffords and Waxman offer is a Faustian bargain. The CO₂ target they propose would eliminate half of all coal-fired electricity generation in the United States.¹³ Worse, it would set a legal precedent for deeper and wider assaults on carbon-based fuels.

As an alternative to the Waxman and Jeffords bills, the Bush Administration and Senate Environment and Public Works Committee Members Bob Smith (R-NH) and George Voinovich (R-OH) advocate a "3-Pollutant" strategy that would cap emissions of NO_x, SO₂, and mercury, but not CO₂. Whereas Jeffords and Waxman propose a 75 percent reduction in NO_x, a 75 percent reduction in SO₂, and a 90 percent reduction in mercury, by 2007, Bush proposes a 70 percent average reduction in all three pollutants, by 2018.¹⁴ Bush's longer compli-

ance period and less stringent mercury target are intended to ensure the survival of coal as an economically viable fuel source. To date, however, neither Bush nor any Member of Congress has introduced a "3-Pollutant" bill.

During the 30-year period from 1970 through 2000, total emissions of the six principal pollutants decreased 29 percent... while U.S. GDP increased 160 percent.

III. Carbon suppression is bad air quality management

The cultural context of most environmental policy debates is a mix of gloomy beliefs and scary images that statistician Bjorn Lomborg calls "the Litany of our ever deteriorating environment."¹⁵ It is widely assumed, for example, that our air is

becoming more polluted,¹⁶ and will keep getting dirtier until the United States ends its "dependence" on fossil fuels. This belief accounts for at least some of the appeal of "4-Pollutant" legislation. It is demonstrably wrong.

In the 20-year period from 1980 through 1999, air quality improved nationally for all six principal ("criteria") pollutants that EPA regulates under the Clean Air Act. Ambient concentrations fell by the following amounts: lead, 94 percent; carbon monoxide, 57 percent; sulfur dioxide, 50 percent; nitrogen dioxide, 25 percent; ozone, 20 percent; fine particles (PM₁₀), 18 percent.¹⁷ During the 30-year period from 1970 through 2000, total emissions of the six principal pollutants decreased 29 percent. This dramatic progress occurred while U.S. GDP increased 160 percent, U.S. population increased 36 percent, vehicle miles traveled increased 143 percent, total energy consumption increased 45 percent,¹⁸ and coal consumption increased 106 percent.¹⁹ How is this possible?

As air quality analyst Joel Schwartz explains, technological advances have slowly but surely "decoupled" air pollution from energy production.²⁰ Technological advances account for these gains. A new car manufactured in 1997 or later emits 98 percent fewer volatile organic compounds (VOCs), 96 percent less carbon monoxide, and 89 percent less NO_x per mile than a new car manufactured before 1975.²¹ New natural gas plants in California emit 90 percent less NO_x per kilowatt-hour of electricity than the average California plant. State-of-the-art technologies can reduce NO_x emissions from older coal-fired generators by 35 to 80 percent.²²

Endnotes

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