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House Subcommittee on Energy and Air Quality

June 19, 2008

Legislative Proposals to Reduce Greenhouse Gas Emissions: An Overview

Chairman Boucher, Ranking Member Upton and Committee Members, we are grateful for the opportunity to testify before you on the important issue of climate change policy, a topic that could determine the competitiveness of the manufacturing sector in the US.

The Industrial Energy Consumers of America (IECA) is a non-profit non-partisan cross-industry trade association whose membership is exclusively energy intensive manufacturing companies. IECA membership represents a diverse set of industries including: chemicals, plastics, fertilizer, cement, paper, steel, glass, rubber, food processing, aluminum, brick, insulation, industrial gases, pharmaceutical, construction products, automotive products, and brewing.

The industrial sector represents about 20 percent of the total US emissions. Because of international competition, continuous energy efficiency and demand destruction due to higher natural gas prices, greenhouse gas emissions are at 1990 levels. All other sector emissions have increased an average of 31 percent.

High natural gas prices have significantly contributed to the loss of 3.3 million manufacturing jobs (19 percent) since 2000. Climate policy, if not implemented with our competitiveness in mind, will drive more good jobs offshore.

Unfortunately, all climate legislation introduced to date does not address or does not sufficiently address several critically important issues for the manufacturing sector.

1. They do not recognize and embrace manufacturing industries as a strategic enabler of vital products and technology that are essential to reducing significant quantities of GHG. They fail to directly or indirectly appreciate the enormous life cycle benefits of our products in the market place. While the industrial sector products consume energy in their production, they save more energy in their life-cycle when used by customers. These same products are indispensable for economic growth. It is impossible for our country to meet the climate challenge without using more, not less, of these products.

Legislation to date significantly increases our costs, which increases the costs of the GHG reduction solution and discourages its use as an option. Higher costs raise the question of whether these products will be produced here or imported.

For example, the chemicals, plastics, aluminum, light weight steel and cost effective fiber glass insulation that save energy when used in homes, commercial buildings, appliances, cars, trucks and air planes are industrial products. These products are also

used extensively by the renewable energy industry to build wind turbines and solar panels.

2. They do not address natural gas supply concerns. Natural gas is the default low carbon fuel in the short term. The resulting higher demand will increase natural gas and electricity prices and will have a greater short term negative impact on the manufacturing sector than climate policy.

Unless the Congress takes decisive action to increase domestic production of natural gas and bring down the price, manufacturing could accelerate its movement offshore. Domestic production of natural gas from 2000 to 2007 is flat despite record well completions. We strongly encourage Presidential and Congressional action to remove outer continental shelf moratoriums and speed up construction of the Alaska Natural Gas Pipeline.

3. They do not set emission reduction targets with timetables that match the availability of cost effective commercial technology such as carbon capture and sequestration and nuclear capacity for the power sector to reduce their emissions. As a result, massive coal to natural gas fuel switching will occur and drive up the price of natural gas and electricity nationwide. This could pit the purchases of natural gas by electric utilities against the demand of the homeowner, farmer and manufacturer. This is not good policy and we urge special attention to this problem.

The April 28, 2008 report by the National Energy Technology Laboratory entitled "Natural Gas and Electricity Costs and Impacts on Industry" agrees with our conclusions. The report says, "Should climate change legislation pass, the dash to gas will be exacerbated, doubling natural gas consumption for power generation, increasing dependence on foreign energy sources, and sending natural gas and power prices skyward across the country."

Fuel switching from coal to natural gas is exactly what happened in Europe with the EU ETS as reported by Garth Edwards, Shell Oil, Trading Manager, Environmental Products, London, England. Mr. Edwards made the following comment during a March 26, 2007 Senate Committee on Energy & Natural Resources Hearing on European Union's Emissions Trading Scheme. He said, "The bulk of emission reductions in the EU are made actually by coal to gas (natural gas) fuel switching in power stations. And any price will start to change the dispatch of power plants…and start change away from coal into gas (natural gas)."

Demand for power generation has consistently grown since 2000 but is accelerating due to a combination of factors including the threat of climate mandates and opposition to coal fired power plants. Natural gas consumption by the power sector has grown by 35 percent since 2000 while total US demand rose by only 9.8 percent. Demand has fallen by all other sectors as a result of higher prices.

Further heightening our concern is the reality that, according to the Energy Information Administration, 73 percent of all new electrical generating capacity built in 2006 was based on natural gas. EIA's 2007 estimate jumps to 78 percent and the 2008 forecast is more of the same. A single 500 MW rankine cycle power plant will consume the equivalent natural gas volume used to fuel 842,308 homes each year.

Lastly, according to the EIA there is about 230,000 MW of existing natural gas fired power generation capacity in the US. Today, only a small amount of this capacity is used, mostly for peaking power. If this generation capacity were to be incentivized to turn-on because of climate legislation it could consume about 5.4 trillion cubic feet of natural gas, about 25 percent of today's US demand. The point is that any incremental increase in demand for natural gas by the power sector will significantly increase the price of natural gas and electricity, especially when we do not have a comparable increase in supply.

4. They do not protect energy intensive manufacturing competitiveness by providing full allowances that cover the increased costs of energy and emissions. They also do not address the needs of manufacturing companies who are our suppliers or customers but not large energy intensive companies. Higher costs reduce our ability to compete for domestic and international markets against foreign producers who do not have these higher costs. Unless full allowances are provided under a cap and trade program, companies will move offshore.

5. They do not recognize the reality of the international marketplace in which we compete. Forcing energy intensive manufacturing in foreign countries to reduce their GHG emissions in exchange for access to US markets is not effective. A global agreement must set a transparent protocol.

6. They do not determine the real cost of each climate bill because the EIA under-estimates the natural gas price assumptions used in the climate change modeling. For example, on April 30, 2008 the Energy Information Administration completed an economic evaluation of S.2191 America's Climate Security Act. Comparing EIA's natural gas price assumptions used in the study to the New York Mercantile Exchange closing forward prices of May 30, 2008 indicates they have under-estimated the cost of S.2191 by over one trillion dollars.

Year	$/mmBtu NYMEX (1)	$/mmBtu EIA (2)2008	$/mmBtu Difference	Tcf Consumption (3)	Additional Cost ($billion)
2008	11.96	7.23	4.73	23.79	$112.5
2009	11.11	7.31	3.80	23.92	$90.9
2010	10.25	6.85	3.40	23.82	$81.0
2011	9.97	6.48	3.49	23.84	$83.2
2012	10.00	6.18	3.82	23.75	$90.6
2013	10.14	5.99	4.15	23.57	$97.8
2014	10.28	5.83	4.45	23.60	$105.4
2015	10.45	5.70	4.75	23.69	$111.6
2016	10.62	5.55	5.07	23.51	$116.6
2017	10.77	5.52	5.25	23.02	$119.0
2018	10.94	5.56	5.38	22.65	$120.3
2019	11.12	5.61	5.51	22.38	$123.4
2020	11.34	5.52	5.82	22.42	$130.5
					$1,383.0
					Total

(1) NYMEX prices as of May 30, 2008
(2) EIA – Core Case
(3) TCF (trillion cubic feet)

7. They do not provide assistance to help manufacturers reduce their ghg emissions and develop the next generation process technology. Major energy intensive manufacturing processes are near their stoichiometric limits. Higher energy and compliance costs means there is less capital available to do energy efficiency projects and invest in R&D to develop new and more energy efficient manufacturing processes.

8. They do not consider potentially more cost-effective policy alternatives to cap and trade. We believe that there are more cost effective policy alternatives that should be explored. Each sector of the economy is different and will respond better to policy options and achieve greater reductions when they are specifically designed for cost effective reductions for that sector.

9. They do not recognize the enormous financial risks that trading carbon and market manipulation presents globally. Carbon offsets could easily become the next sub-prime crisis. Today, carbon in Europe is being traded as an energy-basket commodity, not reflecting the under-lying cost of carbon abatement as it is theorized to achieve. Carbon trading can easily get caught up in the excessive speculation that has gripped energy commodities and drive up the price of carbon.

10. They do not establish one federal regulatory system that preempts state programs. It will be very costly for companies to have regulatory requirements in potentially 50 states. Nothing in these bills prevents the possibility of having to comply

with 50 different regulatory programs, which means compliance costs will be very high and retail consumers will eventually pay for all costs.