

October 30, 2007

The Honorable James M. Inhofe  
453 Russell Senate Office Building  
U.S. Senate  
Washington, DC 20510

The Honorable John Barrasso  
307 Dirksen Senate Office Building  
U.S. Senate  
Washington, DC 20510

Dear Senator Inhofe and Senator Barrasso:

Thank you for the opportunity to address additional questions associated with the Environment and Public Works Committee Hearing on October 24, 2007.

**Question from Senator James M. Inhofe:**

**1. Based on the discussion on the hearing, is there anything else you would like to add?**

In our opinion, all previous EIA or EPA economic analysis on climate change legislation does not adequately address the issue of electric utility fuel switching from coal to natural gas and the costs implications to higher natural gas and electricity prices or the loss of resulting manufacturing jobs.

Much of the concern regarding natural gas supplies for industrial consumers is related to the impact legislation with near term emission targets will have on the availability of natural gas for manufacturing. Between now and 2012 there are few achievable options that will slow the electric utility need for natural gas.

Given forecasted supplies, this added demand by the electric utilities can only be obtained from natural gas currently used in the manufacturing sector. In 2005 the manufacturing sector used 6.6 trillion cubic feet (TCF) of natural gas. Short of a significant recession, to achieve 2005 emission levels in 2012 the electric utility sector will need additional quantities of natural gas that exceed the amount used in total by the manufacturing sector. They can do so because they can pay any price for natural gas, no matter how high and pass the costs onto their ratepayers. This is why we are concerned with emission targets which begin before additional supply of natural gas, new technologies or other efficiency improvements can be put into practice.

We will not succeed long term at reducing ghg emissions without increasing our use of low carbon intensive energy. That being said, it is essential that we increase the supply of affordable and reliable low carbon intensive energy. A "ghg cap" does not increase the supply of low carbon intensive energy because

government and technology barriers prevent these products from getting to the market.

For example, setting a ghg cap will not increase the supply of natural gas from federal lands or waters that is off-limits due to Congressional moratorium. GHG caps will not build our Alaska Natural Gas Pipeline, increase LNG terminal import capacity or build new nuclear plants. We are concerned that we will face ghg reduction targets and none of the government or technology barriers will be removed in time to provide relief.

Removing these barriers is essential because it takes long periods of time to develop the resources. For example, we have about a 100 year supply of natural gas in our offshore areas currently off-limits but establishing a new field could take upwards to 5-8 years.

**Questions from Senator John Barrasso:**

**1. What impact will Lieberman-Warner have on Liquefied Natural Gas imports to the US?**

Lieberman-Warner will significantly increase the demand for natural gas. We would expect the price of natural gas to rise significantly as well. Higher prices will be necessary to attract more LNG imports, if supply is available. Availability is not certain. While there is ongoing expansion of supply, demand is growing even faster. The potential formation of a LNG cartel is concerning.

LNG imports have increased since 2000 but remain only 2.7% of our nation's supply and actually decreased by 7.5% in 2006. Our full import capacity has not been utilized in recent years because we have been unable to compete in global markets for the LNG. In general, other countries regularly buy it away from companies who would bring it to U.S. terminals. Country governments have intervened to buy whatever quantities are needed at sometimes very high prices to supply their country's needs. These same countries are expanding their import capacity without the problems we have in the U.S.

The legislation would place higher demand on LNG because U.S. production of natural gas is being constrained by Congressional moratoriums. Higher demand above our domestic supply and the quantity that is imported from Canada would theoretically be LNG imports. Even though there have been dozens of attempts to greatly expand import terminal capacity only minor increases have occurred and mostly at existing terminals because of NIMBY.

The investments necessary for building a U.S. receiving terminal and the corresponding overseas production terminal are very large and take considerable time to move through both the financing and construction phases. As we have seen over the past few years it is much easier for the United States to import the products produced by IECA member companies. This trend will continue for a

number of years and as the facilities are built or expanded to produce these materials overseas jobs are lost in the United States. If LNG facilities are later built it is unlikely that the manufacturing jobs lost earlier will return to the U.S. This is similar to the situation described by Alcoa involving "stranded energy".

**2. With increasing demand for energy both in America and around the world as a result of increased economic growth, technological solutions will be essential for countries to meet their energy demands while limiting greenhouse gas emissions. However, there are tremendous uncertainties about what technologies will most effectively address these issues.**

**As Congress continues to examine technological solutions to combat climate change, do you believe we have enough information to identify which technologies hold promise and therefore warrant investment?**

Important technology solutions do exist and can be very helpful in a relatively short period of time. Our favorite is industrial gasification. In fact, IECA supports language reported out by the Senate Finance Committee on June 27, 2007 that would enhance Section 48B industrial gasification (IG) incentives and which would provide new incentives for carbon capture and sequestration under Section 450. While generally supportive of the Finance Committee's gasification proposals, we also suggest below, certain modifications that we believe will improve program operations and enhance public benefits.

For the past decade, U.S. environmental and energy policies have created new demand for natural gas use particularly in the generation of electricity. Tight supplies and the rising demand have resulted in natural gas price escalation and volatility with major adverse economic consequences to manufacturing. Many U.S. operations have been driven overseas to regions such as the Persian Gulf where fuel and feedstock prices are low. Section 48B was intended to help U.S. industry transition to domestic plentiful and low-cost alternative fuels and feedstocks in lieu of natural gas. The Section 48B incentives offer a tool to stem the loss of American industrial jobs, enhance our economic and national security, and serve domestic and global environmental goals.

From an environmental perspective, IG offers the quickest near-term, and most cost-effective commercial deployment of carbon capture and geologic sequestration (CCS) technology at economic scale. The first such plants can be operational within three years. From an economic perspective, IG with CCS will allow companies to substitute relatively inexpensive industrial waste such as wood chips or black liquor in the forest products sector, petroleum residues from refineries, or coal, for example, in lieu of natural gas.

Substituting lower-cost feedstock will help U.S. industry succeed in a globally competitive economy. Dampening natural gas demand by industry, the largest gas consuming sector, will also reduce prices for all direct and indirect

consumers of natural gas. Because several CCS deployments at economic scale are needed to fully commercialize the technology, new authority is urgently needed largely as reported by the Senate Finance Committee in June of this year (i.e., increase investment tax credit ceiling by \$1.5 billion, increase the credit rate from 20% to 30%, and creation of CO<sub>2</sub> production or sequestration tax credits, etc.).

In addition to the increased authority reported by Senate Finance, we also have suggestions to improve the original Section 48B provisions beyond the Senate Finance Committee-reported amendments (see attached list). These suggestions include: a) transparent, competitive process for selecting 48B ITC “winners;” b) doubling Section 815 production tax credits to 150,000,000 tons of carbon dioxide emissions captured and sequestered (CCS) in deep geologic formations (automatically made available to 48B projects); and c) indemnification of project sponsors who participate appropriately in federal incentive programs to test and demonstrate these novel carbon sequestration projects. Additionally, we recommend SNG and CO<sub>2</sub> pipeline incentives.

We believe that a carefully constructed industrial gasification incentives program will accomplish two important goals: diversification of energy use to sustain essential and innovative manufacturing sectors in the U.S. while lowering prices for all consumers; and development of critical environmental performance experience on which to build both an informed carbon emissions regulatory program and an accompanying liability framework worldwide.

IECA Supports the following:

#### 48B Investment Tax Credit

- Support additional \$1.5B as reported from Senate Finance in June 2007
- Support increased ITC rate from 20% to 30% and accept CCS equipment requirement (but link Sec. 48B and Sec. 450) as reported from Senate Finance in June, 2007
- Add SNG producers to list of “eligible entities”
- Add codified DOE role to assure transparent and meritorious
  - Awards process (operate under procedures similar to competitive contract solicitation)
  - Closing Agreement process must permit project improvements
- Increase eligible investment from \$630M to \$1B (EPC cost increases of 50%)

Production Tax Credit for CO<sub>2</sub> Sequestration (Amendment to Sec. 450 as provided in Sec. 815 of Senate Finance Committee-reported bill)

- Increase cap on PTCs for CCS to 150 million tons (double that reported by Senate Finance)
  - \$10/ton EOR (as in Senate Finance-reported bill)
  - \$20/ton non-EOR (as in Senate Finance-reported bill)

- Linkage: Amend Senate Finance bill to qualify 48B projects automatically for CO2 PTC

#### 45L – Refined Coal Credit

- Contract volumes of SNG to electricity should qualify for refined coal PTC

#### CO2 Pipeline Depreciation

- Support accelerated depreciation (7 years) as proposed in Senate Finance-reported bill June 2007

#### CO2 Regulation/Liability

- Expedite permitting for early CCS actors
- "Hold harmless" or indemnify PTC recipients from liability when "best efforts" have been applied

#### Federal Loan Guarantees

- Open to industrial gasification (section 1703 (c)), including SNG
- Remove program dollar cap for self-pay projects

Lastly, for a globally competitive manufacturing sector in this country the competition for energy between the electric utility and manufacturing sectors must be reduced. Utilities have more alternatives for producing electricity than manufacturing has for producing its products. Nuclear energy and coal need to be a growing component of the fuel mix used by utilities to produce electricity. Renewables like wind and solar are important also but between their cost, intermittent nature and infrastructure requirements leave the energy needs of the manufacturing sector at risk for a significant period of time.

We cannot overemphasize that our concern is energy and feedstock supplies over the next ten year period and the permanent impact this will have on U.S. manufacturing. Energy efficiency especially as it relates to our existing structures both residential and commercial offers the nearest term opportunity to reduce demand on existing energy supplies. Business, especially energy intensive business continually look at energy efficiency investments, but residential and commercial especially leased buildings have a harder time making investments that will improve energy efficiency.

### **3. What do you think should be Congress' funding priorities?**

More can be done to increase the availability and affordability of low carbon intensive energy by "policy decisions" than by funding decisions. (See the answer to Senator Inhofe's question above.) With that aside, we offer the following areas.

a) Sufficient funding to create an adequate permanent storage solution for nuclear waste;

b) Much increased incentives for energy efficiency across all sectors. Residential need much larger tax incentives to economically justify the cost of energy efficiency improvements. Energy intensive manufacturers continue to do what is cost justified. Significant hurdles remain where productive capital should be replaced to improve energy efficiency. For these types of investments to be justified it will take an acceleration of remaining depreciation on capital to be retired and faster depreciation on new lower energy consuming replacements. Tax incentives are needed to increase use of cogeneration, the most energy efficient way of producing energy and power. Both the faster depreciation and tax incentives for cogeneration and use of waste energy are high priorities;

c) Carbon sequestration;

d) Electricity transmission infrastructure.

**4. What are the costs to family budgets for middle class and low income people of implementing Lieberman –Warner in terms of energy bills and gasoline prices in the next five to ten years?**

All direct and indirect costs of the legislation eventually get passed onto the consumer.

MIT completed a report\* this summer that concluded the Lieberman bill would result in carbon costs of \$40/ton in the initial years and \$160/ton by the time the final cuts were realized in 2050, resulting in significant consumer energy cost increases as follows:

	Initial Year	Final Year
Petroleum Products (gasoline/diesel) \$/gal	0.40	1.60
Natural Gas \$/MM Btu	2.10	8.40
Electricity ¢/KWH	2.5	10

\*MIT Joint Program on the Science and Policy of Global Change. Report No. 146. April 2007.

Secondly, in our opinion, all previous EIA or EPA economic analysis on climate change legislation does not adequately address the issue of electric utility fuel switching from coal to natural gas and the costs implications to higher natural gas and electricity prices nor the loss of resulting manufacturing jobs.

Lastly, while it is true that many new jobs will be created related to energy efficiency and renewable energy, it will be very difficult for the country to increase its productivity if the average cost of energy increases relative to today. Without increases in productivity the country will not be able to improve or possibly

maintain its current standard of living. That has to translate into a portion of our population being worse off than they are today. For all consumers direct energy costs will be higher so home utilities and transportation costs will go up. The costs of products that contain energy like those produced by our members will go up. Imported versions of our products could be sold at lower cost if they are produced in parts of the world that have lower energy and labor costs than currently exist in the United States, which would serve as an offset to some of the direct energy cost increases.

**5. In 2050, how much cooler will the planet be if we adopt Lieberman-Warner?**

Unilateral action by the United States will not have a measurable impact because it does not achieve global reach. The legislation's provisions under Title VI will not work and compel countries like China to reduce its ghg emissions. Importantly, Title VI will not protect U.S. energy intensive industries from unfair competition.

With or without Lieberman-Warner no one knows what the planet's temperature will be in 2050. While it may be prudent to minimize emissions of greenhouse gases that can only be done if we create growing sources of low cost, low or non-emitting energy. Most of the products that are manufactured provide efficiency in meeting the needs of our population. Larger gains in emission reductions will be obtained looking at how we meet those needs than in how we produce individual products.