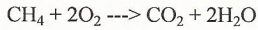


**WHO WILL BE AFFECTED BY THE 25,000 TON/YR.
EMISSIONS THRESHOLD FOR CARBON DIOXIDE?**

Natural Gas is over 99.9% Methane.

Combustion of Methane:



Methane combustion produces 1 carbon dioxide molecule and 2 water vapor molecules.

Specific gravity:

Carbon Dioxide 1.5189

Water Vapor 0.6218

So water vapor is 41% of the weight of Carbon Dioxide:
.6218 div. by 1.5189 = .40937

Total Possible Natural gas emissions:

Pounds per Billion Btu of Energy Input

Molecules	Pounds	Water Pounds
Carbon Dioxide	117,000	95,793
Carbon Monoxide	40	
Nitrogen Oxides	92	
Sulfur Dioxide	1	
Particulates	7	
Mercury	0	
Total:	117,140	117,140

Source: EIA - Natural Gas Issues and Trends 1998 (Natural Gas.org)

Total Pounds: 212,933

Natural gas exhaust:

Molecules	Pounds	Percent
Carbon Dioxide	117,000	0.549470
Water Vapor	95,793	0.449875
Carbon Monoxide	40	0.000188
Nitrogen Oxides (NOX)	92	0.000432
Sulfur Dioxide	1	0.000005
Particulates	7	0.000033
Total Pounds:	212,933	100.00 %

Nitrogen Oxides (nicknamed NOX) are composed of three molecules: Nitrogen Monoxide (NO); Nitrogen Dioxide (NO2); and Nitrous Oxide (N2O or laughing gas). As written, HR 2454 (the Waxman Markey House "Cap & Trade Bill") only specifically names Nitrous Oxide and Carbon Dioxide as gases from the list above that are to be regulated.

Any other gases can be added at the "Administrator's discretion" and will, no doubt, be added.

The above chart does not specify the pounds of Nitrous Oxide, only that all three NOX gases are 92 pounds of the emissions. So for purposes of this paper, we will estimate Nitrous Oxide at 30 pounds, assuming it is a third of the three gases.

HR 2454, (the Waxman Markey House "Cap & Trade Bill").

Section 712 on page 708 establishes a "Carbon Dioxide Equivalent Weight" for various gases. The weight of these two gases is the same. "Equivalent Weight" is a hypothetical value assigned to estimate harm to the atmosphere. The relevant gases for Natural Gas users are listed here:

Carbon Dioxide	1 Equivalent Carbon Dioxide Weight.
Nitrous Oxide	298 Equivalent Carbon Dioxide Weight.

Therefore, using the chart on the previous page we can determine equivalent total pounds to be as follows:

Molecules	Pounds	Times	Equiv. Pounds
Carbon Dioxide	117,000	1	117,000
Nitrous Oxide	30	298	8940
Pounds per Billion BTU's of Natural Gas:			125,940

Let's define the HR 2454 threshold in how much natural gas a factory can burn in one day. The Rule applies to users "Sources" that emit 25,000 Metric Tons or more per year.

Convert this to tons per day, 25,000 divided by 365 days equals:	68.49 tons per day
1 metric ton is 2,204.62262 pounds, so this is about:	151,000 lbs/day
At 125,940 pounds per billion BTU's (151,000 div. by 125,940) equals:	1.1989 billion BTU/day

A typical boiler at a factory burns 10 million BTU's per hour and two eight hour shifts or 16 hours per day. That is (16 Hrs times 10 million):	160 million BTU/day
So this rule is likely to affect factories that run 8 boilers or more, (1.1989 billion BTU div. by 160 million BTU):	7.5 Boilers

This certainly includes our private utilities but takes us well below the amount of natural gas burned by utilities and includes our largest factories. But this is the starting point for the rule. The rule has a built-in road to lower the threshold, just like the 1994 Cap & Trade rule in California.

First, we must understand the required reduction of Natural Gas consumption at each factory. "Cap" & Trade is a misnomer. The original rule used in California in 1994 and the current proposed HR 2454 bill, both establish a beginning allowed usage of gas at year one. Both rules require factories to *reduce* consumption - not cap them.

Section 702 on page 682 requires the following reductions:

2005 Base year	100% May be burned.	0% Reduction
2012	97% May be burned.	3% Reduction
2020	80% May be burned.	20% Reduction
2030	58% May be burned.	32% Reduction
2050	17% May be burned.	83% Reduction

Since natural gas is the only source of heat for our factories, the rule will require an approximate 83% reduction of natural gas burned and therefore approximate 83% reduced production. Imagine a board of directors, having planned 5% annual growth to compete worldwide and being forced to reduce production at 2% per year for 40 years.

Original cap-and-trade rule (RECLAIM layered onto rule 1146).

The original cap-and-trade rule in California applied to all factories and utilities with boilers over 10 million BTU's per hour. The rule started with a Base Year in 1994 regulating 466 factories. By the Air Quality District's own early count there were only 311 factories left in the group. Five utilities were excluded and one hundred and fifty (150) of our largest factories had closed. Factories are still closing under the weight of the rule.

But the Air Quality district did not stop there. The District began lowering the threshold below 10 million BTU boilers to apply to smaller boilers whereby they started all over with the same reductions for the next layer of smaller factories. The rule applied to smaller boilers and therefore smaller factories in four different rule amendments as follows:

<u>Equipment size BTU/hr.</u>	<u>"Compliance date"</u>		<u>Factories closed</u>
	<u>Base year</u>	<u>End year</u>	
10,000,000	1994	1999	210
5,000,000	2004	2009	275
1,000,000	2005	2010	325
400,000	2006	2011	250
75,000	2007	2012	150
			1210

This is about two thirds of the estimated 1,800 factories that existed in the Los Angeles basin in 1991. This loss of factories is generally corroborated by industrial real estate agents in the San Gabriel Valley. It is also corroborated by Donald Sachs, Director of the City of Industry Manufacturer's Council and Chamber of Commerce, who estimates that about 80% of the factories in the City of Industry have closed in the last fifteen years.