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UNITED STATES OF AMERICA

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December 29, 2010

The Honorable Darrell E. Issa  
Ranking Minority Member  
Committee on Oversight and Government Reform  
U.S. House of Representatives  
2157 Rayburn House Office Building  
Washington, DC 20515

**Re: Regulations and their impact on the economy and jobs**

The U.S. Chamber of Commerce, the world's largest business federation representing the interests of more than three million businesses and organizations of every size, sector, and region, is pleased to provide this response to your request for information regarding the impact the federal regulatory process is having on the economy and jobs. The Chamber thanks you for your dedication to this highly important issue, and looks forward to working with you as you explore this and other matters as the next Chairman of the Oversight and Government Reform Committee.

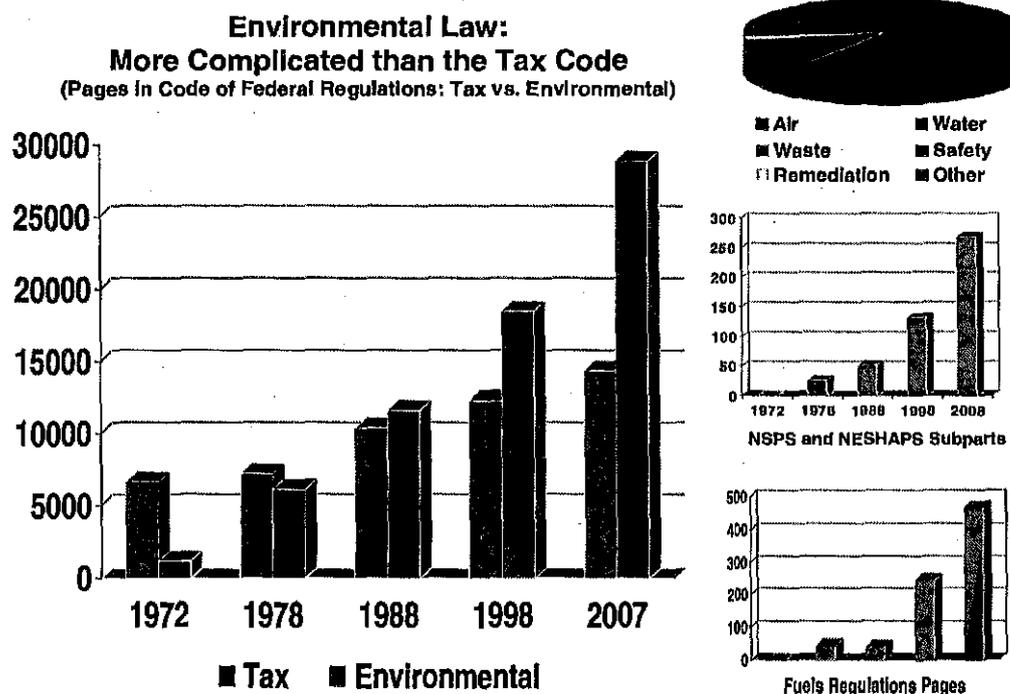
I am the Chamber's Senior Vice President for Environment, Technology and Regulatory Affairs. In this capacity, I represent the business community on issues pertaining to environment, energy, telecommunications, e-commerce, emerging technologies, and regulatory reform. Because the scope of your request covers the entire regulatory sphere, I have asked my colleagues throughout the Chamber to provide their input on regulations in health care, financial reform, education and other sectors. You will receive their responses by separate letter. I urge you to contact them directly with questions or comments on their particular areas of expertise.

I will confine my response to (1) environmental regulations that the Chamber is currently very concerned with, and (2) suggestions as to how these problems may be fixed. I urge you to follow up with me or my staff if you have any questions or would like additional information on these issues.

## I. Environmental Regulations and Their Impact

### A. Overview

Compliance with environmental regulation has, at least in recent years, become a substantial undertaking for businesses. Consider that in 1972, for every 1000 pages of environmental regulations issued, there were 6000 pages of Internal Revenue Code tax regulations issued. By 1988 tax regulations and environmental regulations issued were about equal in number, around 10,000 pages of text. By 2007 tax regulations issued had grown to 13,000 pages; however, in that same year environmental regulations had grown to 30,000 pages! The figure below illustrates the relative growth of the environmental regulatory state.



In recent years, EPA seems to have increased both the breadth and the burden of its regulation of the business community. For whatever reason, it has largely spent the past 24 months attempting to modify, re-issue, or re-interpret virtually every controversial environmental regulatory decision of the past decade. Its actions can generally be grouped into four categories:

1. “Legislation by regulation,” whereby EPA leapfrogs ahead of the legislative process on a particular issue. Specific examples are greenhouse gas regulation under the Clean Air Act, expansion of Clean Water Act jurisdiction, toxic substances reform, and regulation of Chesapeake Bay stormwater runoff.
2. “Reversal or reconsideration,” whereby EPA seeks to reverse, reconsider or reinterpret prior rules in a way that could create even more disruption than the original rule. Examples are its pending reconsideration of national ambient air quality standards (NAAQS) for ozone, its reversal of the California Waiver, its retroactive veto of Arch Coal’s Clean Water Act permit for Spruce Mine No. 1, and its recent decision to revise the definition of “solid waste” under Subtitle C of the Resource Conservation and Recovery Act.
3. “Sue and settle,” whereby EPA initiates a rulemaking to settle a lawsuit by an environmental group. Examples are EPA’s proposal to regulate greenhouse gases under the CWA, the recently-announced New Source Performance Standards (NSPS) for greenhouse gas emissions from electric utilities and refineries, and regulation of nonroad mobile source greenhouse gas emissions (due in 2011).
4. “Strict compliance,” whereby EPA is obligated to issue a regulation (by court order or Congressional directive), but issues an unnecessarily costly regulation with seemingly little or no consideration of its impact on the regulated community. Examples are the Boiler MACT rule, the Transport Rule, and Cooling Water Intake Structures regulation.

The problem is not simply that EPA is issuing a lot of regulations. Rather, it is that it has significantly increased the number of *major* rules (i.e., rules costing the regulated community more than \$100 million). These regulations typically ensnare multiple industry sectors and have economy-wide costs usually measuring in billions or even trillions of dollars. In the cases of greenhouse gases, Boiler MACT, Ozone NAAQS and others, the economic impact is so widespread that multiple sectors of the economy must face substantial compliance costs.

When several of these massive regulations are piled on top of one another for an industry, the cumulative impact can be overwhelming. The result: industries are effectively regulated out of business. This recently happened for two power plants: Portland Gas & Electric's Boardman coal-fired power plant in Oregon, and Exelon Corporation's Oyster Creek Nuclear Generating Station in New Jersey. In both cases, the utility was forced to choose between installing several hundred million dollars' worth of pollution controls to comply with EPA regulations (regional haze at Boardman, cooling water intake structures at Oyster Creek), or simply shut down early. In both cases, the utility chose to shut down. This is a highly disturbing trend, and one that will only continue in 2011 with the issuance of even more major rules.<sup>1</sup> In fact, the North American Electric Reliability Corporation (NERC) recently found that the suite of rules EPA plans to issue for electric utilities could force up to 19 percent of our nation's fossil-fired electric generation to retire in the next ten years.<sup>2</sup>

### B. The Regulations

There are two parts to the regulatory overload problem: the regulations issued by EPA over the past 24 months that are already on the books; and the new regulations expected from EPA in the future. The following lists are divided in this manner.

#### Regulations Proposed or Finalized Between 1/1/2009 and the Present

Regulation	What Happened?	Impact
California Waiver (Final)	As a result of negotiations for which a "vow of silence" was issued, <sup>3</sup> California agrees not to enforce its motor vehicle GHG rule in exchange for EPA granting the waiver and issuing CAA regulations for new motor vehicles.	The California Air Resources Board now essentially controls the fate of the automobile industry. It almost immediately used this new leverage to push for 62 mpg standards by 2025.
Ozone (Proposed)	Less than two years after lowering the Ozone NAAQS from 80 parts per billion (ppb) to 75	According to a Manufacturers' Alliance study, costs as high as

<sup>1</sup> Perhaps none more so than the recently-announced greenhouse gas New Source Performance Standards (NSPS) for new and existing coal- and oil-fired electric utilities and petroleum refiners. Depending on the cost and severity of these new regulations, which EPA will propose in 2011 and require compliance with by 2015 or 2016, many more plants could be forced to substantially modify their operations, leading to eventual shutdowns.

<sup>2</sup> [http://www.nerc.com/files/EPA\\_Scenario\\_Final.pdf](http://www.nerc.com/files/EPA_Scenario_Final.pdf).

<sup>3</sup> See "Vow of silence key to White House-Calif. fuel economy talks," *The New York Times*, May 20, 2009, available at <http://www.nytimes.com/gwire/2009/05/20/20greenwire-vow-of-silence-key-to-white-house-calif-fuel-e-12208.html>.

	ppb, EPA is performing a “do-over” of those very same NAAQS, using the very same record, and lowering the NAAQS even further, to somewhere in the 60-70 ppb range.	\$1.013 trillion annually between 2020 and 2030 (a 5.4% net reduction in GDP) and a potential loss of 7.3 million jobs by 2020 (4.3% of projected labor force).
Boiler MACT <i>(Proposed)</i>	Sets hazardous air pollutant emission limits from industrial boilers and process heaters used by a wide range of manufacturers at levels which are barely detectable and possibly unachievable. Requires installation of up to four different air pollution control devices that will conflict with other existing control requirements.	CIBO/IHS Global Insight estimate an economy-wide GDP reduction of as much as \$1.2 trillion; every \$1 billion spent on compliance costs will put 16,000 jobs at risk. Fisher International estimates pulp and paper industry costs will be \$2.8 billion annually, \$17 billion total, and would close 30 mills and lose 17,000 jobs (72,000 with multiplier effect).
Transport Rule <i>(Proposed)</i>	EPA proposed the Transport Rule to reduce SO <sub>2</sub> and NO <sub>x</sub> emissions from power plants, under a new cap-and-trade program that allows only limited interstate trading. The Transport Rule replaces the Clean Air Interstate Rule that was vacated by the DC Circuit.	North American Electric Reliability Corporation (NERC) predicts the early retirement of 3-7 GW of existing coal capacity.
Coal Ash <i>(Proposed)</i>	To regulate the disposal of coal ash, a byproduct of the use of coal for electricity generation. EPA has proposed to regulate coal ash as either solid waste under RCRA subtitle D or as a hazardous waste under RCRA subtitle C.	NERC predicts early retirement of 388 MW – 2 GW of existing coal capacity (12 to 53 coal units).
GHG Regulation under Clean Air Act <i>(Final)</i>	EPA chose to regulate GHGs under the Clean Air Act and triggered a massive regulatory cascade. The problems start on January 2, 2011 and will impact permitting. In addition, Clean Water Act, NEPA, Endangered Species Act and SEC regulations (material risk disclosures).	PSD permits alone will cost \$125,000 and 866 hours of burden per facility. Title V imposes up to \$250,000 carbon “fee” on applicants. The true economic and employment impacts are potentially devastating.
GHG Regulation under Clean	As part of a “sue and settle” with Center for Biological Diversity (CBD), EPA took comment on whether to use the Clean Water Act to	CWA permit challenges are the environmental groups’ stated goal. <sup>4</sup> Also, a finding that the

<sup>4</sup> The day EPA announced its settlement, the CBD attorney that filed the lawsuit, Miyoko Sakashita, was quoted as stating that in implementing the Clean Water Act, EPA “could restrict CO<sub>2</sub> emissions from places they are giving

<p>Water Act <i>(Proposed)</i></p>	<p>regulate greenhouse gases, due to their impact on ocean acidification.</p>	<p>oceans are impaired by GHGs under the CWA could open the door to a rulemaking under Section 112 of the Clean <i>Air</i> Act, and treatment of GHGs as Hazardous Air Pollutants.</p>
<p>Chemicals Regulation <i>(Final)</i></p>	<p>Congress established a 2011-2012 timeline for TSCA reform; however EPA has begun issuing "Chemical Action Plans" for selected chemicals. There is very little transparency with respect to EPA's selection of chemicals for action plan development. EPA also recently announced that it would deny Confidential Business Information claims for the <u>identity of chemicals</u> in health and safety studies filed under TSCA, and that it will increase the frequency of chemical reporting and broaden the scope of the chemicals that must be reported.</p>	<p>EPA is pushing TSCA toward a more "precautionary principle" type approach, similar in application to the European chemical law, REACH.</p>
<p>Texas Air Permits</p>	<p>In an ongoing dispute, EPA has declared various aspects of Texas' air permit program invalid. EPA revoked authority for several state-run air permit programs in late December 2010, an extremely rare occurrence in the Clean Air Act's 40-year history.</p>	<p>Companies with 15 years of permits issued by Texas (and not objected to by EPA) are scrambling to avoid penalties as well as the misfortune of having to get a new permit in 2011 when GHGs are regulated. States in similar situations to Texas are concerned.</p>
<p>Spruce Mine CWA Permit <i>(Proposed)</i></p>	<p>Mingo Logan Coal Co. obtained a final CWA discharge permit from EPA in 2008; EPA is now considering a retroactive veto of the permit. EPA's regional Administrator has recommended vetoing the permit; a final decision from EPA is expected very soon.</p>	<p>If EPA is allowed to retroactively revoke CWA permits, companies will not risk undertaking such projects (since permits can be reversed retroactively by EPA).</p>
<p>Clean Water Act jurisdiction <i>(Final)</i></p>	<p>EPA is moving beyond the Supreme Court's jurisprudence redefining what is navigable (and therefore under the Clean Water Act's purview), and is developing new definitions. A major guidance document has been rumored. In addition, EPA recently declared the cement-lined Los Angeles River—the concrete ditch of</p>	<p>Expansion of the jurisdiction of the Clean Water Act could ultimately regulate small, intrastate waters not intended by Congress for regulation and expressly rejected by the U.S. Supreme Court.</p>

Clean Water Act permits to . . . That would be what I'd like to see." See "EPA to Consider Using Water Law to Fight Acidification," *E&E ClimateWire*, Mar. 12, 2010, available at <http://www.eenews.net/climatewire/2010/03/12/archive/4> (subscription req'd).

	<i>Grease and Terminator 2</i> car chase fame—a “navigable” water subject to the reach of the Clean Water Act.	
Lead Paint <i>(Final)</i>	EPA issued rule requiring housing contractors to obtain certification in lead-safe work practices before renovating properties built before 1978. EPA removed homeowners’ right to bypass stricter preparation standards for properties where no children under 6 or pregnant women reside, even before examining whether existing scientific research justified the change.	Lack of available training to certify contractors under the new rule slowed construction projects nationwide, and led EPA to postpone the rule’s effective date.

### Future Regulations

Regulation	What Happened?	Impact
MACT for Power Plants	EPA plans to issue a rule requiring sources to use MACT to control hazardous air pollutant emissions from power plants. Coal-fired plants will be the hardest hit.	NERC predicts early retirement of 2-15 GW of existing coal capacity.
Cooling Water Intake Structures	EPA is considering technology-based standards to regulate cooling water intake structures at CWA section 316(b) existing facilities (i.e., power plants). According to EPA, the withdrawal of cooling water harms billions of aquatic organisms each year.	NERC predicts early retirement of 33-36 GW of existing capacity (coal/nuclear), approx. 347 units.
Definition of Solid Waste	In a settlement with Sierra Club, EPA has pledged to revise its definition of solid waste under RCRA. The definition was set in 2008 in a rule intended to promote the legitimate recycling of hazardous secondary materials by making recycling and reuse cost-effective and safe, as well as to prevent “sham” recycling.	The 2008 rule streamlined regulation of hazardous secondary materials and encouraged beneficial recycling. Revising the rule will cut down on these benefits.
NSPS for GHGs	Once GHGs become “subject to regulation” on January 2, 2011, EPA will respond to pending petitions for rulemaking and begin issuing New Source Performance Standards (NSPS) for stationary source categories under CAA Section 111. On December 24, 2010, EPA announced it will propose GHG NSPS for new and existing coal- and oil-fired electric utilities and oil refiners in 2011.	Sleeping giant. Administrator has wide discretion to issue GHG-driven performance standards for wide range of new and <i>existing</i> stationary sources. EPA is considering cap-and-trade, although at this time such a move seems unlikely.
PM2.5 NAAQS	EPA will propose NAAQS for particulate matter in early 2011, with final regulations due	Administrator is not required to consider costs when setting a

	in 2012.	NAAQS, and an overly strict new NAAQS for PM could put hundreds of counties into non-attainment, jeopardizing economic growth.
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## II. How to Fix the Problem

There are a number of good ideas circulating in Congress as to how best to address the “regulatory tsunami” businesses are facing. The Chamber suggests the following additional measures.

- Enforce provisions of existing environmental laws requiring EPA to consider jobs and economic impact. Section 312 of the Clean Air Act (42 U.S.C. § 7612) requires EPA to conduct a cost-benefit analysis for most major air rules. Section 317 (42 U.S.C. § 7617) requires economic impact assessments for most major air rules. And Section 321 (42 U.S.C. § 7621) requires the Administrator to do a continuing study of the effect of its regulations on employment or the threat of job loss. Identical provisions to Section 321 exist in most other environmental statutes, such as the CWA, TSCA, RCRA, and CERCLA. Yet EPA either flat-out ignores these requirements (as it did with Section 321 and its GHG rules), or it does such a poor job with the economic assessment and the underlying data that the result is misleading, usually overstating benefits and understating costs. The Chamber recommends requiring EPA to conduct these statutorily-required analyses for all major regulations. Moreover, the Chamber recommends preempting all EPA regulations issued in 2009 and 2010 that did not adequately comply with Sections 312, 317 and 321.
- “Substantial Evidence” test for major rules. Currently, when regulations are challenged, agencies are required to show that their regulations were not “arbitrary and capricious”—a test under the Administrative Procedure Act. This is a very low bar and considered very deferential to the agencies. However, under the statute creating OSHA, the agency is required to support its regulations with “substantial evidence.” While still deferential, this is a higher bar to meet and requires courts to also look at countervailing evidence as part of the record as a whole. Requiring other agencies to meet this test, perhaps for only a subset of regulations deemed “major” by some

specific definition such as \$100 million impact on the economy, would force agencies to ensure they had better data and arguments before proceeding. It would provide needed balance and accountability to the rulemaking process requiring regulating agencies to support new regulations with a “substantial evidence” standard. The “substantial evidence” determination can be made through an on-the-record hearing using the procedures set forth in Sections 556 and 557 of the Administrative Procedures Act. The Chamber asked for, and was denied, an on-the-record hearing on the issue of EPA’s Endangerment finding.

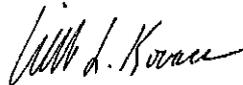
- Assure judicial review under the Data Quality Act. The Data Quality Act (DQA) ensures the “quality, objectivity, utility, and integrity” of information disseminated to the public. It requires agencies to comply with OMB information quality standards and to provide their own information quality guidelines and procedures to ensure affected persons may seek and obtain correction of disseminated information that violates the OMB standards. One value of the DQA is that it recognizes the importance of non-regulatory agency actions such as guidance documents. Because the DQA does not explicitly allow judicial review of claims by interested parties challenging whether an agency has met its burden under this law, agencies claim there is no right to judicial review and assert that they may violate it with effective impunity. Yet the underlying data EPA uses is often fraught with error and uncertainty. The Chamber filed a DQA petition with respect to EPA’s Endangerment finding, but has virtually no legal recourse now that EPA has not acted on it.
- Require a rulemaking to implement Clean Air Act Section 179B (42 U.S.C. § 7509a) for foreign air emissions. Section 179B allows EPA to waive a host of typical CAA non-attainment penalties for areas that can show that they would be in attainment with a NAAQS (for Ozone, PM, etc.) but for the effect of emissions originating outside the United States. With China and other Asian economies industrializing at rapid rates, a great deal of their emissions are wafting across the Pacific Ocean and affecting air quality in the Western United States. Many counties in your home state of California will be in Ozone NAAQS non-attainment under the new standard, despite very little in the way of sources of ground-level ozone. The Chamber submitted a petition for rulemaking to EPA in 2007 on this issue, which it denied. It continues to refuse to implement Section 179B, and gives foreign

air emissions no weight whatsoever when determining what “background” levels of ozone are in the NAAQS it is reconsidering.

- Stop NGO abuse of the regulatory process to advance political agendas and thwart permits for new projects. The environmental regulatory process is irreparably broken. “Sue and settle” is not an appropriate rulemaking process, and is even more egregious when considering that the plaintiffs in those cases typically have their attorneys fees paid from the Judgment Fund, a permanent, unlimited appropriation from the Congress. Moreover, environmental groups and other “Not In My Back Yard” activists have mastered the use of the regulatory process to stop new construction. As recently as Section 1609 of the American Recovery and Reinvestment Act of 2009, the Congress stated that the purpose of NEPA is to “provide an orderly process . . . that prevents litigation and delay that would otherwise be inevitable.” As the Chamber’s enclosed comments on NEPA demonstrate, environmental groups and NIMBY activists have accomplished the exact opposite result. The Chamber’s *Project No Project* initiative (<http://www.projectnoproject.com>) chronicles roughly 350 energy projects that have been stalled, stopped or otherwise thwarted by challenges to permits, zoning changes, political opposition and similar efforts. The lost investment and job creation from keeping those projects on the sidelines is massive. The Chamber intends to release an economic study in early 2011 assessing the true value of those stopped projects.

Thank you once again for your request for information on the “regulatory tsunami” and its impact on jobs and the economy. The Chamber looks forward to your leadership of the Oversight and Government Reform Committee, and stands ready to work with you on these issues.

Sincerely,



William L. Kovacs

Enclosure

CHAMBER OF COMMERCE  
OF THE  
UNITED STATES OF AMERICA

RANDEL K. JOHNSON  
SENIOR VICE PRESIDENT  
LABOR, IMMIGRATION & EMPLOYEE  
BENEFITS

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January 13, 2010

The Honorable Darrell E. Issa  
Ranking Minority Member  
Committee on Oversight and Government Reform  
U.S. House of Representatives  
2157 Rayburn House Office Building  
Washington, DC 20515

**Re: Health Reform Regulations and their impact on the economy and jobs**

The U.S. Chamber of Commerce, the world's largest business federation *representing the interests of more than three million businesses and organizations of every size, sector, and region*, is pleased to provide this response to your request for information regarding the impact that the federal regulatory process is having on the economy and jobs. Thank you for your dedication to this highly important issue; we look forward to working with you as you explore this and other matters as the next Chairman of the Oversight and Government Reform Committee.

Following the passage of Health Reform, six interim final rules were published in a little over two months. This may be perhaps the most troublesome, extensive and broad reaching example of the subversion of appropriate regulatory procedure. Specifically, this regulatory implementation of health reform provides a text-book example of why interim final rules should not be issued for such significant and substantial regulatory provisions. Of the 15 employer related regulatory publications issued, virtually every publication has been followed by some form of correction – either in the form of sub-regulatory guidance revising prior regulatory language or the unusual issuance of an amended interim final regulation.

For two reasons, the argument that statutorily created effective dates mandate such an unusual and expedited regulatory process rings hollow:

1. These effective dates have been virtually impossible for employers to meet and regulatory Departments have responded by delaying enforcement, while still issuing regulations without the opportunity for public input prior to the effective dates. Although the corrections and the delays are better than the inappropriate rules and unattainable deadlines, they create further uncertainty and confusion as employers struggle to remain informed and compliant as to current legal responsibilities and regulatory requirements.

2. There are many reform requirements until the guidance is issued for which the Departments have deemed compliance voluntary (auto-enrollment, W-2 reporting to name a few). It seems the Departments are arbitrarily subverting the Administrative Procedure Act in order to meet statutory deadlines in some instances while simply declaring the delay of compliance and enforcement in others.

In an effort to address this questionable process, the US Chamber of Commerce worked with Senator Cornyn's office during the 111<sup>th</sup> Congress to draft the Public Accountability in Health Care Implementation Act (S. 3924). This legislation was introduced on the Senate floor on September 29, 2010, after a Congressional Research Service report found that 92% (11 out of 12) of PPACA's final rules issued in the first six months of implementation circumvented public comment. (See attached analysis.) This bill promoted transparency in the PPACA rulemaking process by requiring federal agencies to finalize IFRs— based on public comment— within 60 days.

We look forward to continuing to promote transparency and to insure appropriate public comment opportunities while the administrative regulatory agencies implement PPACA, a law which left tremendous rulemaking power to the Administration and affects all 300 million Americans and one-sixth of the American economy.

Should you wish to follow up on these issues, or other issues, please feel free to give me a call.

Sincerely,



Randel K. Johnson  
Senior Vice President  
Labor, Immigration & Employee Benefits  
U.S. Chamber of Commerce



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January 14, 2011

The Honorable Darrell Issa  
Chairman, U.S. House of Representatives Committee on Oversight and Government Reform  
2157 Rayburn House Office Building  
Washington, DC 20515-6143

Dear Chairman Issa,

The Commodity Markets Council (CMC) thanks you for the opportunity to identify proposed or existing regulations that are negatively impacting jobs in our industry, and on reforming the identified regulations and the rulemaking process. With the Commodity Futures Trading Commission (CFTC or Commission) still considering, drafting, or reviewing the majority of rules necessary to implement the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank or the Act), it is difficult to quantify the impact on jobs in the commodity derivatives industry. Therefore, the list we provide below is not exhaustive, and we look forward to a continuing dialogue as you endeavor to reform regulations and rulemaking in the 112<sup>th</sup> Congress.

CMC is a trade association bringing together exchanges with their industry counterparts. The activities of our members represent the complete spectrum of commercial users of all futures markets including agriculture. Specifically, our industry member firms are regular users of the Chicago Board of Trade, Chicago Mercantile Exchange, ICE Futures US, Kansas City Board of Trade, Minneapolis Grain Exchange, and the New York Mercantile Exchange. CMC is uniquely positioned to provide the consensus views of commercial end-users of derivatives exchanges and the exchange markets. Our comments below represent the collective view of CMC members.

The CMC and its members are long-standing proponents of integrity and transparency in U.S. futures markets. The competitive strength and viability of our markets and their ability to serve the price discovery and risk management needs of their users, is directly dependent on these principles. Without public confidence in adherence to these values, there can be no effective and efficient marketplace. Within this context, CMC is concerned that the adoption of unnecessary rules or the adoption of rules without sufficient deliberation will result in policies that hamper market efficiency, tie up capital, and constrain job growth. Specifically, CMC has three primary concerns with the implementation of the Act:

- 1) The rulemaking timeframe does not allow for thoughtful, robust industry comment and dialogue;
- 2) The isolated and atomistic approach adopted by the Commission ignores the inherent relationships that should exist between the rules; and
- 3) While the Act provides a detailed framework for implementation and the industry knew the Act required substantial rulemaking, the CFTC is using this opportunity to implement prescriptive regulations outside of that required by Dodd-Frank to already well-functioning commodity markets.

#### **1. Rulemaking Timeframe Restricts Thoughtful, Robust Industry Comment & Dialogue**

The rulemaking pace adopted by the Commission aims to meet the July 2011 implementation date set by the Dodd-Frank Act; however, the timeframe is so tight, the quantity of rules so large and the subject matter so complex, the industry is simply overwhelmed. For example, at a single public meeting on December 1, 2010, the Commission approved over 500 pages of rulemaking. With each rulemaking building on preceding rules and impacting subsequent rules, we believe it is imperative that industry and the Commission have adequate time and data to make prudent recommendations and comments. The current timeline provided in the Act does not allow for this.

Compounding the problem is the CFTC's refusal to ask for additional time or to prioritize systemically important rulemakings. With this kind of volume and speed, the industry and the regulatory agency are overwhelmed and simply not capable of providing the thoughtful comments the CFTC needs to implement sound public policy.

a. Disruptive Trading Practices Rules Are Overly Broad & Could Discourage Market Participation

The new rules outlined in the Act are intended to protect fair and equitable trading; however, CMC is concerned the statutory language is overly broad and if not implemented with precision could discourage market participation. This fear was voiced by CMC and other industry groups at the CFTC roundtable on this topic and we urge the Commission to strongly weigh it when drafting rules.

1. The statutory language is vague and all implementing rules should provide precision and clarity in order to avoid deterring or restricting legitimate trading activity.
2. Definitions of key terms need to be precisely crafted and the scope of application narrow.
3. The intent standard applied to "disruptive trade practices" should be extreme recklessness.

CMC urged the Commission, following extensive consultation with a broad spectrum of market participants, to promulgate specific "rules of the road" within each of the statutory categories. Anything less poses a threat to innocent traders and risks substantial harm to the markets. While the legislative goals are laudable, the means to achieve them must be fair and clear for all market participants. We believe doing so will serve the interests of the trade, lawmakers, regulators and the general public.

b. Proposed Rulemaking on Prohibition of Market Manipulation

Section 753(c)(1) of the Dodd-Frank Act seeks to proscribe fraud-based manipulative conduct. On its face, the provision borrows heavily from securities' statements and regulation. CMC advised the CFTC that clear differences between the securities and futures markets render this approach dubious at best. The analogue of an issuer with fiduciary obligations is simply not present in the futures world. Insider trading rules have only a limited application in futures markets, and are usually restricted to exchange or government personnel and information. Duties of disclosure flowing from fiduciary relationships have no parallel in futures markets. The effort to copy the statute and rules of one market and apply them to another that exists for different purposes and that functions in a different manner is inappropriate. CMC believes it will lead to confusion and disruption.

**2. The Commission Does Not Have A Team Responsible For a Holistic Reading Of The Rules**

The Commission set up 30 teams to draft the rules required under the Dodd-Frank bill; however, there appears to be no team responsible for a holistic reading of the rules or for facilitating the sharing of salient information between teams. We believe this silo approach risks implementing policies that could have a detrimental impacts on industry.

a. Swap Dealer Definition Is So Broad & The De Minimis Rules So Low It Drains Company Resources

An entity classified as a swap dealer under the new regulations must comply with heightened reporting, compliance, capital and margin requirements. The CFTC's refusal to exempt entities which are classified as a swap dealer in one asset class from being classified as a swap dealer in all asset classes means that a firm which was acting in full compliance with the law prior to the Dodd-Frank bill must now incur the cost of reviewing its business model and adopting all the changes (legal and otherwise) to return to

compliance. This will drain capital that could have gone to job growth and business development.

b. Swap Dealer Definition Fails To Account For Safeguards Already In Place

CMC supports the Commission in its mission to curb systemically risky institutions and instruments; however, we asked the CFTC to use caution in drafting definitions so broad as to impede the creation and flow of capital and liquidity in the financial markets.

For example, cleared over-the-counter (OTC) swaps are already subject to exchange rules of credit assessment and margining. Moreover, clearing members of the exchanges are subject to a thorough credit analysis and required to provide regular financial reporting. These clearing members in turn require a margin and credit analysis of their customers. Entities that exclusively trade exchange-cleared swaps mark their positions to market and are assessed a daily margin. The clearing house also verifies the provision and maintenance of adequate liquidity buffers to cover extreme markets swings.

CMC recommended to the Commission that entities that only trade exchange-cleared swaps should be exempt from the Swap Dealer definition. This would ensure that commercial end users continue to utilize deep OTC markets with adequate liquidity to effectively hedge their risks. We are concerned increased capital and margining requirements will correspondingly increase the cost of compliance and opportunity cost of capital for entities which only trade exchange-cleared OTC swaps. These costs could result in firms ceasing or reducing their use of such instruments which would decrease the liquidity of currently robust markets.

**3. The CFTC Is Using This Opportunity To Implement Overly Prescriptive Regulations & To Go Beyond The Act's Requirements**

We are concerned and disappointed the CFTC is using the Dodd-Frank legislation to not only implement a regulatory regime for unregulated OTC trading, but as an opportunity to propose unnecessary and extremely prescriptive regulations on already regulated derivative markets. These markets were not the cause of the 2008 financial crisis. In fact, these regulated markets operated exemplary under extreme market volatility and pressures. This abrupt shift away from principles-based to prescriptive regulation will not serve the industry in competing globally for market share and liquidity and could impact jobs and growth going forward.

a. The Commission Has Not Provided Empirical Evidence Necessitating The Imposition Of Speculative Position Limits

CMC believes Congress authorized<sup>1</sup> the Commission to set position limits only in the limited circumstances where excessive speculation has resulted in unwarranted price fluctuations. A review of the empirical evidence from multiple studies<sup>2</sup> shows supply and demand fundamentals and other macroeconomic factors, not speculation, proved to be the most significant factors driving the markets.

Against this background, CMC requested the Commission conduct a thorough empirical analysis of pricing and market data before it imposes any position limits on futures,

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<sup>1</sup> Section 4(a) of the Commodities Exchange Act, as amended by the Dodd-Frank Act, makes clear the Commission's authority to set position limits is designed not to restrict speculation, but to prevent "unwarranted and unreasonable fluctuations resulting from excessive speculation...". Moreover, the statute mandates that before position limits are imposed, the Commission must find (1) that there has been "excessive speculation" and (2) that the excessive speculation has resulted in "unwarranted and unreasonable price fluctuations."

<sup>2</sup> See, e.g., CFTC Interagency Task Force on Commodity Markets, Interim Report on Crude Oil at 3-4 (July 22, 2008); Michael Haigh et al., Market Growth, Trader Participation and Pricing in Energy Futures Markets (Feb. 7, 2007) and GAO-09-285R, Issues Involving the Use of the Futures Markets to Invest in Commodity Indexes at 5 (Jan. 30, 2009).

options or swaps contracts in exempt or agricultural commodities. CMC believes this is a subject best left to futures exchanges to address through existing market surveillance programs on a contract by contract basis. Exchanges have developed an expertise in maintaining orderly markets, including setting appropriate reportable levels, position limits and accountability levels relative to energy, metal and agricultural markets. This system provides the flexibility necessary to prevent excessive speculation while preserving transparent and liquid markets.

CMC believes this flexible regulatory approach is a more effective way to address potentially manipulative and disruptive positions. Indeed, the failure of any empirical studies to identify unwarranted price fluctuations due to excessive speculation suggests these programs have been successful in promoting market stability and avoiding unwarranted disruptions. Imposing artificial position limits in this context could harm market liquidity.

If the Commission makes the necessary findings supported by demonstrable evidentiary data, CMC urged the Commission to proceed cautiously and judiciously in setting limits for given futures, options or swaps. The new Dodd-Frank amendments contain various and somewhat confusing timing requirements for the exercise of the Commission's authority in this area, but they all vest the Commission with discretion, premised upon the necessary findings, to establish limits "as appropriate." Thus, the Act contains an element of flexibility so the Commission need not act until it deems position limits in a given area are "appropriate."

It is also important to note that CMC is concerned with reports that the Commission may set concentration limits on all market participants. Such limits, which would apply to bona fide hedgers, would cap the position of market participants at a certain percentage of the open interest of the spot month and all months combined. If such a proposal materializes it would apply to bona fide hedgers in direct contradiction to the law.

b. Sophisticated Market Participants Are Required To Provide Detailed Disclosures, Increasing The Cost Of Trading

The Commission's proposed rules require Swap Dealers and Major Swap Participants (MSP) to verify that a counterparty is an Eligible Contract Participant (ECP), to provide detailed disclosures of the risks in the trades and to provide daily mark-to-market quotations. While this may not be an overly onerous requirement for the Swap Dealer or MSP, the costs incurred by the counterparties in meeting these requirements will increase the cost of trading.

c. FCM Investment Restrictions May Lead To Increased Customer Costs

For Futures Commission Merchants (FCMs), the CFTC recently issued proposed rules limiting the kind of investments that can be used in connection with customer funds. By severely restricting customer fund investment to very low risk instruments, FCMs may be forced to find return elsewhere, including increasing customer costs.

CMC is a long-standing proponent of integrity and transparency in U.S. futures markets. We support the effort both by lawmakers and the CFTC to curb systemically risky institutions and instruments. The businesses of all our member firms depend upon the efficient and competitive functioning of the risk management products traded on U.S. futures exchanges. The Commission's diligent oversight efforts have fostered Exchange innovation and technology adoption. We have seen the commodity markets grow and prosper. They have become deeper and more liquid, narrowing bid/ask spreads and improving hedging effectiveness and price discovery. Meanwhile, liquidity, technology, clearing quality, price and customer service has driven market selection. All of these developments serve the interests of the trade as well as the public.

One of the economic benefits of efficient commodity markets is that they free up capital allowing businesses to invest and grow. Compelling businesses to comply with unnecessary or hastily drafted rules will divert resources away from job growth and business development. In a global marketplace, CMC has seen businesses seek out the liquidity of US commodity markets. To ensure that this continues, we believe it is imperative the rulemaking process of the Dodd-Frank Act take into account the unique nature and outstanding track record of US exchanges.

CMC thanks you for the opportunity to share our thoughts, and we look forward to meeting with you, your colleagues on the committee and your staff in the near future. If you have any questions or would like to discuss further, please do not hesitate to contact me via email at [christine.cochran@commoditymks.org](mailto:christine.cochran@commoditymks.org) or via phone at (202) 842-0400 – ext. 101.

Regards,



Christine M. Cochran  
President  
Commodity Markets Council

Attachments:

For your records, we are including CMC's recent public record filings with the CFTC

- Ag swaps coalition letter
- CMC letter on agricultural swaps
- CMC letter on Carbon Study
- CMC letter on ag commodity definition
- CMC letter on Title VII definitions
- CMC letter on disruptive trade practice
- CMC letter on market manipulation
- CMC pre-comment letter on speculative position limits

October 28, 2010

David A. Stawick  
Secretary  
Commodity Futures Trading Commission  
Three Lafayette Centre  
1155 21st Street, NW  
Washington, DC 20581

**RE: *Advanced Notice of Proposed Rulemaking and Request For Public Comment on Agricultural Swaps (Federal Register Release 75 FR 59666)***

Dear Mr. Stawick,

In response to the Commodity Futures Trading Commission's (CFTC or Commission) presentation before the Agriculture Advisory Committee in August on agricultural swaps and in response to the advanced notice of proposed rulemaking, we would like submit the following comments for your consideration.

We, the undersigned organizations, represent end-users of all U.S. futures markets. The members of our respective organizations trade regularly on the Chicago Board of Trade, Chicago Mercantile Exchange, ICE Futures US, Kansas City Board of Trade, Minneapolis Grain Exchange, and New York Mercantile Exchange.

Ag swaps are used, to varying degrees, by our members because they provide a targeted, customized, cost-effective, and efficient risk management strategy. They offer contract characteristics outside of what is generally available on regulated futures markets. These products are not used to replace regulated exchange-traded contracts. Rather, they complement exchange products and enhance the overall offering of tools available to market users to satisfy their specific risk management needs. In a world with increasing inherent volatility, the need for risk management instruments has never been greater.

We urge the Commission to treat swaps for all commodities harmoniously. We believe the comprehensive regulation of swaps should not be based on distinctions among commodity types. The generally applicable protections under the Dodd-Frank Bill – such as reporting, mandatory clearing, mandatory trading of standardized swaps, minimum capital requirements, and the CFTC's authority to impose position limits, determine which swaps are subject to clearing and trading and to exercise emergency powers – will protect ag swaps from fraud and manipulation.

We look forward to working with the Commission, the commodities industry (including both hedgers and speculators), and the U.S. futures exchanges to find ways to accommodate the demand for better risk instruments – including customized products like swaps.

Sincerely,

American Farm Bureau Federation  
American Soybean Association  
Commodity Markets Council  
National Association of Wheat Growers  
National Cattlemen's Beef Association  
National Corn Growers Association



Commodity Markets Council  
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December 17, 2010

David Stawick  
Secretary  
Commodity Futures Trading Commission  
Three Lafayette Centre  
1155 21st Street, NW  
Washington, DC 20581

**RE: 75 FR 72816, Public Input for the Study Regarding the Oversight of Existing and Prospective Carbon Markets**

Dear Mr. Stawick:

The Commodity Markets Council ("CMC") appreciates the opportunity to submit the following comments for consideration by the Commodity Futures Trading Commission ("CFTC" or "Commission") regarding the congressionally mandated study of the oversight of existing and prospective carbon markets as set out in the November 23, 2010 Federal Register.

CMC is a trade association bringing together exchanges and their industry counterparts. The activities of our members represent the complete spectrum of commercial users of all futures markets including energy and agriculture. Specifically, our industry member firms are regular users of the Chicago Board of Trade, Chicago Mercantile Exchange, ICE Futures US, Kansas City Board of Trade, Minneapolis Grain Exchange and the New York Mercantile Exchange. CMC is uniquely positioned to provide the consensus views of commercial and end users of derivatives. Our comments represent the collective view of CMC members.

The businesses of all our member firms depend upon the efficient and competitive functioning of the risk management products traded on U.S. futures exchanges. Through the Commission's diligent oversight efforts fostering Exchange innovation and technology adoption, we have seen the commodity markets grow and prosper. Carbon markets offer similar opportunities for growth and innovation. Moving forward, we see trading greenhouse gas allowances as part of a market participant's overall energy portfolio – with the products trading much the same way energy products trade today. As such, we believe the CFTC is well-positioned to draw on its experience to regulate the carbon market.

The CMC's select responses to the specific questions asked in the Federal Register are as follows:

2. What are the basic economic features that might be incorporated in a carbon market that would have an effect on-market oversight provisions—e.g., the basic characteristics of allowances, frequency of allocations and compliance obligations, banking of allowances, borrowing of allowances, cost containment mechanisms, etc.?

**RESPONSE:** There are several critical aspects to well-functioning carbon markets. Any structure must have well established clear rules for the approval and issuance of offset credits eligible in the United States. There must also be a timely process for approval to accompany these rules. The U.S. allowance and offset credit market should ideally be fungible with the existing global market and therefore the U.S. registry must be linked to other international registries issuing and housing credits. The unique nature of global carbon markets may require novel approaches to addressing liquidity considerations. It may be appropriate to consider the establishment of a central carbon bank holding a defined reserve of permits for use in strictly defined circumstances.

3. Do the regulatory objectives differ with respect to the oversight of spot market trading of carbon allowances compared to the oversight of derivatives market trading in these instruments? If so, explain further.

**RESPONSE: No.**

4. Are additional statutory provisions necessary to achieve the desired regulatory objectives for carbon markets beyond those provided in the Commodity Exchange Act, as amended by the Dodd-Frank Act, or other federal acts that may be applicable to the trading of carbon allowances?

**RESPONSE: Only to the extent the previously described issues in Question 2 would require statutory changes.**

5. What regulatory methods or tools would be appropriate to achieve the desired regulatory objectives?

**RESPONSE: The current tools embedded in the Commodity Exchange Act should be sufficient.**

6. What types of data or information should be required of market participants in order to allow adequate oversight of a carbon market? Should reporting requirements differ for separate types of market participants?

**RESPONSE: Compliance participants in the market should be subject to public reporting of measured emissions each year, allocation of free permits from the issuing body and expected emission reduction targets. Financial investors should be subject to normal regulatory disclosures.**

7. To what extent is it desirable or not desirable to have a unified regulatory oversight program that would oversee activity in both the secondary carbon market and in the derivatives markets?

**RESPONSE: It is extremely desirable to have a unified body in order to avoid conflicting or unclear regulatory overlap.**

8. To what extent, if any, and how should a U.S. regulatory program interact with the regulatory programs of carbon markets in foreign jurisdictions?

**RESPONSE: Global carbon markets tend to be guided by the decisions of governments about the quantity and quality of eligible offsets. In the short term, it seems the United States or market sponsors need to make similar decisions, as well as what off-shore offsets will qualify. All this speaks to the previously mentioned need to link U.S. registries with other international registries, creating a fungible commodity. Longer term, the U.S. market should be part of a global market of shared allowances and regulatory structures should engage internationally, as necessary and appropriate.**

The CMC thanks the Commission for the opportunity to present its views on this most important subject. If you have any questions or would like to discuss further, please do not hesitate to contact me via email at [christine.cochran@commoditymks.org](mailto:christine.cochran@commoditymks.org) or via phone at (202) 842-0400 – ext. 101. Thank you in anticipation of your attention to these comments.

Regards,



Christine M. Cochran  
President



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November 24, 2010

Mr. David A. Stawick  
Secretary  
U.S. Commodity Futures Trading Commission  
Three Lafayette Centre  
1155 21<sup>st</sup> Street, NW  
Washington, DC

**Re: Agricultural Swaps ANPRM; Agricultural Commodity Definition (RIN 3038 – AD21)**

Dear Mr. Stawick,

The Commodity Markets Council (“CMC”) appreciates the opportunity to comment during the process of rulemaking by the Commodity Futures Trading Commission (“CFTC” or “Commission”) in response to the Dodd-Frank Wall Street Reform and Consumer Protection Act (“Act”).

CMC is a trade association bringing together exchanges with their industry counterparts. The activities of our members represent the complete spectrum of commercial users of all futures markets including agriculture. Specifically, our industry member firms are regular users of the Chicago Board of Trade, Chicago Mercantile Exchange, ICE Futures US, Kansas City Board of Trade, Minneapolis Grain Exchange, and the New York Mercantile Exchange. CMC is uniquely positioned to provide the consensus views of commercial end-users of derivatives exchanges and the exchange markets. Our comments below represent the collective view of CMC members.

CMC is supportive of the Commission’s efforts to define an “agricultural commodity”, and of the four categories of agricultural commodities spelled out by the CFTC in its proposed rule issued on October 26, 2010. We agree with the CFTC’s classification of agricultural commodities based on their enumeration and the primary purpose for which they are used. We also support the inclusion in their own separate category of other commodities that are widely accepted as being agricultural in nature, but that do not fit neatly into any other category based on the parameters described above. Finally, we support the delineation of commodity-based contracts in the final category as listed by the Commission, pursuant to whether such contracts are based principally or wholly on a single underlying agricultural commodity.

However, because defining agricultural commodities is a new endeavor for the CFTC, the CMC believes it would be prudent to guard against the consequences that may result from the inclusion or exclusion of specific commodities in / from the definition. The futures industry is innovative and rapidly evolving, and as such, we believe that neither regulators nor market participants can entirely and accurately foresee the nature of new products and the future impact of regulatory decisions made at this time without anticipation of such developments.

We therefore urge the Commission to provide for an appeals process for new instruments. To elaborate, we request that a consistent process and time period be instated for appealing a CFTC decision to include or exclude a particular commodity from the list of agricultural commodities. We acknowledge that the CFTC in its ANPRM has made a provision for public hearings for Category 3 agricultural commodities, but we request that a process for public comments and appeals be made broadly available in the context of including or excluding an agricultural commodity under any category of the definition.

If you have any questions or would like to discuss further, please do not hesitate to contact me via email at [christine.cochran@commoditymkt.com](mailto:christine.cochran@commoditymkt.com) or via phone at (202) 842-0400 – ext. 101. Thank you in anticipation of your attention to these comments.

Regards,

A handwritten signature in black ink, appearing to read 'Christine M. Cochran', written in a cursive style.

CHRISTINE M. COCHRAN  
President



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October 28, 2010

Mr. David A. Stawick  
Secretary  
U.S. Commodity Futures Trading Commission  
Three Lafayette Centre  
1155 21<sup>st</sup> Street, NW  
Washington, DC

**Re: Advanced Notice of Proposed Rulemaking and Request For Public Comment on  
Agricultural Swaps (Federal Register Release 75 FR 59666)**

Dear Mr. Stawick,

The Commodity Markets Council ("CMC") appreciates the opportunity to comment during the process of rulemaking by the Commodity Futures Trading Commission ("CFTC" or "Commission") in response to the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Act").

CMC is a trade association bringing together exchanges with their industry counterparts. The activities of our members represent the complete spectrum of commercial users of all futures markets including agriculture. Specifically, our industry member firms are regular users of the Chicago Board of Trade, Chicago Mercantile Exchange, ICE Futures US, Kansas City Board of Trade, Minneapolis Grain Exchange, and the New York Mercantile Exchange. CMC is uniquely positioned to provide the consensus views of commercial end-users of derivatives exchanges and the exchange markets. Our comments below represent the collective view of CMC members.

Agricultural swaps are used, to varying degrees, by our members because they provide a targeted, customized, cost-effective and efficient risk management strategy. They offer contract characteristics outside of what is generally available on regulated futures markets. These products are not used to replace regulated exchange-traded contracts. Rather, they complement exchange products and enhance the overall offering of tools available to market users to satisfy their specific risk management needs. In a world with increasing inherent volatility, the need for risk management instruments has never been greater.

**Harmonious Treatment of Agricultural Swaps Is in the Public Interest**

As Senators Dodd and Lincoln stated in their June 30, 2010 letter to Representatives Frank and Peterson, "derivatives are an important tool businesses use to manage costs and market volatility," regardless of whether they are used by an airline hedging its fuel costs or a global manufacturing company hedging interest rate risk. Accordingly, we urge the Commission to treat swaps for all commodities harmoniously. We believe the comprehensive regulation of swaps should not be based on distinctions among commodity types. The generally applicable protections under the Act - such as reporting, mandatory clearing, mandatory trading of standardized swaps, minimum capital requirements, and the CFTC's authority to impose position limits, determine which swaps are subject to clearing and trading, and to exercise emergency powers - will protect agricultural swaps from fraud and manipulation.



While we encourage the Commission to set the same requirements for eligible contract participants ("ECP") across all asset classes, we believe there should be no ECP requirement for agricultural swaps traded on a designated contract market ("DCM").

Historically, the Commission and lawmakers subjected agricultural commodities to a greater degree of regulation and oversight as part of a policy to protect producers. We believe the protection already embedded in the Act will provide the necessary safeguards for producers and other market participants. For example, if neither party to a swap agreement was an end-user, the Act requires the transaction to be traded on a DCM or swaps execution facility. Such transactions must be cleared. If an entity is trading as an end-user, the Act already requires the entity to be an ECP. In either situation, we believe these safeguards are in the public interest.

Moreover, these protections embedded in the Act could be averted if the Commission were to maintain the current regulatory structure for agricultural swaps under Part 35. For example, an agricultural swap entered into under the existing Part 35 regulations would be excluded from the clearing and exchange-trading requirements of the Act. This loophole would also allow such participants to evade the swap dealer and major swap participant regulations.

**Cash Forward Contracts With Embedded Options and Certain Cash Transaction Book-outs Should Not be Treated as "Swaps"**

While recognizing these trades are different, CMC believes embedded options in forward contracts and, separately, book-outs from certain cash transactions should not be treated as swaps. Each of these markets has been historically recognized by the Commission as cash and we merely seek confirmation of this from the CFTC as the proposed rules affecting agricultural transactions move forward. Regardless of whether these trades are made with producers or are between commercial entities, so long as the parties to the transaction have the intention of physical delivery, they should continue to be treated as cash and not become subject to regulation as a swap. CMC believes these transactions are significant to the agricultural cash market; any change in the characterization would reduce cash contract opportunities for producers and disrupt export markets in bulk agricultural commodities.

From a producer perspective, treating embedded options as swaps would deny them access to cash contracts that allow them improved pricing opportunities. These contracts require delivery, but hold open final pricing until the producer sets his basis under the terms of the contract. The CMC requests the Commission to reaffirm its position that these transactions fit within the exclusion for cash forward transactions under the Act.

Similarly, if book-outs are treated as swaps, CMC believes it could hinder the net settlement of physical transactions and place the Commission in the position of regulating what is, in fact, a vibrant piece of the cash market between commercial participants. Senators Dodd and Lincoln in their letter to the CFTC expressly excluded from the definition of swaps the situation where "commercial parties agree to book-out their physical delivery obligations under a forward contract." Accordingly, CMC respectfully urges the Commission to grant an exclusion from rules regulating agricultural swaps for book-outs, so long as such transactions are intended to be physically settled.

Because of the importance of this distinction to the agricultural industry, CMC requests the CFTC expressly state in its rulemaking that embedded options in forward contracts and book-outs are not swaps and therefore will not be regulated as such.

Below are CMC's answers to the Commission's specific questions.

### **Current Agricultural Swaps Business**

- 1. *How big is the current agricultural swaps business—including both agricultural swaps trading under current part 35 and ATOs under §§ 32.4 and 32.13(g) of the Commission's regulations?***

Unlike other forms of swaps, agricultural swaps markets are not as fully developed; however, we believe they are robust and, as we discussed above, serve an important function for the industry. Until the industry has in place reporting requirements, it is difficult to estimate the size of the agricultural swaps market.

- 2. *What types of entities are participating in the current agricultural swaps business?***

We believe the participants in the agricultural swaps markets are very similar to those using futures and options for risk management. These include grain trading and processing firms, elevator operators, energy companies, swaps dealers, proprietary trading firms, and others.

- 3. *Are agricultural swaps/ATO participants significantly different than the types of entities participating in other physical commodity swaps/trade options?***

CMC believes the participants in the agricultural swaps and agricultural trade options (ATOs) markets are not significantly different from the entities participating in the market for other physical commodity swaps/trade options. Similar to our answer to question 2, we believe market participants use agricultural swaps and ATOs in the same way users of other physical commodity swaps/trade options use those products.

### **Agricultural Swaps Clearing**

- 4. *What percentage of existing agricultural swaps trading is cleared vs. non-cleared?***

Until the industry has in place reporting requirements, it is difficult to estimate the size of the agricultural swaps market.

- 5. *What percentage of existing agricultural swaps would be eligible for the commercial end-user exemption from the mandatory clearing requirement?***

Based on our understanding of the end-user exemption and the composition of market participants, we believe most users of commodity index swaps would not qualify for the commercial end user exemption. However, based on a survey of our membership, we believe that many users of individual commodity swaps such as grain traders and processors, energy companies, and elevator operators likely would qualify for the end-user exemption.

A definitive answer to this question - and several other similar questions asked by the Commission - would depend fundamentally on how the CFTC defines a "swap". If embedded options in a physical contract or book-outs are defined as "swaps", then the percentage would be higher. As stated above, the CMC believes that such transactions should not be defined as swaps, as the core business models of several companies that currently engage productively in the commodities markets would be dramatically and adversely impacted.

The CMC strongly supports the CFTC's efforts to bring more transparency to the markets, but respectfully cautions that a "swaps" definition that is overly broad and captures too many transactions would be economically detrimental to the markets and market participants, including

commercial end users. A practical example of such a detrimental effect would be the widening of bid-ask spreads from the current 2-3 cents to 30-40 cents in most agricultural commodities. This would result in the drying up of liquidity.

6. *What percentage of trading would be subject to the Dodd-Frank clearing requirement, if that requirement applied automatically to agricultural swaps (other than those eligible for the commercial end-user exemption)?*

Unless the Commission retained the existing regulations under Part 35, as we discussed above, our belief is the majority of agricultural swaps currently being traded would be subject to the clearing requirement.

7. *What would be the practical and economic effect of a rule requiring agricultural swaps transactions (other than those eligible for the commercial end-user exemption) generally to be cleared? The Commission is interested in the views of agricultural swaps market participants (both users and swap dealers) regarding a potential clearing requirement for agricultural swaps.*

CMC anticipates the practical and economic effects of mandatory clearing for agricultural swaps to be both positive and negative. Positively, we expect to see a reduction of systemic risk by mutualizing risk in the central counterparty clearing system. We also believe resources will be more efficiently allocated with a reduced need to evaluate creditworthiness of counterparties and improved market liquidity by reducing concern over counterparty credit risk.

While we expect to see these very strong positives from mandated clearing, we also anticipate negative effects as well. For example, we expect to see an increase in the number and use of more standardized transactions. Correspondingly, we believe there will be a loss of innovation as customers lose the benefit of tailored risk management tools. We also anticipate increased costs from the capital and margin requirements for clearing. Exchanges have proven their efficiency at setting margins on standard contracts, but, historically, they have not had the necessary experience to effectively establish margin for bilateral transactions.

8. *What would be the practical and economic effect of requiring agricultural swaps to be cleared under the Dodd-Frank clearing regime?*

See our answers above.

#### **Trading**

9. *Have current agricultural swaps/ATO participants experienced any significant trading problems, including:*
- (a) economic problems (i.e., contracts not providing an effective hedging mechanism, or otherwise not performing as expected);*
  - (b) fraud or other types of abuse; or*
  - (c) difficulty gaining access to the agricultural swaps market?*

We are not aware of any trading problems; however, we believe participants in ATO markets have been extremely limited due to the complicated process for complying with ATO rules.

Access to calendar swaps for corn, wheat and soybeans was enhanced following CFTC approval of CME Group's 4c and 4d petitions for these products, as was access to the swaps on soft commodities and wheat offered by ICE Clearing U.S. and KCBT Clearing, which allowed them to be offered to eligible contract participants.

#### **Agricultural Swaps Purchasers**

***10. Do agricultural swaps/ATO purchasers need more protections than participants in other physical commodity swaps/trade options?***

As we explained above, we do not believe agricultural swaps/ATO purchasers need more protections than participants in other physical commodity swaps or trade options.

***11. If so, why, and what should those protections be?***

See our answer to question 10.

***12. Would additional protections for agricultural swaps purchasers unduly restrict their risk management opportunities?***

Yes. Additional protections for agricultural swaps purchasers likely would restrict their risk management opportunities. Requiring additional protection for agricultural swaps purchasers may increase the costs associated with entering such swaps and decrease the liquidity of the agricultural swap market. CMC believes that the Act offers ample protections for all swap market participants and there is no reason to extend additional protections to purchasers of agricultural swaps.

***13. Should the Commission consider rules to make it easier for agricultural producers to participate in agricultural swaps—for example, by allowing producers who do not qualify as ECPs to purchase agricultural swaps?***

As stated above, we encourage the Commission to set the same requirements for ECPs across all asset classes; however, we encourage the CFTC to allow non-ECP market participants to continue to trade in agricultural swaps on DCMs. Market participants should have the same ability to engage in agricultural swaps as they do other swaps.

CMC would recommend against allowing non-ECPs to engage in OTC agricultural swaps. Because agricultural swap participants and instruments are similar to other asset classes, the rules and regulations that apply to agricultural swaps should be the same as those that apply to other swaps. While we see no reason to restrict trading in agricultural swaps any more than for other swaps, we also do not believe there is any reason to expand it beyond the boundaries outlined in the Commodity Exchange Act or the Dodd-Frank Act.

#### **Designated Contract Markets**

***14. Should agricultural swaps transactions be permitted to trade on DCMs to the same extent as all other swaps are permitted on DCMs?***

Yes, CMC believes that the rules and regulations applicable to non-agricultural swaps should apply with equal force to agricultural swaps, including rules with respect to trading on DCMs.

15. *If yes, why?*

Market participants use agricultural swaps for the same purposes as other swaps, i.e. hedging and speculation. DCMs are already subject to comprehensive regulation by the CFTC and this regulation offers a suitable level of protection for those market participants who choose to trade swaps on DCMs. Furthermore, permitting agricultural swaps to trade on DCMs would increase market transparency.

16. *If no, what other requirements, conditions or limitations should apply?*

CMC believes no other requirements, conditions or limitations should apply.

**Swap Execution Facilities**

17. *Should agricultural swaps transactions be permitted on SEFs to the same extent as all other swaps are permitted to transact on SEFs?*

Yes, CMC believes that the rules and regulations applicable to non-agricultural swaps should apply with equal force to agricultural swaps, including rules with respect to trading on SEFs.

18. *If yes, why?*

ECPs use agricultural swaps for the same purposes as other swaps, i.e., hedging and speculation, and should have the same tools available for all physical commodity swaps, whether agricultural commodities or not.

19. *If no, what other requirements, conditions or limitations should apply?*

CMC believes no other requirements, conditions or limitations should apply.

**Trading Outside of DCMs and SEFs**

20. *Should agricultural swaps be permitted to trade outside of a DCM or SEF to the same extent as all other swaps?*

Yes, CMC believes that the rules and regulations applicable to non-agricultural swaps should apply with equal force to agricultural swaps, including rules with respect to trading in the OTC market.

21. *If yes, why?*

Under the Act, only ECPs may transact swaps in the OTC market and most standardized swaps must be cleared and exchange-traded. ECPs can evaluate and manage appropriately the risks associated with OTC swaps and the Commission should not restrict their ability to enter agricultural swaps.

Moreover, market participants use agricultural swaps for the same purposes that they use other swaps and we are aware of no specific evidence that indicates users of these swaps need more (or fewer) protections than the users of other swaps.

Over the past decade, the various agricultural constituencies have come to rely more on OTC agricultural products and the technologies that facilitate trading in these products. We have also seen the development of a core group of commercial firms who have demonstrated experience in

servicing as dealers in the OTC market for agricultural swaps. The Commission should allow the OTC agricultural swap market to develop and evolve naturally without hindering the creation of liquidity, just as in the cases of OTC market for other commodities.

**22. If no, what other requirements, conditions or limitations should apply?**

CMC believes no other requirements, conditions or limitations should apply.

**23. Should agricultural swaps be permitted to trade outside of a DCM or SEF to a different extent than other swaps due to the nature of the products and/or participants in the agricultural swaps market?**

No. CMC believes that agricultural swaps should be permitted to trade outside of a DCM or SEF to the same extent as other swaps.

**24. In general, should agricultural swaps be treated like all other physical commodity swaps under Dodd-Frank?**

Yes, agricultural swap should be treated like all other physical commodity swaps under the Act.

**25. If yes, why?**

The Act establishes a comprehensive regulatory scheme that both promotes the stability of the U.S. financial system and provides protections for individual market participants. We are aware of no difference between agricultural swaps and swaps in other physical commodities that would require different treatment for agricultural swaps. Moreover, treating agricultural swaps just like all other physical commodity swaps would enhance depth and liquidity in the markets.

**26. If no, are there any additional requirements, conditions or limitations not already discussed in other answers that should apply?**

CMC believes no other requirements, conditions or limitations should apply.

**27. If agricultural swaps are generally treated like swaps in other physical commodities, are there specific agricultural commodities that would require special or different protections?**

As stated above, CMC believes agricultural swaps should be treated identically with other swaps. There are no specific agricultural commodities that would require special or different protections.

If you have any questions or would like to discuss further, please do not hesitate to contact me via email at [christine.cochran@commoditymktcs.org](mailto:christine.cochran@commoditymktcs.org) or via phone at (202) 842-0400 – ext. 101. Thank you in anticipation of your attention to these comments.

Sincerely,



Christine M. Cochran  
President  
Commodity Markets Council



Commodity Markets Council  
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Washington, DC 20005  
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January 3, 2011

*VIA Electronic Mail*

Mr. David Stawick  
Secretary of the Commission  
Commodity Futures Trading Commission  
Three Lafayette Centre  
1155 21<sup>st</sup> Street, N.W.  
Washington, DC 20581

**RE: Advanced Notice of Proposed Rulemaking On Disruptive Trading Practices  
RIN No. 3038-AD4**

Dear Mr. Stawick:

Commodity Markets Council ("CMC"), on behalf of its many members, welcomes the opportunity to submit the following comments to the Commodity Futures Trading Commission ("CFTC" or "Commission") regarding its Advance Notice of Proposed Rulemaking ("ANPR") with respect to Section 747 of the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank"), Antidisruptive Trading Practices.

The new rules outlined in the Dodd-Frank Act are intended to protect fair and equitable trading; however, CMC is concerned the statutory language is overly broad and if not implemented with precision could discourage market participation. This fear was voiced by CMC and other industry groups at the CFTC roundtable on this topic and we urge the Commission to strongly weigh it when drafting rules. There are three principles CMC would like to see the CFTC follow in any future rulemaking:

1. The statutory language is vague and all implementing rules should provide precision and clarity in order to facilitate legitimate trading activity.
2. Definitions of key terms need to be precisely crafted and the scope of application narrow.
3. The standard applied to "disruptive trade practices" should be intentional, deliberate or extreme recklessness.

CMC is a trade association bringing together exchanges and their industry counterparts. The activities of our members represent the complete spectrum of commercial users of all futures markets including energy and agriculture. Specifically, our industry member firms are regular users of the Chicago Board of Trade, Chicago Mercantile Exchange, ICE Futures US, Kansas City Board of Trade, Minneapolis Grain Exchange and the New York Mercantile Exchange. CMC is uniquely positioned to provide the consensus views of commercial and end users of derivatives. Our comments represent the collective view of CMC members.

The businesses of all our member firms depend upon the efficient and competitive functioning of the risk management products traded on U.S. futures exchanges. Through the Commission's diligent oversight efforts that have fostered Exchange innovation and technology adoption, we have seen the commodity markets grow and prosper. They have become deeper and more liquid, narrowing bid/ask spreads and improving hedging effectiveness and price discovery. Meanwhile, liquidity, technology, clearing quality, price and customer service have driven market selection. All of these developments serve the interests of the trade as well as the public.

#### **A. Vague Statutory Language**

Section 747 of Dodd-Frank makes it unlawful for any person to engage in any trading practice or conduct subject to the rules of a registered entity that

- (a) “violates bids or offers”,
- (b) “demonstrates intentional or reckless disregard for the orderly execution of transactions during the closing period,” or
- (c) “ is of the character of, or is commonly known as ‘spoofing’ (bidding or offering with the intent to cancel the bid or offer before execution.”)

CMC believes this language is far too broad and will encompass within its expansive arms otherwise legitimate trading practices and strategies. While the CMC shares Congress’ goals of greater market transparency and preserved integrity, the vagueness of the language risks discouraging market participants from trading out of fear their actions may later be determined illegal – with potentially severe consequences.

Additionally, the section grants the CFTC rulemaking authority to prohibit “... any other trading practice that is disruptive of fair and equitable trading.” CMC encourages the Commission to narrowly interpret and clarify this language. Arguably, it cedes legislative authority to the CFTC and raises serious constitutional issues regarding separation of powers.

#### **B. Definition and Clarify Needed**

CMC wishes to add to the concerns we and other industry groups voiced at the Commission’s recent roundtable as well as the rising chorus of industry participants who have decried the vagueness of the legislation’s language and urges the CFTC to adopt regulations implementing Section 747 that provide clarity and precision in defining the proscribed conduct. Absent clearly defined standards of conduct, legitimate trading practices will be chilled, thereby affecting adversely the depth and liquidity of the futures and swaps markets. Congress could not have intended such a result.

The statutory terms “violate bids and offers”, “orderly execution of transactions during the closing period” and “spoofing” need clarity and precise definition. They can have multiple meanings from one context to the next. For example, “violate bid and offers” has most frequently been associated with the open outcry environment. It appears to have no application to the electronic trading world where matching algorithms preclude bids and offers from being violated. CMC urges the Commission to draft rules clarifying the language and limiting its application to open outcry venues and only intentional or extremely reckless actions to violate bids and offers are prohibited.

Similarly, CMC recommends the CFTC provide precise clarity on what is meant by orderly execution during the “closing period” and “spoofing.” Market participants must be provided with specific standards to which to conform their conduct. “Orderly execution”, “closing period” and “spoofing” without precise definition are dangerously elastic terms.

#### **C. Only Intentional Conduct Proscribed**

With respect to the practices identified in (A) through (C) of Section 747, CMC believes it is imperative the Commission also make clear that no violation occurs unless the person acts intentionally, deliberately or with extreme recklessness. Extreme recklessness requires a showing either (1) that the alleged offender knew that the conduct was prohibited or (2) that the conduct was so obviously wrong that the alleged offender must have known it was prohibited. Any lesser standard may ensnare inadvertent actions within the ambit of proscribed conduct, thereby chilling market participation and impairing liquidity.

CMC urges the Commission, following extensive consultation with a broad spectrum of market participants, to promulgate specific "rules of the road" within each of the statutory categories. Anything less poses a threat to innocent traders and risks substantial harm to the markets. While the legislative goals are laudable, the means to achieve them must be fair and clear for all market participants. We believe doing so will serve the interests of the trade, lawmakers, regulators and the general public.

The CMC thanks the Commission for the opportunity to present its views on this most important subject. If you have any questions or would like to discuss further, please do not hesitate to contact me via email at [christine.cochran@commoditymkt.com](mailto:christine.cochran@commoditymkt.com) or via phone at (202) 842-0400 – ext. 101. Thank you in anticipation of your attention to these comments.

Regards,



Christine M. Cochran  
President



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January 3, 2011

*VIA Electronic Mail*

Mr. David Stawick  
Secretary of the Commission  
Commodity Futures Trading Commission  
Three Lafayette Centre  
1155 21<sup>st</sup> Street, N.W.  
Washington, DC 20581

**RE: Notice of Proposed Rulemaking On Prohibition of Market Manipulation  
RIN No. 3038-AD2**

Dear Mr. Stawick:

Commodity Markets Council ("CMC"), on behalf of its many members, welcomes the invitation to submit the following comments to the Commodity Futures Trading Commission ("CFTC" or "Commission") Notice of Proposed Rulemaking ("NOPR") on prohibition of market manipulation.

The CMC and its members are long-standing proponents of integrity and transparency in U.S. futures markets. The competitive strength and viability of our markets and their ability to serve the price discovery and risk management needs of their users, is directly dependent on these principles. Without public confidence in adherence to these values, there can be no effective and efficient marketplace.

It is equally important market participation does not become the unintended victim of overly broad and ill-conceived efforts to promote market integrity. The CFTC's mission is two pronged. The Commission is tasked with protecting market users and the public from fraud, manipulation and abusive practices, while at the same time, fostering open, competitive and financially sound markets. Poorly crafted legislative language designed to protect against fraud or deception may risk grave harm to the markets and fail to provide real protection for its participants. Absent well-defined rules tailored to the unique characteristics of the futures market, more harm than good may be done.

CMC is a trade association bringing together exchanges and their industry counterparts. The activities of our members represent the complete spectrum of commercial users of all futures markets including energy and agriculture. Specifically, our industry member firms are regular users of the Chicago Board of Trade, Chicago Mercantile Exchange, ICE Futures US, Kansas City Board of Trade, Minneapolis Grain Exchange and the New York Mercantile Exchange. CMC is uniquely positioned to provide the consensus views of commercial and end users of derivatives. Our comments represent the collective view of CMC members.

The businesses of all our member firms depend upon the efficient and competitive functioning of the risk management products traded on U.S. futures exchanges. Through the Commission's diligent oversight efforts that have fostered Exchange innovation and technology adoption, we have seen the commodity markets grow and prosper. They have become deeper and more liquid, narrowing bid/ask spreads and improving hedging effectiveness and price discovery. Meanwhile, liquidity, technology, clearing quality, price and customer service have driven market selection. All of these developments serve the interests of the trade as well as the public.

Section 753(c)(1) seeks to proscribe fraud-based manipulative conduct. On its face, the provision borrows heavily from the experiences and language of securities' law regulation. Clear differences between the securities and futures markets render this approach dubious at best. The analogue of an issuer with fiduciary obligations is simply not present in the futures world. Insider trading rules have only a limited application in futures markets, and are usually restricted to exchange or government personnel and information. Duties of disclosure flowing from fiduciary relationships have no parallel in futures markets. The effort to borrow the experiences and rules of one market and apply them to another that exists for different purposes and that functions in a different manner is inappropriate. CMC believes it will lead only to confusion and disruption.

#### **A. The Scienter Requirement**

At a minimum, CMC encourages the CFTC to set extreme recklessness, not mere recklessness or negligence, as the scienter standard under the proposed rule. Announcing the proposed scienter standard "...will be tailored to the facts and circumstances of each case", as the NOPR does, provides no guidance at all. If there is any place for application of the securities' law paradigm, it is found in its judicial precedent interpreting the intent-based scienter requirement under SEC Rule 10b-5.

#### **B. The Need For Clarity**

The language of Section 753 is extremely broad. It needs precise regulatory definition so market users will have adequate notice of what conduct is prohibited. The "I know it when I see it" approach is both constitutionally suspect under the due process clause and fails as a regulatory guidepost.

For example, the proscribed conduct in Section 753(a) mandates that it must be "in connection with any swap or contract of sale of any commodity in interstate commerce..." The "in connection with" language is distinctly different than parallel language in other anti-fraud statutes or rules. In other similar rules, the wrongful conduct must occur in connection with "the purchase or sale" of the product being regulated.

As currently proposed, the Commission explains the "in connection with" nexus would be satisfied "...whenever misstatements or other relevant conduct are made in a manner reasonably calculated to influence market participants." CMC believes this guidance is far too broad to provide any meaningful direction. Moreover, we are concerned it is so broad that it may even capture casual statements about general conditions affecting markets, such as observations about weather, crop yields, or interest rate volatility. We urge the Commission to clarify its rule does not reach such conduct and that "in connection with" must be tied to a specific market transaction (i.e., the purchase or sale of a swap or a futures contract).

#### **C. The Price Manipulation Test**

Pursuant to its general authority under Section 8(a)(5) of the Commodity Exchange Act ("CEA"), the Commission also is proposing a rule under the new Section 6(c)(3) of the CEA. The proposal merely repeats the language of Section 753(c)(3) making it "unlawful for any person to manipulate or attempt to manipulate the price of any swap or any commodity in interstate commerce or for future delivery on or subject to the rules of any registered entity."

The CMC supports the Commission's reaffirmed commitment to the four-part test for price manipulation. It is consistent with established legal precedent with which market participants are familiar. *In Re Di Placido*, 2008WL4831204 (CFTC 208), *aff'd* in pertinent part, *Di Placido v. Commodity Futures Trading Comm*, 364 Fed Appx. 657, 2009 WL 3326624 (2d Cir. 2009). Since *Placido* is good law, CMC recommends the Commission clarify Section 6(c)(3) does not confer any additional enforcement authority.

Also, the CFTC's statement that the "conclusion that prices [are] affected by a factor not consistent with normal forces of supply and demand will often follow inescapably from proof of actions of the alleged manipulator" is a misreading of judicial precedent like *Di Placido*. The Commission should make clear the proposed rule does not

create a presumption that a price is artificial merely because one or more isolated transactions are deemed uneconomic without proof of a specific intent to move prices. There are a variety of valid commercial reasons for engaging in transactions that may appear on the surface to lack economic rationale, but which are not intended to move prices, e.g., hedging during the closing period. These trading activities should be distinguished from the egregious conduct present in Di Placido and similar cases. The Commission's effort to avoid its burden of proof of "artificial price" with the "inescapable conclusion" approach should be disavowed.

The CMC thanks the Commission for the opportunity to present its views on this most important subject. If you have any questions or would like to discuss further, please do not hesitate to contact me via email at [christine.cochran@commoditymks.org](mailto:christine.cochran@commoditymks.org) or via phone at (202) 842-0400 – ext. 101. Thank you in anticipation of your attention to these comments.

Regards,



Christine M. Cochran  
President



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December 14, 2010

David Stawick  
Secretary  
Commodity Futures Trading Commission  
Three Lafayette Centre  
1155 21st Street, NW  
Washington, DC 20581

**RE: Speculative Position Limits Pre-Rulemaking Comments**

Dear Mr. Stawick:

The Commodity Markets Council ("CMC") appreciates the opportunity to submit the following comments for consideration by the Commodity Futures Trading Commission ("CFTC" or "Commission") in advance of its planned rulemaking on position limits for certain contracts in exempt and agricultural commodities.

CMC is a trade association bringing together exchanges and their industry counterparts. The activities of our members represent the complete spectrum of commercial users of all futures markets including energy and agriculture. Specifically, our industry member firms are regular users of the Chicago Board of Trade, Chicago Mercantile Exchange, ICE Futures US, Kansas City Board of Trade, Minneapolis Grain Exchange and the New York Mercantile Exchange. CMC is uniquely positioned to provide the consensus views of commercial and end users of derivatives. Our comments represent the collective view of CMC members.

The businesses of all our member firms depend upon the efficient and competitive functioning of the risk management products traded on U.S. futures exchanges. Through the Commission's diligent oversight efforts that have fostered Exchange innovation and technology adoption, we have seen the commodity markets grow and prosper. They have become deeper and more liquid, narrowing bid/ask spreads and improving hedging effectiveness and price discovery. Meanwhile, liquidity, technology, clearing quality, price and customer service have driven market selection. All of these developments serve the interests of the trade as well as the public.

CMC supports the concept of position limits, whether set by an exchange or the CFTC, but only where such limits are necessary to prevent or diminish price distortions resulting from excessive speculation. In that circumstance, the price discovery and risk management functions of the market are disrupted and public confidence is undercut.

CMC does not believe speculation is synonymous with manipulation or is it an inappropriate practice. As the Commission appreciates, speculation is essential. It provides liquidity and ensures the price discovery and risk management functions of the market are achieved.

The CEA, as amended by the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank"), makes clear, the Commission's authority to set position limits is designed not to restrict speculation, but to prevent "unwarranted and unreasonable fluctuations resulting from excessive speculation...".



Moreover, the statute mandates that before position limits are imposed, the Commission must find (1) that there has been “excessive speculation” and (2) that the excessive speculation has resulted in “unwarranted and unreasonable price fluctuations.” CEA, Section 4a(a)(1)<sup>1</sup>. Even the new subsection 4(a)(2) confirms that any position limits set thereunder must be established “[i]n accordance to the standards set forth in paragraph 1 of this subsection.”

CMC believes Congress authorized the Commission to set position limits only in the limited circumstances where excessive speculation has resulted in unwarranted price fluctuations. The statute does not grant a general authority to set position limits.

There are some market participants that believe the activities of large speculators were solely to blame for the run-up in commodity prices in 2007 and 2008. However, the experience of many of our members and a review of the empirical evidence does not support the view that speculation was the sole or even primary reason for price volatility in the market. Instead, most economists conclude that supply and demand fundamentals and other macroeconomic factors proved to be the most significant factors driving the markets at that time.

For example, the CFTC’s study following the 2008 rise in oil prices concluded the price movements were the result of normal supply and demand factors. *See*, CFTC Interagency Task Force On Commodity Markets, Interim Report On Crude Oil at 3-4 (July 22, 2008). The Government Accountability Office in 2009 reviewed most of the empirical and anecdotal studies on “speculative trading” and reached the same conclusion. *See* GAL-09-285R, Issues Involving the Use of the Futures Markets to Invest in Commodity Indices at 5(30) 2009.

Against this background, CMC urges the Commission to conduct a thorough empirical analysis of pricing and market data before it imposes any position limits on futures, options or swaps contracts in exempt or agricultural commodities. CMC agrees with the commentary filed by CME Group that this is a subject best left to futures exchanges to address through existing market surveillance programs on a contract by contract basis. Exchanges and the Commission have developed an expertise in maintaining orderly markets, including setting appropriate reportable levels, position limits and accountability levels relative to energy, metal and agricultural markets. This system provides the flexibility necessary to prevent excessive speculation while preserving transparent and liquid markets.

CMC believes this flexible regulatory approach is a more effective way to address potentially manipulative and disruptive positions. Indeed, the failure of any empirical studies to identify unwarranted price fluctuations due to excessive speculation suggests these programs have been successful in promoting market stability and avoiding unwarranted disruptions. Imposing artificial position limits in this context could harm market liquidity.

If the Commission makes the necessary findings supported by demonstrable evidentiary data, CMC would nonetheless urge the Commission to proceed cautiously and judiciously in setting limits for given futures, options or swaps.

The new Dodd-Frank amendments contain various and somewhat confusing timing requirements for the exercise of the Commission’s authority in this area, but they all vest the Commission with discretion, premised upon the necessary findings, to establish limits “as appropriate.” Thus, the Act contains an element of flexibility so that the Commission need not act until it deems that position limits in a given area are “appropriate.”

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<sup>1</sup> The Commission also must publish the required finding and information in support of establishing such position limits in any notice of proposed rulemaking in order to comply with the requirements of the Administrative Procedure Act. Absent such a finding and supporting information, the public’s ability to comment on the proposal is compromised because it lacks an understanding of the Commission’s reasoning. (*See*, e.g. *Am. Med. Assoc. v. Reno*, 57 F 3d 1129, 1132, D.C. Cir. 1995)

Additionally, Section 4a(a)(2)(C) mandates the Commission act to avoid shifting the price discovery function to foreign boards of trade (FBOTs). We believe Congress was concerned unnecessary restrictions on trading positions threaten to reduce liquidity and adversely affect the hedging and price discovery functions of the U.S. commodity markets. Moreover, the Financial Services Authority recently announced its decision to not impose speculative position limits.

Under the CEA, as amended by Dodd-Frank, the Commission also has been granted broad exemptive authority from any position limit rule. The CMC urges the Commission to use its exemptive authority to permit market participants to use futures, options and swaps contracts to manage the risks they face in their particular enterprises. Given the inter-connectiveness and correlation between various markets, many entities use the commodities markets to hedge risks in other markets as well as in physical commodities. CMC recommends the Commission use its exemptive authority to take account of these factors.

The CMC thanks the Commission for the opportunity to present its views on this most important subject. If you have any questions or would like to discuss further, please do not hesitate to contact me via email at [christine.cochran@commoditymks.org](mailto:christine.cochran@commoditymks.org) or via phone at (202) 842-0400 – ext. 101. Thank you in anticipation of your attention to these comments.

Regards,



Christine M. Cochran  
President



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September 20, 2010

David Stawick  
Secretary  
Commodity Futures Trading Commission  
Three Lafayette Centre  
1155 21st Street, NW  
Washington, DC 20581

**Re: *Definitions Contained in Title VII of Dodd-Frank Wall Street Reform and Consumer Protection Act***

Dear Mr. Stawick,

The Commodity Markets Council (CMC) thanks the Commodity Futures Trading Commission (CFTC or Commission) for the opportunity to provide comments on the Title VII definitions in the Dodd-Frank Act before the CFTC embarks on associated rulemakings. Definitions are, of course, fundamental to any subsequent rulemaking, and must be addressed with due deliberation.

CMC is a trade association bringing together commodity exchanges with their industry counterparts. The activities of our members represent the complete spectrum of commercial users of all futures markets including agriculture. Specifically, our industry member firms are regular users of the Chicago Board of Trade, Chicago Mercantile Exchange, ICE Futures US, Kansas City Board of Trade, Minneapolis Grain Exchange, and New York Mercantile Exchange. CMC is uniquely positioned to provide the consensus views of commercial end-users of derivatives exchanges and the exchange markets. Our comments below represent the collective view of the CMC's members.

Congress and the President enacted The Dodd-Frank Wall Street Reform and Consumer Protection Act (the Act) in response to the financial crisis in 2008-09 with the purpose of establishing a prescriptive regulatory framework for systemically risky financial institutions and instruments. Since 2008, CMC has advocated for increased transparency and regulation of such institutions and instruments; however, we do not believe the Act was intended to prescriptively regulate *all* firms and *all* instruments that operate in financial markets. While Congress created a prescriptive regulatory framework, it provides the CFTC with flexibility to implement the law in a way that continues to promote and maintain the efficiency of US markets. CMC encourages the Commission to recognize the protections already embedded in swaps which exchanges agree to list, trade and accept for clearing. We also urge you to make the necessary distinctions as the CFTC makes decisions related to definitions.

**Defining "Swaps Dealers"**

Cleared over-the-counter (OTC) swaps would be subject to exchange rules of credit assessment and margining. Moreover, clearing members of the exchanges are subject to a thorough credit analysis and required to provide regular financial reporting. These clearing members in turn require a margin and credit analysis of their customers. Entities that exclusively trade exchange-cleared swaps mark their

positions to market and are assessed a daily margin. The clearing house also verifies the provision and maintenance of adequate liquidity buffers to cover extreme markets swings.

Despite these protections, CFTC Chairman Gary Gensler recently suggested the Commission could classify as many as 200 firms as "Swap Dealers" (SD), subjecting them to additional capital and margining requirements. CMC supports the Commission in its mission to curb systemically risky institutions and instruments; however, we ask the CFTC to use caution in drafting definitions so broad as to impede the creation and flow of capital and liquidity in the financial markets.

CMC recommends that entities which only trade exchange-cleared swaps be exempt from the SD definition. This will ensure commercial end users continue to utilize deep OTC markets with adequate liquidity to effectively hedge their risks. We are concerned increased capital and margining requirements will correspondingly increase the cost of compliance and opportunity cost of capital for entities which only trade exchange-cleared OTC swaps. These costs could result in firms ceasing or reducing their use of such instruments which would decrease the liquidity of currently robust markets.

The Act specifies that an SD or Major Swap Participant (MSP) designation does not apply across all asset classes. There is concern within the industry that once a firm is designated as such for one asset class it will be regulated as such for *all* asset classes. CMC would ask the Commission to clarify its position on this issue.

#### **Defining Yield Swaps**

There are market participants (e.g. reinsurance companies) that offer risk mitigant products, i.e. "swaps," that reference "yield" (in bushels per acre on corn, soybeans, wheat and other commodities) as the underlying asset. The CMC would like to ensure that such products are included in the definition of "swaps".

#### **Defining "Futures Commission Merchants"**

The Act expanded the definition of a Futures Commission Merchant (FCM) to include many new categories, one being any entity that solicits or accepts swaps. Understanding the markets for physically traded commodities, CMC is concerned this language could be interpreted in a manner that adversely impacts the businesses of our members by capturing firms which are not traditional FCMs and do not operate as such. For example, a firm trading only exchange-cleared swaps could be defined as both an SD and an FCM, which would treat the firm as systemically risky despite the proven safeguards of being exchange-cleared.

The CMC appreciates the opportunity to submit these comments, and we look forward to working with the Commission in the weeks and months ahead. If you should have any questions, please do not hesitate to contact us.

Sincerely,



CHRISTINE M. COCHRAN  
President  
Commodity Markets Council



*Representing the Interests of America's Industrial Energy Users since 1978*

January 11, 2011

The Honorable Darrell Issa  
Chairman  
Committee on Oversight & Government Reform  
U.S. House of Representatives  
Washington, DC 20515

Dear Chairman Issa,

CIBO would like to thank you for the opportunity to help identify existing and proposed regulations that could negatively impact jobs and job growth at our members' facilities.

The Council of Industrial Boiler Owners (CIBO) is a national trade association of over 110 members including industrial boiler owners, architect engineers, related equipment manufacturers, and universities representing 20 major industrial and institutional sectors. CIBO has been working to (1) promote the exchange of information between industry and government relating to energy and environmental policies, laws, and regulations affecting industrial boilers and the manufacturing and institutional energy base of our country; (2) promote technically sound, cost-effective laws and regulations; and (3) improve energy and environmental performance, reliability and cost-effectiveness of members' operations through technical interchange. CIBO's membership represents industries as diverse as chemicals, paper, cogeneration, metals, automotive, refining, brewing, combustion engineering, and food products. CIBO members also include operators of boiler facilities at over a dozen major universities. For 32 years, CIBO has been promoting better integration of our nation's policies and regulations to achieve energy and environmental benefits.

EPA regulations for Greenhouse Gas Emissions, Boiler MACT, Fossil Fuel Ash Classification, Clean Air Transport Rule revisions, Short Term SO<sub>2</sub> and NO<sub>2</sub> NAAQS, Water Effluent rules, Cooling Water Intake rules, NAAQS for Particulate Matter, Ozone and SO<sub>2</sub>, and other rules, can all have negative impacts on existing and potential new jobs within the United States. While it is difficult to project the cost of any regulation prior to its actual implementation, it is possible to identify reasonable costs when equipment suppliers, owners and operators and consultants work together. With the current EPA industrial, commercial and institutional (ICI) energy system databases and state inventories, it should be possible to develop more realistic representations of costs. EPA should be working with the actual people having to make modifications and install

technology to develop better environmental compliance costing models for industrial/commercial/institutional energy facilities and not only the equipment suppliers, regulators and environmental community who have never designed or operated the equipment.

However, even with the best cost data, it is impossible to assess the true economic impact of any rule or regulation using the cost benefit analysis currently conducted at EPA. At some point a true economic impact evaluation should be completed to consider jobs put at risk of being lost, potential federal and state tax revenue and GDP losses, to be compared with the direct health benefits and potential new jobs that could be gained from compliance versus product line or facility closure. At this point there is disagreement regarding how this should be done. It could be worthwhile for a National Academy of Sciences panel to be developed to consider or develop a protocol for this type of activity.

CIBO has been very active over the last 15 years with Boiler MACT Rule development. As such, we developed an estimated installed capital cost based on use of best available compliance technology application on a unit-by-unit basis using the EPA database. This generated a conservative compliance capital cost of \$20.7 billion compared to EPA's \$9.6 billion. Interested in identifying what this meant in negative impacts to the boiler/process heater industrial/commercial/institutional owner sectors and country overall, we contracted IHS Global Insight to do an Economic Impact Analysis over the range of industry and institutional sectors we represent. The results were a staggering potential 338,000 US jobs put at risk of being lost, and \$5.7 billion in lost tax revenues if all units were equipped to attempt to meet the rule as proposed. While we believe the cost of any regulation that in effect raises the cost of energy to the industrial/commercial/institutional sector could have the same relative effect, more research and real cost information on an industry-by-industry, unit-by-unit basis would also be helpful in better understanding the rule's impacts. Attached is a copy of the CIBO IHS Global Insight Report and CIBO statement regarding its release. The approach of this Report could provide a template for impact analysis for other EPA rules.

We appreciate your request for information and would be happy to answer any questions you may have.

Again, thank you for this opportunity.

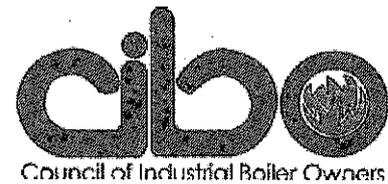
Robert D Bessette

President  
Council of Industrial Boiler Owners

# The Economic Impact of Proposed EPA Boiler/Process Heater MACT Rule on Industrial, Commercial, and Institutional Boiler and Process Heater Operators



**GLOBAL  
INSIGHT**



Prepared For:

**Council of Industrial Boiler Owners**

August 2010



## ABOUT IHS GLOBAL INSIGHT

IHS Global Insight is widely recognized as the most consistently accurate economic forecasting firm in the world. With over 600 economists, statisticians, and industry specialists in 25 offices worldwide, IHS Global Insight has a well-established track record for providing rigorous, objective forecast analysis and data to governments and businesses around the world.

Among our areas of expertise are the economic impact, tax implications, and job-creation dynamics within multiple sectors core to national, state and local economies. In this capacity, we help governments and companies at all levels interpret the impact of proposed investments, policies, programs, and projects.

IHS Global Insight was formed by the merger of DRI and WEFA. Still active in an advisory capacity to the firm is the original founder of WEFA, Lawrence R. Klein, the 1980 winner of the Nobel Prize in Economics.

IHS (NYSE: IHS) is a leading source of information and insight in pivotal areas that shape today's business landscape: energy, economics, geopolitical risk, sustainability and supply chain management.

## FOR MORE INFORMATION

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Washington, DC 20036



## Executive Summary

***Every billion dollars spent on MACT upgrade and compliance costs  
will put 16,000 jobs at risk and  
reduce US GDP by as much as \$1.2 billion.***

In June 2010, the Environmental Protection Agency (EPA) proposed new Maximum Achievable Control Technology (MACT) standards for industrial boilers and process heaters, which would impose stringent emission limits and monitoring requirements for eleven subcategories of boilers and process heaters, based on fuel type and unit design. These standards, which are intended to address hazardous air pollutant (HAP) emissions, would impose tight limits on five HAP/"surrogate" pollutants:

- Mercury (Hg),
- Hydrogen Chloride (HCl),
- Particulate Matter (PM),
- Carbon monoxide (CO), and
- Dioxins/Furans (D/F).

EPA contends that implementing the proposed MACT standards for these five pollutants will minimize emissions of all HAPs. Under the proposed rule, sources (boilers and process heaters) 10 MMBtu/hr and greater will be required to comply with numerical emission limits for PM, HCl, Hg, CO, and dioxin/furan. Sources 100 MMBtu/hr and greater will be required to install CO CEMS and sources 250 MMBtu/hr and greater that fire solid fuels or residual fuel oil will be required to install PM CEMS. Compliance with the other emission limits would be determined through fuel analyses, performance tests, and parametric monitoring.

The Council of Industrial Boiler Operators (CIBO) believes its members may be subject to significant economic hardship should the proposed EPA rules regulating boiler emissions be adopted. Potential consequences include the shuttering of domestic manufacturing capacity – and the associated jobs losses – for those CIBO members that find the capital costs associated with compliance via plant retrofitting make it economically unfeasible to continue operations.

CIBO commissioned IHS Global Insight to conduct a study to quantify the economic impact of compliance by all affected sources to the proposed standards under three scenarios.

- **Scenario 1:** The impact of upgrade costs for all proposed standards
- **Scenario 2:** The impact of the HCl upgrade costs only
- **Scenario 3:** The impact of upgrading Gas 1 units to comply with all of the potential standards described by EPA in the proposed rule Preamble if they were to impose emission limits instead of the proposed work practice standard approach

This report presents the results of IHS Global Insight's assessment of the economic impact of compliance to the MACT standards for all affected boiler and process heater owners. For each of the three scenarios, we utilized a methodology that determined the direct (vendor- or regulated entity in this case), indirect (supplier) and induced (wage) impact of the MACT standards on five primary areas of economic activity:

- **Employment:** the number of jobs potentially "at risk" of being eliminated as a consequence of compliance with the standards;
- **Labor Income:** The employee compensation potentially forfeited due to compliance to the new standards;
- **Value Added:** The economic contribution to the US Gross Domestic Product that could be affected by implementing the standards;
- **Industry Output:** The industry sales lost as CIBO members either shutter plants or attempt to pass the costs on to their customers.
- **Tax Implications:** the potential loss of federal as well as state and local tax receipts.

This report presents the detailed findings of the study, which are summarized in the table below. Across all three scenarios we found that, **every \$1B spent on upgrade and compliance costs will put 16,000 jobs at risk and reduce US GDP by as much as \$1.2B.** A significant portion of this economic pain will be felt in supplier networks.



<b>Potential Total Economic Impact</b>			
	<b>Scenario 1</b>	<b>Scenario 2</b>	<b>Scenario 3</b>
<b>Employment</b>	<b>337,703</b>	<b>152,552</b>	<b>798,250</b>
<b>Labor Income</b>	<b>\$15.2B</b>	<b>\$6.9B</b>	<b>\$38.0B</b>
<b>Value Added</b>	<b>\$25.2B</b>	<b>\$11.4B</b>	<b>\$63.3B</b>
<b>Output</b>	<b>\$67.4B</b>	<b>\$30.4B</b>	<b>\$172.5B</b>
<b>Taxes</b>	<b>\$5.7B</b>	<b>\$2.6B</b>	<b>\$14.3B</b>

*Source: Results generated by IHS Global Insight from IMPLAN model*



## Introduction

In June 2010, the Environmental Protection Agency (EPA) proposed new Maximum Achievable Control Technology (MACT) standards for industrial boilers and process heaters, which would impose stringent emission limits and monitoring requirements for eleven subcategories of boilers, based on fuel type and unit design. These standards, which are intended to address hazardous air pollutant (HAP) emissions, would impose tight limits on five HAP/"surrogate" pollutants:

- Mercury (Hg),
- Hydrogen Chloride (HCl),
- Particulate Matter (PM),
- Carbon monoxide (CO), and
- Dioxins/Furans (D/F).

The proposed limits, by source-type are detailed in the following table.

EMISSION LIMITS FOR BOILERS AND PROCESS HEATERS					
	Particulate matter (PM) <sup>1</sup>	Hydrogen chloride (HCl) <sup>1</sup>	Mercury (Hg) <sup>1</sup>	Carbon monoxide (CO) <sup>2</sup>	Dioxins/furans (total TEQ) <sup>3</sup>
<b>Existing</b>					
Coal Stoker	.02	.02	.000003	50	.003
Coal Fluidized Bed	.02	.02	.000003	30	.002
Pulverized Coal	.02	.02	.000003	90	.004
Biomass Stoker	.02	.006	.0000009	560	.004
Biomass Fluidized Bed	.02	.006	.0000009	250	.02
Biomass Suspension	.02	.006	.0000009	1010	.03
Biomass Fuel Cells	.02	.006	.0000009	270	.02
Liquid	.004	.0009	.000004	1	.002
Gas (Other Process Gases)	.05	.000003	.0000002	1	.009
<b>New</b>					
Coal Stoker	.001	.00006	.000002	7	.003
Coal Fluidized Bed	.001	.00006	.000002	30	.00003
Pulverized Coal	.001	.00006	.000002	90	.002
Biomass Stoker	.008	.004	.0000002	560	.00005
Biomass Fluidized Bed	.008	.004	.0000002	40	.007
Biomass Suspension	.008	.004	.0000002	1010	.03
Biomass Fuel Cells	.008	.004	.0000002	270	.0005
Liquid	.002	.0004	.0000003	1	.002
Gas (Other Process Gases)	.003	.000003	.0000002	1	.009

<sup>1</sup> Pounds per million British Thermal Units (BTUs)

<sup>2</sup> (ppm @3% oxygen)

<sup>3</sup> (ng/dscm @7% oxygen)

Source: EPA

EPA contends that implementing the proposed MACT standards for these five pollutants will minimize emissions of all HAPs. Sources (boilers and process heaters) with heat input greater than or equal to 100 MMBtu/hr would be required to install continuous emission monitors for CO and coal, biomass, or residual oil fired boilers and process heaters with heat input greater than or equal to 250 MMBtu/hr would be required to install continuous emission monitors for PM in order to demonstrate compliance with the corresponding limits. Compliance with the other emission limits would be determined through fuel analyses, performance tests, and parametric monitoring.

The Council of Industrial Boiler Operators (CIBO) is the trade association representing the interests of non-utility energy producers and users in the United States. As such, CIBO's membership represents a diverse set of major manufacturing industries that use industrial boilers and process heaters and related technologies. CIBO believes its members may be subject to significant economic hardship should the proposed EPA rules regulating boiler and process heater emissions be adopted. Potential consequences include the shuttering of domestic manufacturing capacity – and the associated jobs losses – for those CIBO members that find the capital costs associated with compliance via plant retrofitting make it economically unfeasible to continue operations.

CIBO commissioned IHS Global Insight to conduct a study to quantify the economic impact of compliance by all affected sources to the proposed standards under three scenarios. The study, which focused on upgrade costs only, did not include on-going operations and maintenance costs companies would incur in subsequent years.

- **Scenario 1:** The impact of upgrade costs for all proposed standards
- **Scenario 2:** The impact of the HCl upgrade costs only
- **Scenario 3:** The impact of upgrading Gas 1 units to comply with all of the potential standards described by EPA in the proposed rule Preamble if they were to impose emission limits instead of the proposed work practice standard approach

IHS Global Insight utilized a methodology that determined the impact of the MACT standards on five primary areas of economic activity:

- **Employment:** the number of jobs potentially "at risk" of being eliminated as a consequence of compliance with the standards;
- **Labor Income:** The employee compensation potentially forfeited due to compliance to the new standards;
- **Value Added:** The economic contribution to the US Gross Domestic Product that could be affected by implementing the standards;
- **Industry Output:** The industry sales lost as affected sources either shutter plants or attempt to pass the costs on to their customers.
- **Tax Implications:** the potential lose of federal as well as state and local tax receipts.

Because any change to the economic conditions of a given industry sector or commercial/institutional entity can have far-reaching consequences on other industries and entities and the overall economy, IHS Global Insight's analyses captured the economic impact on three levels. The first quantifies the impact on those facilities that will bear the direct costs of



upgrading their boilers and process heaters to comply with the standards (*direct impact*). The second level measures the impact on the supply chains of the direct industries (*indirect impact*). The third level assesses the impact on economic activity attributable to spending by employees of the direct and indirect industries (*induced impact*). These classes of economic impact are discussed in-depth in the following section and in Appendix B.

The total economic impact (direct + indirect + induced) for each of the scenarios is shown in the table below. Across all three scenarios we found that, **every \$1B spent on upgrade and compliance costs will put 16,000 jobs at risk and reduce US GDP by as much as \$1.2B**. A significant portion of this economic pain will be felt in supplier networks.

<b>Summary of Potential Total Economic Impact</b>			
	<b>Scenario 1</b>	<b>Scenario 2</b>	<b>Scenario 3</b>
<b>Employment</b>	<b>337,702</b>	<b>152,553</b>	<b>798,250</b>
<b>Labor Income</b>	<b>\$15.2B</b>	<b>\$6.9B</b>	<b>\$38.0B</b>
<b>Value Added</b>	<b>\$25.2B</b>	<b>\$11.4B</b>	<b>\$63.3B</b>
<b>Output</b>	<b>\$67.4B</b>	<b>\$30.4B</b>	<b>\$172.5B</b>
<b>Taxes</b>	<b>\$5.7B</b>	<b>\$2.6B</b>	<b>\$14.3B</b>

Source: Results generated by IHS Global Insight from IMPLAN model



## APPROACH

Changes to business operating climates, regulatory or policy environments, or capital project priorities affect economic activity. The total economic impact of these changes is separated into three distinct parts: direct, indirect, and induced. The direct impacts measure the degree to which economic activities are altered within those industries directly affected by the changes. The indirect impact represents the corresponding effects on suppliers to the direct sectors. This would include, for example, steel tube suppliers to a drill operator. The induced impact adds the effect of spending from wage and other income derived from the direct and indirect sectors.

In assessing the economic impact of the EPA rule changes on the US economy, IHS Global Insight assumed that the upgrade costs borne by each industry due to the regulations result in a corresponding and equal loss in potential output. An increase in capital costs, impacting specific facilities across a broad range of industries, will likely be managed in a variety of ways by those directly affected. The impacted companies could choose outside financing, or finance it through cash reserves/ profits, pass the cost along to their customers, or decide to avoid the upgrade costs and cease operations. Because of this, the methodology of treating the upgrade costs as a corresponding and equal loss in potential output is a direct and standard methodology to examine such a situation that provides clarity to the process and consistency across industries.

Building off a boiler and process heater inventory database provided by CIBO<sup>1</sup>, we were able to estimate the following upgrade costs by industry sector.

- **Scenario 1:** The upgrade costs for all proposed standards totaled \$20.7B
- **Scenario 2:** The HCI-only upgrade costs summed to \$9.3B
- **Scenario 3:** The costs of upgrading Gas 1 units were estimated at \$51.7B

These industry-level capital costs served as primary inputs to the IMPLAN<sup>2</sup> modeling framework, which was used to quantify the economic impact (employment, labor income, value added, output, and tax receipts) along the following dimensions:

- **Direct Impact:** The impact on economic activity in the facilities that must incur the costs of implementing the required boiler upgrades. Leveraging the boiler and process heater inventory database, we determined the cross-industry distribution of the capital costs required to implement the proposed changes. For each affected sector, these capital expenditures were assumed to result in corresponding and equal decreases in output.

<sup>1</sup> The boiler inventory database used in this study based on work by URS Corporation that was commissioned by CIBO, based on EPA's major source boiler inventory database table. Please see Appendix A for an overview of the methodology used to determine the upgrade and compliance costs.

<sup>2</sup> IHS Global Insight used the IMPLAN model for the entire US economy to quantify the economic impact of the proposed EPA rule changes. The IMPLAN model closely follows the accounting conventions used in the U.S. Department of Commerce Bureau of Economic Analysis (BEA)'s definitive 1980 study, Input-Output Study of the U.S. Economy, and is flexible enough to evaluate the change via the value of output or employment from the source industry. (Additional details related to this modeling approach are presented in Appendix B).



- **Indirect Impact:** The impact in those industries that supply the direct industries.
- **Induced Impact:** The impact attributable to spending by employees of the direct and indirect industries in the general economy.
- **Total Impact:** The sum of the direct, indirect and induced impacts.

The results of the simulation for each scenario are presented in the following three sections.



## Results: Scenario 1

In Scenario 1, IHS Global Insight assessed the economic impact of the capital costs required to upgrade boilers and process heaters to comply with the EPA proposed rule for all five pollutant categories.

Using the boiler/process heater inventory database, the capital costs for the upgrades were determined to total \$20.7B, distributed across 24 industry subsectors<sup>3</sup>. The upgrade expenditures were subtracted from the output of each subsector and used as inputs to the IMPLAN model.

The results of the Scenario 1 analysis are summarized in the table below. Incurring the capital costs of compliance will put 338,000 jobs potentially at risk, of which nearly 70,000 are directly tied to the affected industries/facilities. This does not mean that all of the "at risk" jobs will be eliminated. Some larger organizations will absorb the costs with minimal changes to employment levels; however they will likely pass both the compliance and on-going operating and maintenance costs downstream to their customers or absorb a hit to their profitability and therefore pass that cost along to their shareholders. Smaller or marginally-profitable firms, on the other hand, may be faced with either reducing staff or shutting down operations.

<b>Summary of Economic Impact of Scenario 1</b>				
	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
<b>Employment</b>	<b>69,934</b>	<b>157,824</b>	<b>109,944</b>	<b>337,702</b>
<b>Labor Income</b>	<b>\$3.6B</b>	<b>\$6.4B</b>	<b>\$5.2B</b>	<b>\$15.2B</b>
<b>Value Added</b>	<b>\$4.4B</b>	<b>\$11.7B</b>	<b>\$9.1B</b>	<b>\$25.2B</b>
<b>Output</b>	<b>\$20.7B</b>	<b>\$29.5B</b>	<b>\$17.2B</b>	<b>\$67.4B</b>
<b>Taxes</b>				<b>\$5.7B</b>

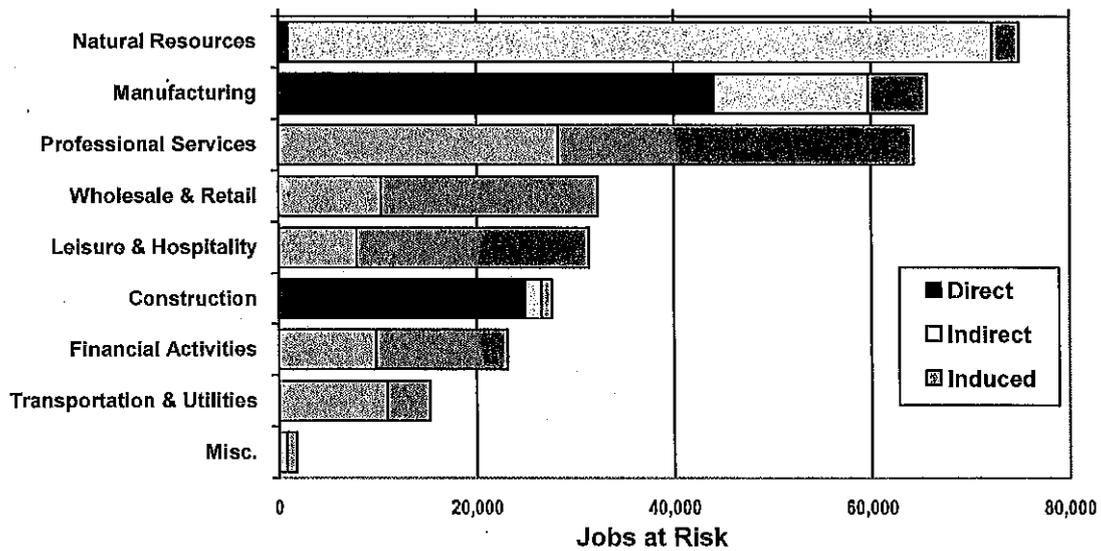
*Source: Results generated by IHS Global Insight from IMPLAN model*

As shown below, the 24 industry subsectors that will incur capital costs of \$20.7B aggregate under three industry supersectors: construction, manufacturing and natural resources (mining, farming, etc). However, as shown in the charts on the following pages, the indirect and induced impacts will be felt in other supersectors, such as professional services.

<sup>3</sup> The relationship between IMPLAN industry sectors and NAICS categories is explained further in Appendix B.

Industry Supersector	Capital Costs (millions of dollars)
Construction	\$3,718
Manufacturing	\$16,951
Natural Resources	\$65
<b>Total</b>	<b>\$20,734</b>

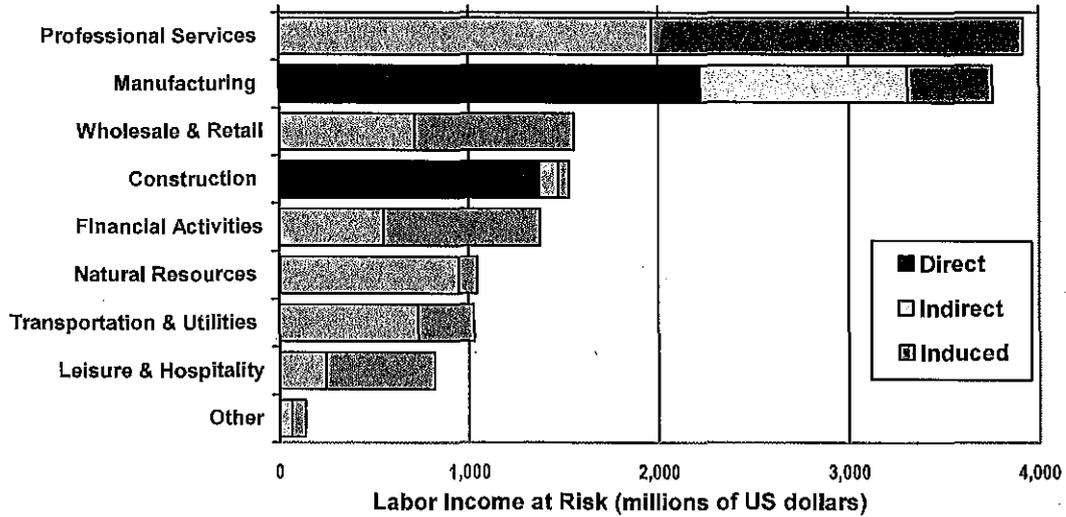
### Impact on Employment by Industry Super-Sector, Scenario 1



Source: Results generated by IHS Global Insight from IMPLAN model

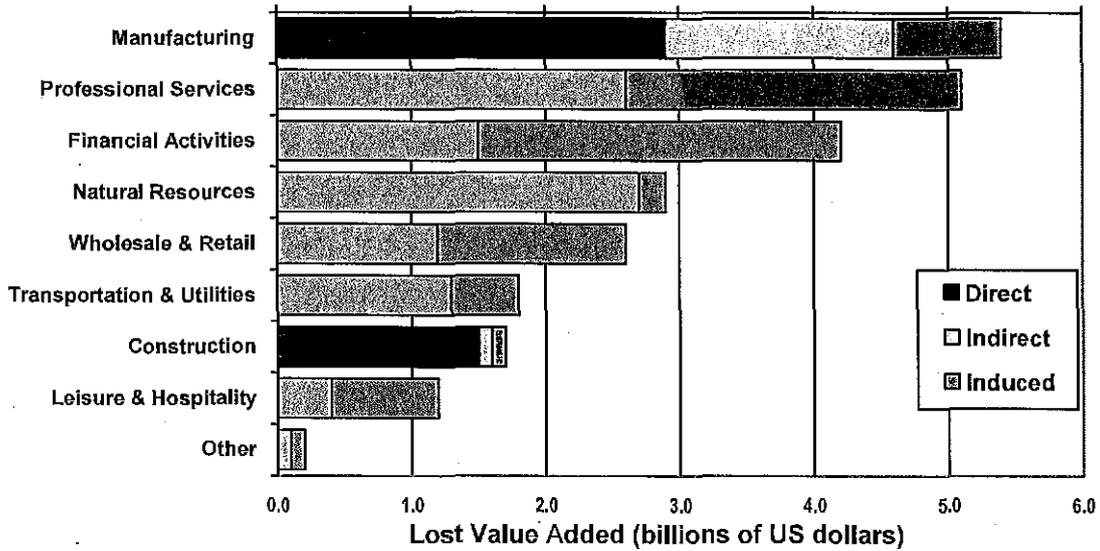


### Impact on Labor Income by Industry Super-Sector, Scenario 1



Source: Results generated by IHS Global Insight from IMPLAN model

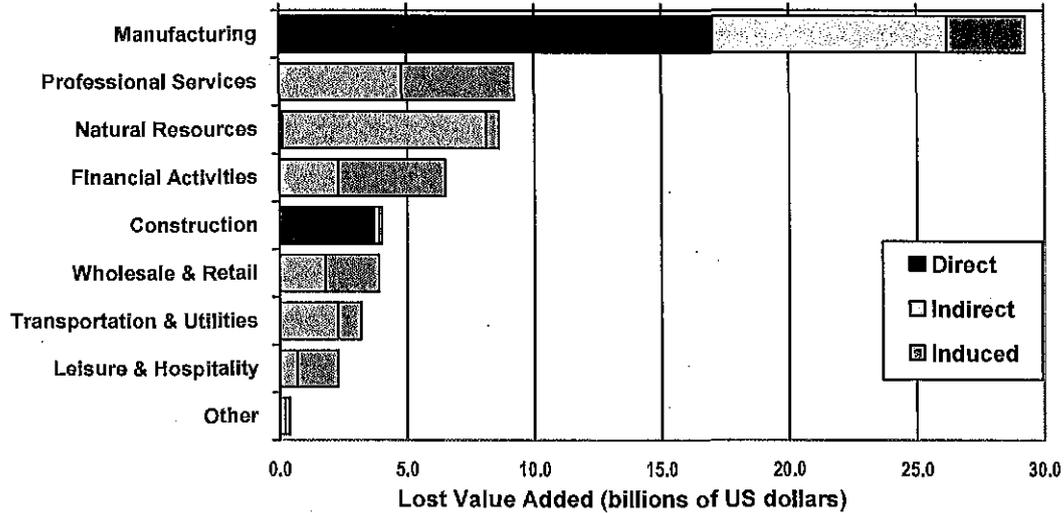
### Impact on Value Added by Industry Super-Sector, Scenario 1



Source: Results generated by IHS Global Insight from IMPLAN model



### Impact on Output by Industry Super-Sector, Scenario 1



Source: Results generated by IHS Global Insight from IMPLAN model

In reviewing the summary tables shown above, the significance of the downstream effects becomes clear. For a sector like Natural Resources, the direct effect of the regulations is relatively small, but the employment impact on this industry as a supplier to the Manufacturing and Construction sectors is extremely significant. Additionally, the employment impact on the professional services sector is also significant, but even more so is the labor income impact on this sector, which highlights the fact that the jobs in this particular sector are high paying and high value jobs which might not normally come into focus when assessing the impact of standards such as these.



**Detailed Economic Impact of Scenario 1**

	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
<b>Jobs at Risk</b>	<b>69,934</b>	<b>157,824</b>	<b>109,944</b>	<b>337,702</b>
Construction	24,879	1,683	1,075	27,637
Financial Activities	-	9,855	13,295	23,149
Professional Services	-	28,251	36,039	64,290
Leisure & Hospitality	-	7,889	23,554	31,443
Manufacturing	44,072	15,621	5,947	65,640
Natural Resources	983	72,291	2,835	76,109
Transportation & Utilities	-	11,005	4,275	15,280
Wholesale & Retail	-	10,343	21,963	32,306
Other	-	887	962	1,849
<b>Labor Income (US\$M)</b>	<b>3,599.7</b>	<b>6,427.7</b>	<b>5,157.4</b>	<b>15,184.8</b>
Construction	1,372.2	100.4	57.1	1,529.7
Financial Activities	-	551.5	827.1	1,378.6
Professional Services	-	1,964.7	1,955.0	3,919.7
Leisure & Hospitality	-	246.6	571.5	818.2
Manufacturing	2,221.8	1,090.9	446.7	3,759.3
Natural Resources	5.6	956.1	99.9	1,061.7
Transportation & Utilities	-	734.3	292.0	1,026.3
Wholesale & Retail	-	716.5	837.0	1,553.5
Other	-	66.7	71.1	137.7
<b>Value Added (US\$M)</b>	<b>4,425.0</b>	<b>11,579.6</b>	<b>9,124.6</b>	<b>25,129.2</b>
Construction	1,458.6	106.2	69.7	1,634.5
Financial Activities	-	1,507.6	2,723.8	4,231.4
Professional Services	-	2,645.2	2,504.8	5,150.1
Leisure & Hospitality	-	371.1	821.4	1,192.5
Manufacturing	2,937.7	1,660.7	752.7	5,351.0
Natural Resources	28.7	2,726.8	247.4	3,003.0
Transportation & Utilities	-	1,327.2	533.1	1,860.3
Wholesale & Retail	-	1,227.6	1,400.3	2,627.8
Other	-	79.0	79.6	158.6
<b>Industry Output (US\$M)</b>	<b>20,734.1</b>	<b>29,520.3</b>	<b>17,174.6</b>	<b>67,428.9</b>
Construction	3,718.3	192.6	119.3	4,030.1
Financial Activities	-	2,287.2	4,182.8	6,470.0
Professional Services	-	4,803.1	4,424.5	9,227.6
Leisure & Hospitality	-	666.8	1,618.5	2,285.3
Manufacturing	16,951.1	9,172.5	3,145.4	29,269.0
Natural Resources	64.6	8,026.4	510.4	8,601.4
Transportation & Utilities	-	2,299.9	862.4	3,162.3
Wholesale & Retail	-	1,828.0	2,078.0	3,906.1
Other	-	243.7	233.4	477.1

Source: Results generated by IHS Global Insight from IMPLAN model



## Results: Scenario 2:

In Scenario 2, IHS Global Insight performed a similar assessment to that done in Scenario 1, but narrowed the focus to analyze the impact of only the HCl standard costs. This was done to provide a maximum potential impact assessment of the value of implementing a compliance flexibility provision such as a health based alternative under CAA §112(d)(4) instead of the proposed HCl emission limits.

Using the boiler/process heater inventory database, the capital costs for the HCl controls were determined to total \$9.3B, distributed across 24 industry subsectors<sup>4</sup>. The controls expenditures were subtracted from the output of each subsector and used as inputs to the IMPLAN model.

The results of the Scenario 2 analysis are summarized in the table below. Incurring the capital costs of compliance will over 152,000 jobs potentially at risk, of which over 31,000 are directly tied to the affected industries/facilities. This does not mean that all of the "at risk" jobs will be eliminated. Some larger organizations will absorb the costs with minimal changes to employment levels; however they will likely pass the both the compliance and on-going maintenance costs downstream to their customers or absorb a hit to their profitability and therefore pass that cost along to their shareholders. Smaller or marginally-profitable firms, on the other hand, may be faced with either reducing staff or shutting down operations.

<b>Summary of Economic Impact of Scenario 2</b>				
	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
<b>Employment</b>	<b>31,639</b>	<b>71,246</b>	<b>49,668</b>	<b>152,552</b>
<b>Labor Income</b>	<b>\$1.6B</b>	<b>\$2.9B</b>	<b>\$2.3B</b>	<b>\$6.9B</b>
<b>Value Added</b>	<b>\$2.0B</b>	<b>\$5.2B</b>	<b>\$4.1B</b>	<b>\$11.4B</b>
<b>Output</b>	<b>\$9.3B</b>	<b>\$13.3B</b>	<b>\$7.8B</b>	<b>\$30.4B</b>
<b>Taxes</b>				<b>\$2.6B</b>

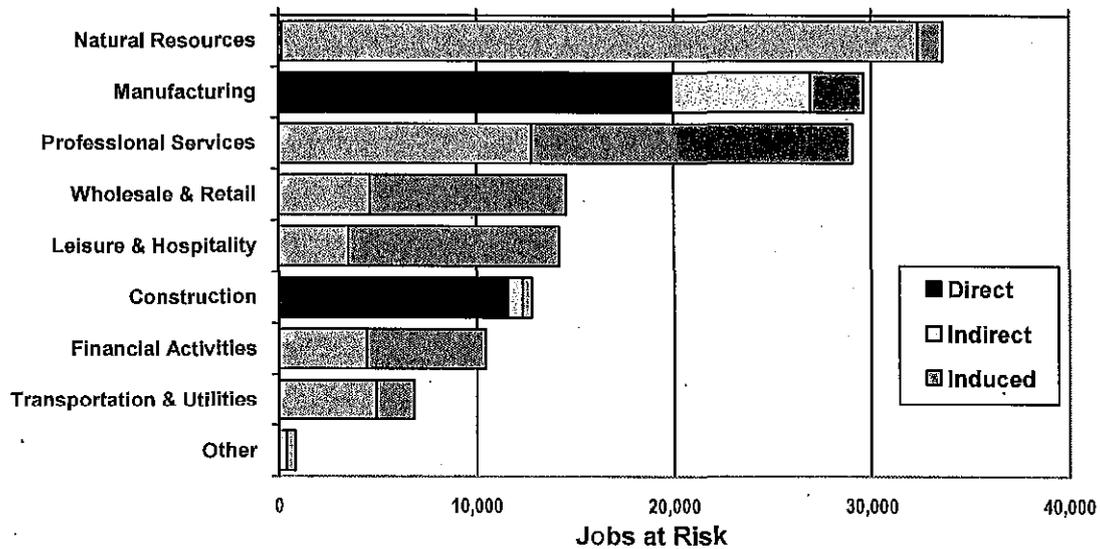
*Source: Results generated by IHS Global Insight from IMPLAN model*

As shown below, the 24 industry subsectors that will incur capital costs of \$9.3B aggregate under three industry supersectors: construction, manufacturing and natural resources. However, as shown in the charts on the following pages, the indirect and induced impacts will be felt in other supersectors, such as professional services.

<sup>4</sup> The relationship between IMPLAN industry sectors and NAICS categories is explained further in Appendix B.

Industry Supersector	Capital Costs (millions of dollars)
Construction	\$1,727
Manufacturing	\$7,571
Natural Resources	\$15
<b>Total</b>	<b>\$9,313</b>

### Impact on Employment by Industry Super-Sector, Scenario 2



Source: Results generated by IHS Global Insight from IMPLAN model

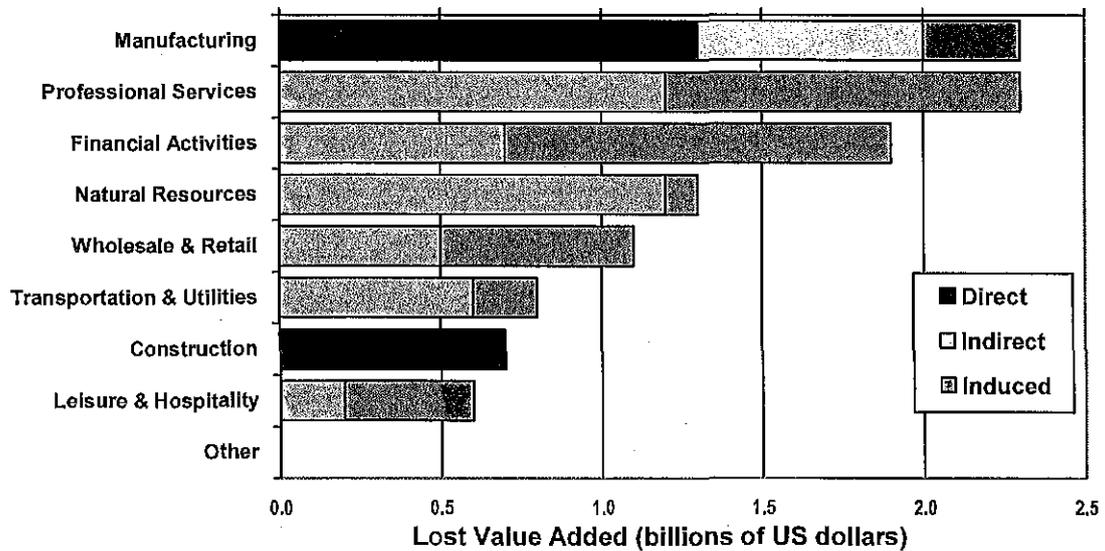


### Impact on Labor Income by Industry Super-Sector, Scenario 2



Source: Results generated by IHS Global Insight from IMPLAN model

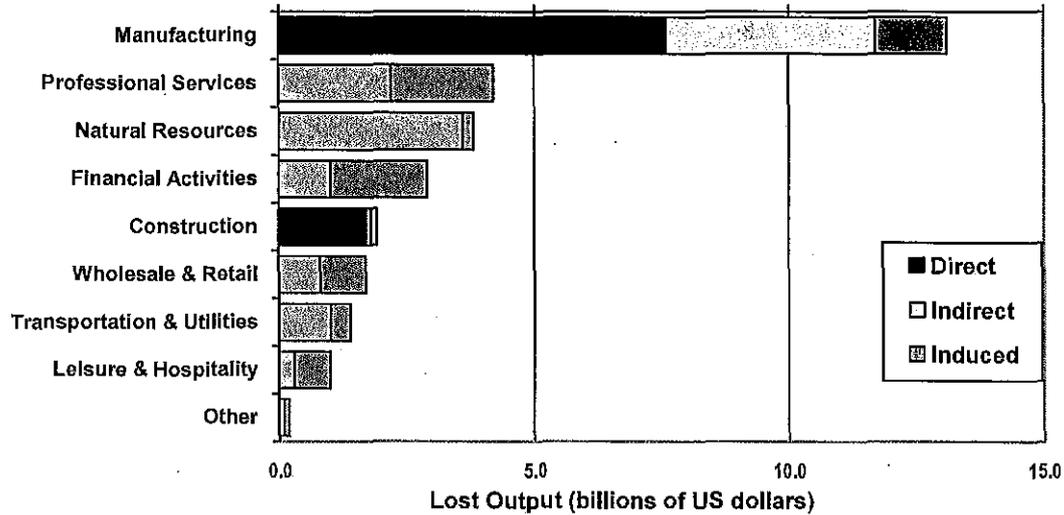
### Impact on Value Added by Industry Super-Sector, Scenario 2



Source: Results generated by IHS Global Insight from IMPLAN model



### Impact on Output by Industry Super-Sector, Scenario 2



Source: Results generated by IHS Global Insight from IMPLAN model

In reviewing the summary tables shown above, the significance of the downstream effects becomes clear. For a sector like Natural Resources, the direct effect of the regulations is relatively small, but the employment impact on this industry as a supplier to the Manufacturing and Construction sectors is extremely significant. Additionally, the employment impact on the professional services sector is also significant, but even more so is the labor income impact on this sector, which highlights the fact that the jobs in this particular sector are high paying and high value jobs which might not normally come into focus when assessing the impact of standards such as these.



**Detailed Economic Impact of Scenario 2**

	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
<b>Jobs at Risk</b>	<b>31,639</b>	<b>71,246</b>	<b>49,668</b>	<b>152,553</b>
Construction	11,564	754	486	12,804
Financial Activities	-	4,452	6,006	10,458
Professional Services	-	12,800	16,281	29,081
Leisure & Hospitality	-	3,569	10,640	14,209
Manufacturing	19,900	7,040	2,687	29,627
Natural Resources	174	32,663	1,281	34,118
Transportation & Utilities	-	4,928	1,931	6,860
Wholesale & Retail	-	4,642	9,922	14,563
Other	-	399	435	833
<b>Labor Income (US\$M)</b>	<b>1,637.3</b>	<b>2,892.6</b>	<b>2,329.8</b>	<b>6,859.8</b>
Construction	637.8	44.9	25.8	708.6
Financial Activities	-	249.0	373.6	622.7
Professional Services	-	888.9	883.2	1,772.1
Leisure & Hospitality	-	111.6	258.2	369.8
Manufacturing	998.1	490.2	201.8	1,690.1
Natural Resources	1.3	428.7	45.1	475.2
Transportation & Utilities	-	328.5	131.9	460.4
Wholesale & Retail	-	320.8	378.1	698.9
Other	-	30.0	32.1	62.1
<b>Value Added (US\$M)</b>	<b>1,992.3</b>	<b>5,239.8</b>	<b>4,125.7</b>	<b>11,357.8</b>
Construction	677.6	47.5	31.5	756.7
Financial Activities	-	680.8	1,230.5	1,911.3
Professional Services	-	1,195.8	1,131.6	2,327.3
Leisure & Hospitality	-	168.0	371.1	539.0
Manufacturing	1,308.9	745.6	340.0	2,394.5
Natural Resources	5.8	1,223.8	111.8	1,341.3
Transportation & Utilities	-	593.3	240.8	834.1
Wholesale & Retail	-	549.6	632.6	1,182.2
Other	-	35.4	36.0	71.4
<b>Industry Output (US\$M)</b>	<b>9,313.1</b>	<b>13,280.6</b>	<b>7,758.6</b>	<b>30,352.2</b>
Construction	1,727.4	86.2	53.9	1,867.5
Financial Activities	-	1,032.7	1,889.6	2,922.3
Professional Services	-	2,170.7	1,998.7	4,169.4
Leisure & Hospitality	-	301.8	731.2	1,032.9
Manufacturing	7,570.6	4,120.4	1,420.9	13,111.9
Natural Resources	15.0	3,612.8	230.6	3,858.3
Transportation & Utilities	-	1,028.3	389.6	1,417.9
Wholesale & Retail	-	818.4	938.7	1,757.2
Other	-	109.4	105.4	214.8

Source: Results generated by IHS Global Insight from IMPLAN model



## Results: Scenario 3

In Scenario 3, IHS Global Insight assessed the economic impact should the EPA rules be expanded to include emission limits for Gas 1 units for all five pollutant categories instead of the work practice standard approach proposed.

Using the Gas 1 unit specific inventory database and the projected emission limits provided by EPA in the proposed rule Preamble, the capital costs for the emissions controls were determined to total \$51.5B, distributed across 26 industry subsectors<sup>5</sup>. The upgrade expenditures were subtracted from the output of each subsector and used as inputs to the IMPLAN model.

The results of the Scenario 3 analysis are summarized in the table below. Incurring the capital costs of compliance will put almost 800,000 jobs potentially at risk, of which over 180,000 are directly tied to the affected industries. This does not mean that all of the "at risk" jobs will be eliminated. Some larger organizations will absorb the costs with minimal changes to employment levels; however they will likely pass both the compliance and on-going operating and maintenance costs downstream to their customers or absorb a hit to their profitability and therefore pass that cost along to their shareholders. Smaller or marginally-profitable firms, on the other hand, may be faced with either reducing staff or shutting down operations.

<b>Summary of Economic Impact of Scenario 3</b>				
	<b>Direct</b>	<b>Indirect</b>	<b>Induced</b>	<b>Total</b>
<b>Employment</b>	<b>181,099</b>	<b>341,800</b>	<b>275,351</b>	<b>798,250</b>
<b>Labor Income</b>	<b>\$8.5B</b>	<b>\$16.6B</b>	<b>\$12.9B</b>	<b>\$38.0B</b>
<b>Value Added</b>	<b>\$11.1B</b>	<b>\$29.3B</b>	<b>\$22.9B</b>	<b>\$63.3B</b>
<b>Output</b>	<b>\$51.5B</b>	<b>\$77.9B</b>	<b>\$43.0B</b>	<b>\$172.5B</b>
<b>Taxes</b>				<b>\$14.3B</b>

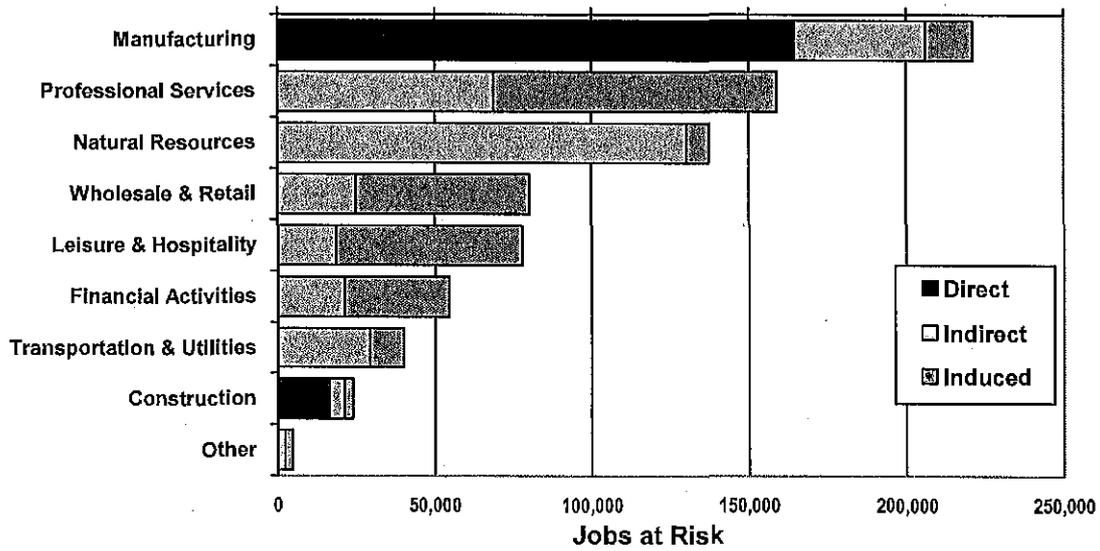
*Source: Results generated by IHS Global Insight from IMPLAN model*

As shown below, the 26 industry subsectors that will incur capital costs of \$51.4B aggregate under three industry supersectors: construction, manufacturing and natural resources. In this scenario, the manufacturing subsector will incur approximately 96% of the upgrade cost. However, as shown in the charts on the following pages, the indirect and induced impacts will be felt in other supersectors, such as professional services.

<sup>5</sup> The relationship between IMPLAN industry sectors and NAICS categories is explained further in Appendix B.

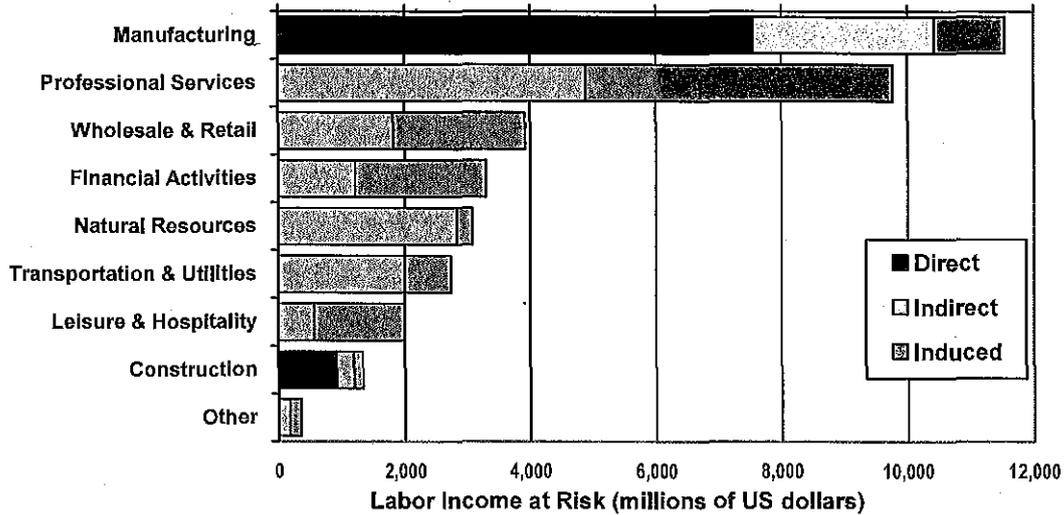
Industry Supersector	Capital Costs (millions of dollars)
Construction	\$2,571
Manufacturing	\$48,966
Natural Resources	\$3
<b>Total</b>	<b>\$51,540</b>

### Impact on Employment by Industry Super-Sector, Scenario 3



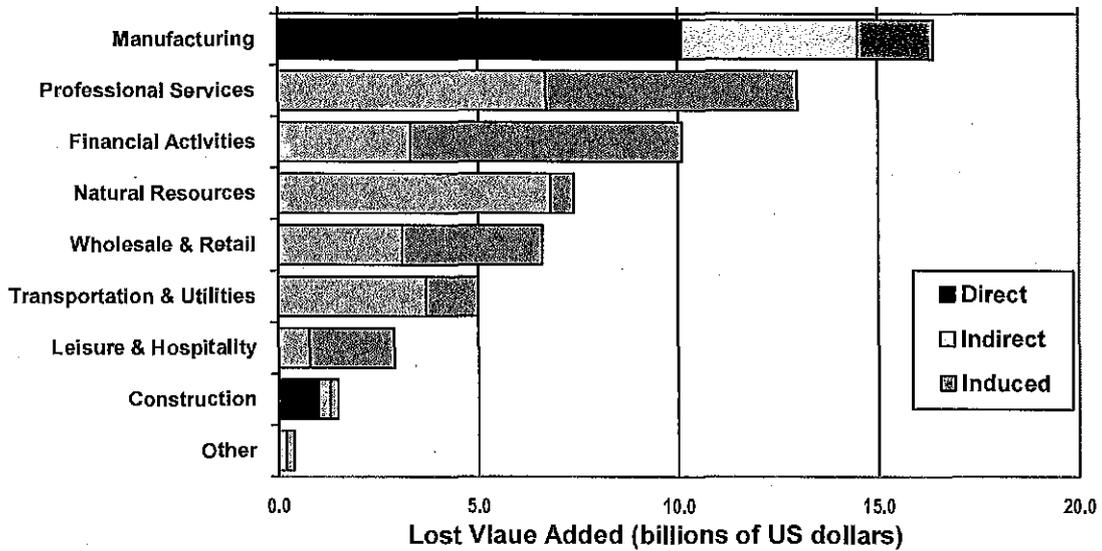
Source: Results generated by IHS Global Insight from IMPLAN model

### Impact on Labor Income by Industry Super-Sector, Scenario 3



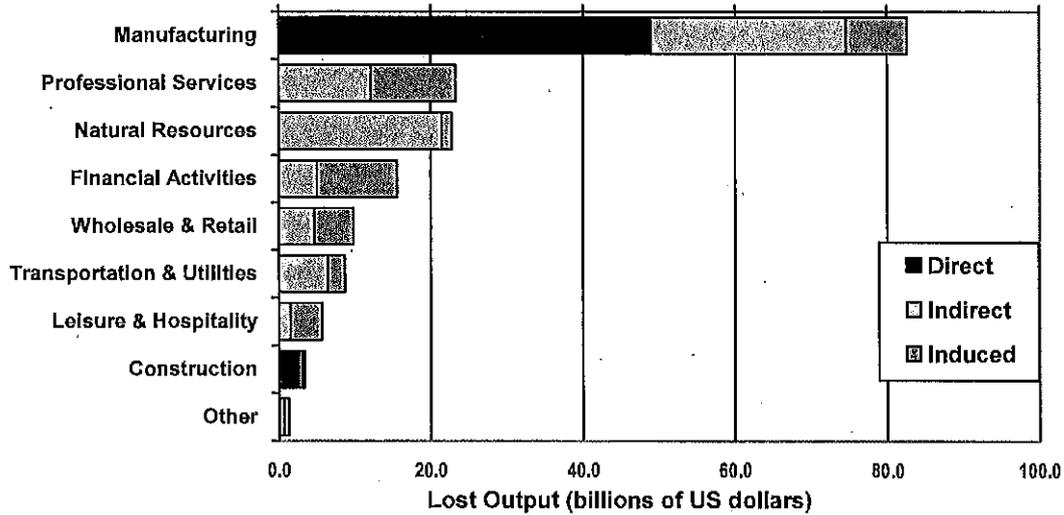
Source: Results generated by IHS Global Insight from IMPLAN model

### Impact on Value Added by Industry Super-Sector, Scenario 3



Source: Results generated by IHS Global Insight from IMPLAN model

### Impact on Output by Industry Super-Sector, Scenario 3



Source: Results generated by IHS Global Insight from IMPLAN model

In reviewing the summary tables shown above, the significance of the downstream effects becomes clear. For a sector like Natural Resources, there is only a small amount of direct effect on the industry, but the employment impact on this industry as a supplier to the Manufacturing and Construction sectors is extremely significant. Additionally, the employment impact on the professional services sector is also significant, as is the labor income impact on this sector, which highlights the fact that the jobs in this particular sector are high paying and high value jobs which might not normally come into focus when assessing the impact of standards such as these.



### Detailed Economic Impact of Scenario 3

	Direct	Indirect	Induced	Total
<b>Jobs at Risk</b>	<b>181,099</b>	<b>341,801</b>	<b>275,351</b>	<b>798,250</b>
Construction	16,638	4,611	2,692	23,941
Financial Activities	-	21,245	33,300	54,544
Professional Services	-	68,694	90,260	158,954
Leisure & Hospitality	-	18,528	58,984	77,513
Manufacturing	164,424	41,776	14,896	221,097
Natural Resources	37	130,142	7,102	137,281
Transportation & Utilities	-	29,329	10,707	40,036
Wholesale & Retail	-	25,123	55,001	80,125
Other	-	2,352	2,409	4,761
<b>Labor Income (US\$M)</b>	<b>8,470.5</b>	<b>16,641.3</b>	<b>12,916.9</b>	<b>38,028.7</b>
Construction	918.9	275.2	143.1	1,337.2
Financial Activities	-	1,211.2	2,071.5	3,282.7
Professional Services	-	4,884.2	4,896.4	9,780.6
Leisure & Hospitality	-	570.8	1,431.2	2,002.0
Manufacturing	7,551.3	2,879.0	1,118.8	11,549.0
Natural Resources	0.3	2,821.9	250.3	3,072.6
Transportation & Utilities	-	2,003.2	731.4	2,734.6
Wholesale & Retail	-	1,818.7	2,096.3	3,915.0
Other	-	177.0	178.0	355.0
<b>Value Added (US\$M)</b>	<b>11,103.0</b>	<b>29,307.0</b>	<b>22,873.3</b>	<b>63,283.3</b>
Construction	1,007.1	290.9	174.5	1,472.5
Financial Activities	-	3,266.9	6,821.6	10,088.4
Professional Services	-	6,655.4	6,273.7	12,929.0
Leisure & Hospitality	-	847.3	2,057.0	2,904.2
Manufacturing	10,094.6	4,415.1	1,885.3	16,395.0
Natural Resources	1.3	6,807.4	619.8	7,428.6
Transportation & Utilities	-	3,690.5	1,335.2	5,025.6
Wholesale & Retail	-	3,120.0	3,506.9	6,626.9
Other	-	213.6	199.4	412.9
<b>Output (US\$M)</b>	<b>51,540.6</b>	<b>77,946.6</b>	<b>43,015.0</b>	<b>172,502.1</b>
Construction	2,570.5	527.7	298.7	3,396.8
Financial Activities	-	4,983.6	10,475.3	15,458.8
Professional Services	-	12,060.5	11,081.6	23,142.1
Leisure & Hospitality	-	1,530.7	4,053.1	5,583.9
Manufacturing	48,966.2	25,745.9	7,878.8	82,590.9
Natural Resources	3.8	21,385.4	1,278.5	22,667.8
Transportation & Utilities	-	6,405.0	2,160.0	8,565.1
Wholesale & Retail	-	4,648.4	5,204.3	9,852.7
Other	-	659.4	584.7	1,244.1

Source: Results generated by IHS Global Insight from IMPLAN model



## Appendix A: How the MACT Costs were Calculated

Because of the anticipated major financial impact of this rule on the Industrial Commercial and Institutional (ICI) sectors of the country, the Council of Industrial Boiler Owners (CIBO) commissioned URS Corporation to work with our members to estimate the capital costs for installation of additional control technologies on existing boilers. The approach used by CIBO and URS (CIBO/URS) to estimate capital costs differed from EPA's in several respects, as described below.

We developed a detailed spreadsheet to estimate costs for Boiler MACT, based on EPA's major source boiler inventory database table. Based on the information in the EPA emissions database on boiler size, fuel, existing controls, and emissions, we estimated costs of controls that would likely be necessary to comply with the Boiler MACT for coal, biomass, liquid, and gas 2 boilers for those units 10 MMBtu/hr and greater. Because the proposed rule does not include emission limits for natural gas boilers, these units were considered in a separate cost analysis assuming the work practice standards would not be allowed and the proposed Gas 1 limits in the preamble would be applied, requiring application of control technology to these boilers and process heaters for all regulated pollutants.

Information from various sources was used to determine a base capital cost for a 250 MMBtu/hr boiler and process heater for each PM and HCl control technology option and then scaled using an 0.6 power function based on the size of each boiler and process heater in the inventory. For example, the capital cost of a scrubber on a 100 MMBtu/hr boiler is calculated as the base cost of \$8 million times  $(100/250)^{0.6}$ . A fixed capital cost of \$1 million was assumed for installation of a carbon adsorption system for Hg and/or dioxin control, as these systems do not vary much in cost by boiler size. A fixed capital cost of \$2 million was assumed for CO controls (either projects to improve combustion or fuel feed or installation of a CO catalyst). Base cost estimates represent median costs for the various control scenarios based on published reports, industry and vendor information on specific project costs, EPA reports or control device fact sheets, or actual BACT or BART analyses previously submitted to permitting agencies.

To estimate capital costs for each boiler and process heater, we assumed that if there was no emissions information available for a particular unit, the unit would likely need MACT, which EPA stated in the preamble to the proposed Boiler MACT is a fabric filter (FF) plus carbon injection plus wet scrubber plus combustion improvements (or CO catalyst). For PM, if a unit did not already have a FF or ESP and there was information that indicated the unit cannot meet the proposed limit or there was no emissions information, we assumed a new FF. If the unit already had a FF or ESP and there was information that indicated the unit cannot meet the proposed limit we assumed an upgrade to the existing control equipment. To estimate control costs for HCl, if there was information that indicated the unit cannot meet the proposed limit or if there was no emissions information, we assumed either a scrubber upgrade or new scrubber depending on whether the unit currently had a scrubber. For Hg and dioxin, if there was information that indicated the unit cannot meet the proposed limit or if there was no emissions information, we

added carbon injection. For CO, if there was information that indicated the unit cannot meet the proposed limit and is not a fluidized bed boiler, stoker boiler, suspension boiler, or dutch oven, then we assumed that capital would be necessary to either perform combustion and/or fuel feed improvements or other boiler/process heater improvement projects to reduce CO or install a CO catalyst.

Although EPA's estimates indicate that the total capital cost of the proposed rule will be \$9.5 billion, CIBO and URS have estimated that the total capital cost of the rule will be over \$20 billion for all affected sources for installation of emissions controls on coal, biomass, liquid, and gas 2 boilers and process heaters. It is evident major capital investments in add-on control technology will be required for continued operation of the ICI power house and energy base of the country.

Our capital cost estimates differ from EPA's cost estimates as follows:

- ✦ EPA has used the outdated Control Cost Manual and we have based our cost estimates on more recent information, including actual vendor cost estimates, actual project costs, BACT and BART analyses, industry control cost studies, etc.
- ✦ We used a CO catalyst cost 4 times higher than EPA's. The CIBO/URS estimate is based on a recent quote from BASF and EPA's is based on the 1998 Control Cost Manual section on catalytic oxidizers for VOC control.
- ✦ EPA has estimated that a tuneup or burner replacement will be adequate for many units to achieve the CO limits. We do not agree with this assumption and have estimated higher costs to implement combustion controls, fuel feed system improvements, or CO catalyst.
- ✦ Our estimated CO control capital costs are \$1.2 billion for liquid and gas 2 and \$1.5 billion for coal and biomass, where EPA's total estimate for CO control capital costs is only \$13.9 million, mostly because they have assumed that tune-ups and replacement burners will be adequate for the vast majority of boilers to comply.
- ✦ EPA has estimated that activated carbon injection will only be required on 155 existing boilers because installation of a fabric filter is expected to achieve the mercury emission limits, except in cases where a unit already has a fabric filter and does not meet the limits. We do not agree that fabric filters will be sufficient to reduce mercury emissions to the ultra low levels proposed in this rule. There is a flaw in the logic that fabric filters are expected to achieve mercury emission limits when there are many boilers in the database that are equipped with fabric filters and have measured mercury emissions higher than the proposed limits. EPA's estimated industry-wide capital cost for activated carbon injection presented in Table 2 of the cost and emissions impacts memo is extremely low, at only \$9.5 million. We do not understand how this can represent 155 boilers; it seems to us to represent the cost 10 boilers would incur to install a carbon injection system. Our estimate for carbon injection required for mercury and dioxin/furan control is \$1.7 billion.
- ✦ EPA estimated that an ESP would be installed to meet the PM emissions limit unless a unit already had a fabric filter installed. We believe that since sorbent injection will be required for acid gas, mercury, and dioxin control, that fabric filters will likely be chosen for units without existing ESPs in order to maximize the performance of the sorbents and minimize the amount of sorbent used. For example, use of an ESP will require 4 times the carbon



to be injected for mercury/dioxin control than if a fabric filter is used. The capital cost for a fabric filter is higher than the capital cost for an ESP on the same boiler.

- CIBO/URS has estimated a PM control cost for coal, liquid, and gas 2 boilers and process heaters of \$7 billion versus EPA's estimated PM control cost of \$6.1 billion.
- EPA has estimated costs to install packed bed scrubbers for HCl control. Industrial boilers do not use packed bed scrubbers for acid gas control, as the limitations of these devices make them impractical for use on applications with high flow rates, high PM loading, and high inlet pollutant concentration. EPA's own fact sheet on these devices, located at <http://www.epa.gov/ttn/catc/dir1/fpack.pdf>, lists these limitations of these devices and indicates that they are only used in applications up to 75,000 scfm, which limits their use to small units only. Facilities will instead install wet scrubbers, dry scrubbers, or semi-dry scrubbers to control acid gas emissions from industrial boilers. EPA has estimated HCl control costs for equipment that industry is not likely to install.
- CIBO/URS has estimated capital costs for coal, liquid, and gas 2 boilers and process heaters for HCl control of \$9.3 billion, while EPA's capital cost estimate for wet scrubbers is \$3.3 billion.
- EPA presents several cost options in the two ERG memos. Option 2E assumes that facilities will not incur costs to comply with the dioxin/furan standards because they will test for dioxin/furan and be below detection levels. This logic does not make sense, especially because EPA has not outlined in the rule any procedures for handling non-detects when performing compliance testing and there are boilers in the EPA emissions database with dioxin/furan emissions that are non-detect but actually measured emissions higher than the proposed limit. CIBO/URS has estimated carbon injection as the control measure for dioxin/furan emissions and mercury emissions. As stated above, our cost estimate for carbon injection for coal, liquid, and gas 2 boilers and process heaters is \$1.7 billion versus EPA's of only \$9.5 million.

### Capital Cost Estimates for MACT Compliance

Item	EPA Capital Cost	CIBO/URS Capital Cost
CO Controls	\$13.9 million	\$2.7 billion
Carbon Injection for Hg and D/F	\$9.5 million	\$1.7 billion
PM Controls	\$6.1 billion	\$7.0 billion
HCl Controls	\$3.3 billion	\$9.3 billion

In the event Work Practice Standards for Natural Gas fired boilers and process heaters are replaced with the numerical standards proposed in the preamble for Gas 1 boilers, the following costs were estimated using the same assumptions as above. We have assumed that gas 1 boilers and process heaters will apply the following technology: FF (for PM), carbon injection (for Hg and D/F), wet scrubber (for HCl), and CO catalyst.



### Capital Cost Estimates for MACT Compliance

Item	EPA Capital Cost for Gas 1 Boilers >10 MMBtu	CIBO/URS Capital Cost
CO Controls	\$3.5 million	\$5.8 billion
Carbon Injection for Hg and D/F	\$32 million	\$2.9 billion
PM Controls	\$11.5 billion	\$19.6 billion
HCl Controls	\$3.1 billion	\$23.2 billion

The above estimates could be considered conservative since they assume that emission controls can be installed on existing units and that controls will actually allow compliance with the proposed emission limits. These are very conservative assumptions since it is known that retrofit of emissions control devices such as these is extremely difficult for some units due to design and space limitations, and major issues with the floor setting methodology make achievability of the emission limits highly uncertain. Therefore, it is likely that some combustion units will need to be replaced rather than retrofitting controls to those existing units. Replacement of combustion units could escalate these costs significantly.



## Appendix B: The IMPLAN Model

IMPLAN, short for "Impact Analysis for Planning," is a widely used commercially available model for input/output analysis. Minnesota IMPLAN Group, Inc., is responsible for the production of the IMPLAN data, model, and software. Using classic input/output analysis in combination with region-specific social accounting matrices and multiplier models, IMPLAN provides a highly accurate and adaptable model for its users. The IMPLAN database contains country, state, zip code, and federal economic statistics, which are specialized by region. IMPLAN accounts closely follow the accounting conventions used in the "Input-Output Study of the U.S. Economy" by the BEA and the rectangular format recommended by the United Nations. The IMPLAN system was designed to serve three functions:

- 1) Data retrieval,
- 2) Data reduction, model development, and
- 3) Impact analysis

Comprehensive and detailed data coverage of the entire United States by geography, and the ability to incorporate user-supplied data at each stage of the model-building process, provides a high degree of flexibility both in terms of geographic coverage and model formulation. There are two components to the IMPLAN system, the software and databases. The databases provide all information to create regional IMPLAN models. The software performs the calculations and provides an interface for the user to make final-demand changes.

The IMPLAN system consists of two major parts:

- 1) A national-level technology matrix and
- 2) Estimates of sectoral activity for final demand, final payments, industry output, and employment for each detailed geography in the United States along with the aggregate region.

Input-output accounting describes commodity flows from producers to intermediate and final consumers. The total industry purchases of commodities, services, employment compensation, value added, and imports are equal to the value of the commodities produced.

Purchases for final use (final demand) drive the model. Industries produce goods and services for final demand and purchase goods and services from other producers. These other producers, in turn, purchase goods and services. This buying of goods and services (indirect purchases) continues until leakages from the region (imports and value added) stop the cycle.

These indirect and induced effects (the effects of household spending) can be mathematically derived. The derivation is called the Leontief inverse. The resulting sets of multipliers describe the change of output for each and every regional industry caused by a one dollar change in final demand for any given industry.



Creating regional input-output models requires a tremendous amount of data. The costs of surveying industries within each region to derive a list of commodity purchases production functions) are prohibitive. IMPLAN was developed as a cost-effective means to develop regional input-output models.

IMPLAN easily allows the user to do the following:

- Develop his/her own multiplier tables;
- Develop a complete set of SAM (Social Accounting Matrix) accounts;
- Change any component of the system, production functions, trade flows, or database;
- Generate type I, II, or any true SAM multiplier internalizing household, government, and/or investment activities
- Create custom impact analysis by entering final-demand changes;
- Obtain any report in the system to examine the model's assumptions and calculations.

There are two components to the IMPLAN system, the software and databases. The databases provide all information to create regional IMPLAN models. The software performs the calculations and provides an interface for the user to make final-demand changes.

## **IMPLAN SOFTWARE**

Minnesota IMPLAN Group developed the current version of IMPLAN Professional® version 3.0 in 2009. It is a Windows-based software package that performs the calculations necessary to create the predictive model. The software reads the database, creates the complete set of social accounting matrices (SAM), the I/O accounts, and integrates all user-defined inputs to produce an alternative scenario.

The IMPLAN Input/Output System derives the predictive multipliers. The software also enables the user to make changes to the data, the trade flows, or technology. It also enables the user to make final-demand changes, which results in the impact assessment.

Features of IMPLAN Professional® include:

- 1) Windows file and printer management;
- 2) Economic database editor;
- 3) Complete Social Accounting Matrix structure;
- 4) A choice of trade-flow assumptions: Supply-Demand Pooling; Regional Purchase Coefficients; Location
- 5) quotients;
- 6) Production function editor, i.e., the tools and opportunity necessary to modify the "absorption"
- 7) and "byproducts" matrices;



- 8) Libraries for production functions and impact analysis expenditures;
- 9) Flexible model aggregation tools;
- 10) Report generator; many preset reports for all stages of model building and analysis;
- 11) Export feature to many of the major PC file formats;
- 12) Flexible assumptions for induced effects;
- 13) Type SAM – true SAM multipliers which allow internalizing any number of institutions;
  - a. Type II - Based on PCE and SAM based local income relationship;
  - b. Type II - Based on user-specified disposable income rate;
  - c. Type III (CPMM) - Traditional Forest Service employment based multipliers;
- 14) Menu structure for easy impact analysis;
- 15) Event-based impact databases;
- 16) Built-in and editable transaction margins;
- 17) Built-in and editable deflators;
- 18) Technical support by MIG, Inc.;
- 19) Data in Access Database format.

## **DATABASE**

Each database has information for these components for all 440 industrial sectors in the IMPLAN model. This 440-sector scheme was revised in 2007 and was originally the basis for the Bureau of Economic Analysis's Benchmark Input-Output Study. This scheme is nearly 6 digit NAICS for manufacturing, and more aggregate for service sectors. By necessity IMPLAN's sectoring is very similar. However, in some cases, 6 digit NAICS code data has been aggregated for certain IMPLAN sectors. A full NAICS to IMPLAN mapping document can be downloaded from [www.implan.com](http://www.implan.com).

Employment is total wage and salary and self-employed jobs in a region. In the 1985 database, employment was measured as full-time equivalent jobs. This meant that total employment in a region would generally be below most published estimates because these are generally full-time and parttime. In the 1990 and subsequent databases, employment includes both full-time and part-time workers. Employment in the 1990 and subsequent databases are measured in total jobs.

There are four sub-components for value added:

- 1) Employee Compensation;
- 2) Proprietary Income;
- 3) Other Property Type Income;
- 4) Indirect Business Taxes;

Employee compensation is wage and salary payments as well as benefits, including health and life insurance, retirement payments, and any other non-cash compensation. This provides a measure of income to workers who are paid by employers.



Proprietary income consists of payments received by self-employed individuals as income. This would be recorded on Federal Tax Form 1040C. This includes income received by private business owners, doctors, lawyers, and so forth. Any income a person receives for payment of self-employed work is counted here.

Other property-type income consists of payments from rents royalties and dividends. This includes payments to individuals in the form of rents received on property, royalties from contract, and dividends paid by corporations. This also includes corporate profits earned by corporations.

Indirect business taxes consist primarily of excise and sales taxes paid by individuals to businesses. These taxes are collected during the normal operation of these businesses but do not include taxes on profit or income. Goods and services purchased for their ultimate use by an end user are called final demands. For a region, this would include exports as that is a final use for that product. In an input-output framework, final demands are allocated to producing industries with margins allocated to the service sectors (transportation, wholesale and retail trade, insurance) associated with providing that good to the final user.

Thus, final demands are in producer prices. There are 13 subcomponents for final demands:

- 1) Personal Consumption Expenditures (PCE)—nine income levels;
- 2) Federal Government Military Purchases;
- 3) Federal Government Nonmilitary Purchases;
- 4) Federal Government Capital Formation Purchases;
- 5) State and Local Government Non-Education Purchases;
- 6) State and Local Government Education Purchases;
- 7) State and Local Government Capital Formation Purchases;
- 8) Inventory Purchases;
- 9) Capital Formation;
- 10) Foreign Exports;
- 11) State and Local Government Sales;
- 12) Federal Government Sales;
- 13) Inventory Sales.

All final demands in the original data are on a commodity basis. The distinction between industries and commodities is as follows from the 1972 I-O Definitions and Conventions Manual:

- An input-output industry is a grouping of establishments, as classified by Standard Industrial Classification (SIC)<sup>6</sup>;

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<sup>6</sup> The IMPLAN sector scheme is now currently based on NAICS definitions and is revised as necessary after each 5-year Economic Census is released.



- An input-output commodity consists of the characteristic products of the corresponding I-O industry wherever made. There are several industries that have no commodities. This is a result of departures from the strict SIC of industries. Also, some commodities have no associated industry. An example of this is noncomparable imports.

PCE consists of payments by individuals/households to industries for goods and services used for personal consumption. Individuals tend to buy little directly from industries other than retail trade. In an input-output table, though, purchases made by individuals for final consumption are shown as payments made directly to the industry producing the good. PCE is the largest component of final demand.

Federal government purchases are divided between military and nonmilitary uses and capital formation. Federal military purchases are those made to support the national defense. Goods range from food for troops to missile launchers. Nonmilitary purchases are made to supply all other government functions. Payments made to other governmental units are transfers and are not included in federal government purchases.

State and local government purchases are divided between public education and non-education and capital formation. Public education purchases are for elementary, high school, and higher education. Non-education purchases are for all other government activities. These include state government operations, operations including police protection and sanitation. Private-sector education purchases are not counted here. Private education purchases show up in IMPLAN sectors 495 and 496.

Inventory purchases are made when industries do not sell all output created in one year. This is generally the case. Each year, a portion of output goes to inventory. Inventory sales occur when industries sell more than they produce and need to deplete inventory. Inventory purchases and sales generally involve goods-producing industries (e.g., agriculture, mining, and manufacturing).

Capital formation is private expenditures made to obtain capital equipment. The dollar values in the IMPLAN database are expenditures made to an industrial sector producing the capital equipment. The values are not expenditures by the industrial sector.

Foreign exports are demands made to industries for goods for export beyond national borders. These represent goods and services demanded by foreign parties. Domestic exports are calculated during the IMPLAN model creation and are not part of the database.

The national transactions matrix is based on the most current BEA National Benchmark Input-Output Model. It is re-sectored to IMPLAN industrial sectoring. We use our IMPLAN data for the current year to update the most recent National Benchmark study.



## **IMPLAN MULTIPLIERS**

The notion of a multiplier rests upon the difference between the initial effect of a change in final demand and the total effects of that change. Total effects can be calculated either as direct and indirect effects, or as direct, indirect, and induced effects. Direct effects are production changes associated with the immediate effects or final-demand changes. Indirect effects are production changes in backward-linked industries caused by the changing input needs of directly affected industries (for example, additional purchases to produce additional output). Induced effects are the changes in regional household spending patterns caused by changes in household income generated from the direct and indirect effects.

Five different sets of multipliers are estimated by IMPLAN corresponding to five measures of regional economic activity: total industry output, personal income, total income, value added, and employment. For each set of multipliers, four types of multipliers are generated, Type I, Type II, Type SAM, and Type III.

### ***Type I Multiplier***

A Type I multiplier is the direct effect, produced by a change in final demand, plus the indirect effect divided by the direct effect. Increased demands are assumed to lead to increased employment and population with the average income level remaining constant. The Leontief inverse (Type I multipliers matrix) is derived by inverting the direct coefficients matrix. The result is a matrix of total requirement coefficients, the amount each industry must produce for the purchasing industry to deliver one dollar's worth of output to final demand.

### ***Type II Multipliers***

Type II multipliers incorporate "induced" effects resulting from the household expenditures from new labor income. The linear relationship between labor income and household expenditure can be customized in the IMPLAN Professional® software: 1. The default relationship is PCE and total household expenditures. Each dollar of workplace-based income is spent based on the SAM relationship generated by IMPLAN. 2. The second possibility is a RIMS II style of Type II multiplier, where PCE is adjusted to represent only the spending of the disposable income portion of labor income. In this way, there is a direct one-to-one relationship to labor income and PCE. Then, a ratio which the user can specify is applied to convert total income to disposable income before the rounds of induced effects are calculated.

### ***Type SAM***

Type SAM multipliers are the direct, indirect, and induced effects where the induced effect is based on information in the social account matrix. This relationship accounts for social security and income tax leakage, institution savings, and commuting. It also accounts for inter-institutional transfers. This multiplier is flexible in that you can include any institutions you want. In other



words, if you want to create a model closed to households and state and local government, you can. If you select this option, an additional dialog box will be displayed allowing you to select the institutions you want to include.

### ***Output Multipliers***

This report shows the total industry output multipliers and per-capita personal consumption expenditures. Output multipliers can be used to gauge the interdependence of sectors; the larger the output multiplier, the greater the interdependence of the sector on the rest of the regional economy. A Type I entry represents the value of production (from direct and indirect effects) required from all sectors by a particular sector to deliver one dollar's worth of output. Type II, SAM, and III adds in the induced requirements.

Example: If a Type I multiplier for the dairy farm industry is 1.0943, for each dollar of output produced by the dairy farm sector, 0.0943 dollars' worth of indirect output is generated in other local industries. If the Type SAM Dairy Farm multiplier is 1.3140, 0.3140 dollars of indirect and induced output is generated in other local industries. The induced output would be 1.3140 minus 1.0943 or 0.2197 dollars for each dollar of output produced by the dairy farm sector.

### ***Labor Income Multipliers***

The labor income multiplier report shows the direct, indirect, and induced employee compensation plus proprietor income effects generated per dollar of output. The Type I personal income multiplier is the direct and indirect employee compensation plus proprietor income divided by the direct income. The Type II, Type SAM, and Type III multiplier adds the induced effects component.

Example: If the Type I multiplier for the dairy farm sector is 1.4761 and the Type SAM multiplier is 2.7067, then for each dollar of direct income generated by this industry, 0.4761 dollars of indirect and 1.2306 dollars of induced income are generated.

### ***Employee Compensation Multipliers***

Employee compensation represents all payroll costs of wage and salary workers. The Type I, Type SAM, Type II, or Type III total income multipliers are listed in this report along with the direct, indirect, and induced total income effects generated from the production of one dollar's output.

### ***Proprietor Income Multiplier***

Proprietor income is the income earned by the owners of a private—non-incorporated business—i.e., the self-employed. The Type I, Type SAM, Type II, or Type III total income multipliers are



listed in this report along with the direct, indirect, and induced total income effects generated from the production of one dollar's output.

### ***Other Property-Type Income***

Other property-type income represents corporate income, rental income, and interest. The Type I and Type II/Type SAM/Type III total income multipliers are listed in this report along with the direct, indirect, and induced total income effects generated from the production of one dollar's output.

### ***Value-Added Multipliers***

Type I and Type II/Type SAM/Type III value-added multipliers are listed in this report along with the direct, indirect, and induced value-added effects generated from the production of one dollar of output. Value-added includes employee compensation, proprietary income, other property-type income, and indirect business taxes.

### ***Employment Multipliers***

Type I and Type II/Type SAM/Type III employment multipliers are listed in this report along with the direct, indirect, and induced employment effects from the production of one million dollars of output. Employment is in terms of full-time and part-time jobs.

Example: if a dairy farm Type I employment multiplier is 1.1158, for each job created directly by the dairy farm industry, 0.1158 jobs are created indirectly.



FOR IMMEDIATE RELEASE  
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September 14, 2010

## **CIBO Urges EPA To Save Jobs In Final MACT Rules**

Burke, VA – A new economic impact study by IHS Global Insight says new, strict proposed Environmental Protection Agency (EPA) pollution rules for boilers and process heaters could put more than 300,000 jobs at risk and significantly impact the broader economy. The study is intended to help EPA minimize the economic impacts in finalizing the regulation.

The study, which was released by the Council of Industrial Boiler Owners (CIBO) today, analyzed three different compliance scenarios that could result depending upon how EPA finalizes its proposed Boiler MACT rule for Industrial, Commercial, and Institutional (ICI) boilers and process heaters. Across all three scenarios, the study found that every \$1 billion spent on upgrade and compliance costs could put 16,000 jobs at risk and reduce the US GDP by as much as \$1.2 billion.

EPA's proposed rule would impose new regulations and new monitoring requirements for 11 subcategories of boilers and process heaters based on fuel type and unit design, with the intention of substantially reducing hazardous air pollutant (HAP) emissions from those units. In many cases, these new standards would require the installation of expensive control technologies without sufficient assurance that proposed emission limits would routinely be achieved. The often large capital costs needed to retrofit many current plants could prove economically difficult for many existing units and could lead to closure of some operations.

In addition to the significant potential impact on the ICI sectors that operate boilers and process heaters, the report outlines far-reaching consequences on the economy. Projected impacts vary based on the scenario being evaluated. For example, the rule as proposed could put 338,000 jobs at risk (at regulated facilities, their suppliers, and broader effects of the loss of direct and indirect spending). Of those jobs that could be at risk, 153,000 of them could be avoided if EPA were to use a health-based approach for regulating inorganic HAPS, which would result in roughly equivalent environmental benefit. EPA has sensibly proposed to use a work practice standard for natural gas-fired units. For these natural gas units, if EPA instead decides to apply technology based emissions limits as discussed in the proposed rule, an additional 798,000 jobs could be put at risk.

"CIBO believes a cost-effective and environmentally-protective regulation is possible within the existing framework if EPA finalizes this rule carefully and addresses the critical issues identified in comments submitted by owners of units that must comply with the rule," said Robert Bessette, President of CIBO. "This study offers an eye-opening look at the economic damage that could be caused if EPA moves forward with this Boiler MACT rule without substantial modifications. The

study makes clear that it is important for EPA to take great care in finalizing this rule to avoid significant consequences for many boiler and process heater owners, the communities surrounding affected facilities and the broader economy."

While some larger entities will be able to absorb the costs of the rule with minimal changes to employment levels, they would pass on the costs to their customers. The largest impact would be on smaller or less profitable firms, which could be forced to make the largest staff reductions or even shut down.

###

*CIBO is a broad-based trade association of industrial boiler owners, architect-engineers, universities & related equipment manufacturers representing 20 major industrial sectors. CIBO actively promotes energy and environmental equipment, technology, operations & policies and laws & regulations affecting industrial energy facilities.*

*IHS Global Insight is widely recognized as the most consistently accurate economic forecasting firm in the world. With over 600 economists, statisticians, and industry specialists in 25 offices worldwide, IHS Global Insight has a well-established track record for providing rigorous, objective forecast analysis and data to governments and businesses around the world.*

The study may be accessed at: [www.cibo.org](http://www.cibo.org)

For information, please contact

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## Construction Industry Round Table

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January 6, 2011

The Honorable Darrell E. Issa  
Chairman  
U.S. House of Representatives  
Committee on Oversight and Government Reform  
2157 Rayburn House Office Building  
Washington, DC 20515-6143

Dear Chairman Issa:

On behalf of the Construction Industry Round Table (CIRT)<sup>1</sup>, we wish to thank you for requesting the Round Table's participation in the critically important effort to identify existing and proposed regulations that have or may negatively impact job growth in our industry.

"Time is money" both axiomatic and true in the design and construction industry – which remains heavily labor intensive to this day. So, if something takes more time it cost jobs . . . thus, regulatory delays, redundancies, inefficiencies, and red tape collectively have a direct impact on costs and therefore the vitality and ability of our industry to remain profitable and hire more people.

Even the American public has come to this conclusion, with an overwhelming 81 percent agreeing that the government "needs a basic overhaul" and should undertake "an annual 'spring cleaning' to eliminate unnecessary regulations and red tape." according to a recent Clarus Research Group poll (Dec. 2010).

#### Design and Construction Community

The design/construction community's "can-do-spirit" and "know-how" still exists, it's just hard find under the mountains of laws, regulations, and rules that we insist on heaping onto our private sector job creators and then expect them to spur economic growth and employment. Not only is the existing mass burdensome (which one might call "the regulatory complex"), the uncertainty and unintended consequences of what appears to be a never ending expansion of government's reach has also done severe damage to the entrepreneurial spirit and risk taking – both necessary to jump start a robust recovery.

<sup>1</sup> The Construction Industry Round Table (CIRT) strives to create one voice to meet the interest and needs of the design and construction community. CIRT supports its members by actively representing the industry on public policy issues, by improving the image and presence of its leading members, and by providing a forum for enhancing and/or developing strong management approaches in an ever changing environment through networking and peer interaction.

The Round Table is composed of approximately 100 CEOs from the leading architectural, engineering, and construction firms in the United States. Together these firms deliver on billions of dollars of public and private sector infrastructure projects that enhance the quality of life of all Americans while directly employing half-million Americans.

The process of designing and constructing is one of man's most complex and daunting endeavors – it often is the means by which we measure the success of an entire civilization (to wit, the "ruins" of ancient worlds are typically viewed as how advance they were or how resourceful and lasting). Part of the complexity is the number of parties and interested players that may have a hand in or influence over a given project, add to that the number of layered jurisdictions (federal, state, local, etc.); and one begins to understand the myriad places and opportunities where delay/redundancy can creep into the process through unnecessary red tape.

This process has become profoundly more complicated, as recently noted in the *Civil Engineer* BLOG: "[t]he environmental protection movement has contributed to the uncertainty for construction because of the inability to know what will be required and how long it will take to obtain approval from the regulatory agencies. The requirements of continued re-evaluation of problems and the lack of definitive criteria which are practical have also resulted in added costs."<sup>2</sup>

While examples of red tape can be found in procurement of services, environmental requirements, public safety, financial requirements (FinReg), project delivery, payment systems, benefit mandates (health care reform), and countless other areas – they all hold some things in common: lack of uniformity, redundancy, and inefficiencies.

#### **(A) Streamlining**

"As a people we have chosen to function under a political system that promotes diversity of governmental authority, and structure. As a result, we have developed a national regulatory system well meaning in its intentions, but layered and overly complex. Our social purposes, missions, and public interests often compete, with our 44,000 jurisdictions, all 50 states, several territories, and the federal government each amending, adopting, interpreting, and enforcing five major sets of construction codes and over 2,000 technical standards governing the site selection, design, and construction of *buildings* (NOTE: just "buildings" is being considered here – in other words "vertical construction" – not roads, bridges, environmental remediation, etc. etc.)." See, NCSBCS and its 54 national partners [hereinafter "Alliance"] web site entitled: *Streamlining the Nation's Building Regulatory Process* ([www.ncsbc.org/newsite/Streamline/Stream.htm](http://www.ncsbc.org/newsite/Streamline/Stream.htm))<sup>3</sup>

And the cost of red tape can be substantial. The Alliance/FIATECH Project has found that increasing the efficiency of modern construction codes, rules, and regulations as well as reducing the amount of time it takes to move a new building or building renovation through the regulatory process by as much as 60% annually, can also save both the private and public sectors tens of billions of dollars.

When extrapolated to the full construction market, the study notes that:

<sup>2</sup> The Environmental Protection Agency (EPA) has long been a source of regulatory inefficiency and costs. Almost 30 years ago *Land Economics* (Vol. 59, No. 1, February 1983) published an article entitled: "Impact of Regulatory Delays on the Cost of Wastewater Treatment Plants" by Krista S. Reed and C. Edwin Young which pointed out that "The red tape necessary to meet the EPA requirements frequently delays the start of construction an average of 2 to 4 years." *Id.* @ page 35.

<sup>3</sup> The National Conference of States on Building Codes and Standards, Inc. (NCSBCS) has worked over the years with federal agencies and public and private sector organizations, and has now joined with the FIATECH Streamlining Project and the State and Local government support activities of *Robert Wible & Associates* with a goal to reduce the amount of time it takes to move buildings through the regulatory system by as much as 60%.

*Regulatory Costs = 10% of the Annual \$1.0 trillion in U.S. Construction or \$100 Billion in costs.<sup>4</sup>*

BUT, even with these enormous savings – much, if not all, of the purpose of these procedures could be accomplished without the unnecessary delays and costs<sup>5</sup> – that's not just a theory, but a fact proven by the experiences borne from projects across the country when time is of the essence.

**(B) Contrasting Project Experiences**

There are any number of examples and experiences over the years where we can focus on the clear unmistakable lessons we've learned and put them to work across the board on a myriad of public projects so that we get the benefits of efficient, science-based, and cost/time sensitive regulations without the unnecessary and wasteful burdens. Or we can ignore them and continue with wasteful inefficient procedures.

- **Cutting Through Red Tape (Early Completion)**: After barely one year (some three months ahead of schedule) a new I-35W bridge stood where one tragically collapsed on Aug.1 2007. The old span carried more than 140,000 vehicles a day and the loss of the bridge was costing \$400,000 per day in diminished revenue, increased commuter expenses, and burden on surrounding roads. "Business as usual" and needless regulatory delays would not be acceptable or tolerated by the devastated community. When incentives exist, the regulations and red tape can be overcome/managed and eliminated to create a notable success: The Interstate 35W bridge replacement project was completed early/below budget and was awarded America's Transportation Awards' Grand Prize for 2009 by the American Automobile Assn., the American Assn. of State Highway & Transportation Officials and the U.S. Chamber of Commerce. [RESOURCE: Linda Figg, Figg Engineering Group (FL)]
- **Typical Project Delays**: The project to rehab the City of Chicago's "Redline" and bring it to a state of good repair, on its existing right away (which is currently in disrepair and "falling

<sup>4</sup> The Alliance documented the savings from streamlining and use of IT methods for building projects – and then applied it to 2007 Construction Data (today, construction spending is down to approximately \$810 billion, of which about \$256 billion is in non-residential building).

<sup>5</sup> The Alliance/FIATECH web site notes: "This is not about regulatory abandonment! This is about spending both government and private sector dollars wisely."

By 2007, the study found vast savings from seemingly simple efficiencies such as:  
(1) e-Permit Processing now used in over 500 jurisdictions across the nation ranging in population from Los Angeles (3,696,000) to Cobleskill, NY (5,300) reduce staff and building owner/architect times to process permits by between 30 – 40%;  
(2) Interactive Voice Response (IVR) systems in Shelby Co., TN; Orlando, FL and Washington Co., OR reduce the time to schedule and conduct inspections from 2-3 days to less than 24 hours; (3) Mobile field inspection technology being used in cities including Phoenix, AZ; San Dimes, CA increase the number of inspections performed per day by 25% and reduce contractor down time waiting for inspections and their results by 20%; (4) e-Plan Review now being conducted in: Atlanta, GA; Bend, OR; Maricopa Co., AZ; Osceola Co., FL and a dozen other jurisdictions reduce the amount of time it takes to review plans by 40%, eliminate lost plans, and reduce by 80% the number of trips to these jurisdictions by out of state owners/architects; and (5) streamlined processes are getting buildings up and open faster, putting both people to work and revenues into the jurisdiction's coffers sooner; for example a 200 room hotel open just 3 months earlier using streamlined processes with an 80% occupancy = \$144,000 in added tax revenues to a jurisdiction just from the 10% occupancy tax on \$100/night rooms.

down") is estimated to cost \$4 billion. If the CTA "Chicago Transit Authority" had the money in their hands today, the project *still* could not be finished until 2019; even though the construction should *only* take two years. The delay of some 7-years is due to the EPA, EIS, and all the other groups that have to touch the project (notwithstanding it's an existing line that is operating now) preventing the start of construction for years! The Mayor of Los Angeles is facing the same type of delays in building a number of his projects in his city. [RESOURCE: Jim Kenny, Kenny Management Services, (IL)]

### **(C) Procedures & Process**

Hidden in any discussion of regulatory waste is the procedural and process burden (or "paper work") that typically accompanies any rules. Examples of this process are both universal in application and often times unique or specific to industry groups and/or regulated areas. The same is true for the design/construction community.

- **Compliance and Paper Work Costs/Delays:** Somewhat unique to the A/E/C community, the federal agencies appear to be "beefing-up" and hiring full-time staffers to assign to large projects involving so-called "stimulus" funds, where they are requiring monthly oversight meetings to ensure compliance with federal guidelines. The San Diego courthouse is in the category of such a "mega-project" (over \$100M): contractors are devoting a number of people and resources to make sure they are in complete compliance -- the paperwork required is akin to a monthly federal audit.

Regulations have not been altered drastically, but chances of being audited have increased and audits to a greater depth have been promised. The OFCCP, in fact, has eliminated their "desk audit" procedure and have moved to more aggressive in-depth on-site auditing process across the board -- this then requires greater preparation for potential audits on the contractors' part in anticipation of the notification letter or knock on the door.

- **Procurement Rules for Construction Projects:** Another example of regulatory rule making that has a direct impact on costs/time relates to procurement procedures for A/E/C projects:
  - **Use of project Labor Agreements (PLA) on Federal Construction Projects:** The new rule seeks to implement President Obama's Executive Order No. 13502 (Feb.6, 2009), which for the first time establishes a policy of "encouraging" federal agencies to consider imposing union-only PLA's on federal construction projects whose total costs exceed \$25 million. Besides the obvious potential (and likely) impact on increasing costs for federal projects (which means less projects can be initiated), the proposal also end runs Congressional mandates and laws.<sup>6</sup> [RESOURCE: Ben Brubeck, ABC ([brubeck@abc.org](mailto:brubeck@abc.org))]
  - **Redefining "Inherently Governmental":** One of the more pernicious expansions of government is its willful efforts to compete with the private sector. To further that aim, the Administration has undertaken a rulemaking process to expand and flip the intent of what is "inherently governmental" so as to prevent work from being contracted to the private sector. Clearly this has a direct impact on the ability of firms

<sup>6</sup> The proposal contemplates expanding the PLA mandate to projects that do not directly involve the federal government (as a party to the contract) by simply attaching the requirement to the funding. Currently, cases appear to restrict such an expansive reading of the NLRA. The proposal also interferes with Congressional direction that federal agencies should strive to "obtain full and open competition" as set forth in the "Competition in Contracting Act." Moreover, the rule violates and ignores 5 U.S.C. 804 (Congressional Review Act) and the Regulatory Flexibility Act.

to survive and maintain their personnel if the government agency reduces or stops contracting out work.<sup>7</sup> [RESOURCE: John Palatiello, BCFC ([john@jempa.us](mailto:john@jempa.us))].

- **"Card Check"** The potential remains, without the votes in Congress to pass a change in the law related to the so-called "Card Check" legislation, the Administration will turn to the NLRB's rulemaking authority. Given the construction industry's labor intensive nature, and the fact it is fairly highly unionized (at approximately 14.5%), such a rule or regulatory change will have an immediate and direct impact on the construction portion of the industry.

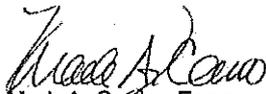
### Conclusion

The time has come, if not long past, for efforts to focus on ways to roll-back, sunset, repeal, and/or de-fund the excessive "regulatory complex" that has arisen to new heights over the past decade.<sup>8</sup> Beyond these measures, the courts may also need to play a role to reverse the imbalance.<sup>9</sup>

Short of outright repeal and/or elimination of excessive regulations and rules, the affect of streamlining them whereby actions are done concurrently and shared among and between jurisdictions/agencies so that a project may move forward in a timely manner devoid of unnecessary delays would greatly improve the ability of A/E/C firms to complete work and gainfully employ more Americans. Right now, dollars allocated to be spent on these projects are subject to endless redundant time consuming and often wasteful rules which weigh down efficiencies and delivery times, while increasing costs.

To expect the U.S. economy to expand, create jobs, and become robust through government intervention and excessive regulations, is to expect something that "*never was and never will be*" – to paraphrase Thomas Jefferson.

Sincerely,



Mark A. Casso, Esq.  
President

Construction Industry Round Table

<sup>7</sup> The OFPP guidance letter's construct reverses the original and long-held intent of federal policy to contract-out for goods and services unless they were "inherently governmental" in nature, to one that now suggests that agency officials must prove it is not "inherently governmental" to contract-out. [See, 75 Fed. Reg. 16,196 (March 31, 2010)].

<sup>8</sup> CIRT is aware that the new 112<sup>th</sup> Congress may take-up a number of proposals that seek to rebalance and/or address the regulatory complex that is rapidly replacing the Constitutional safeguards and divisions that are the hallmark of our governmental system. The Round Table supports such efforts and commends these along with such suggestions as put forth by J.T. Young to apply deficit-cutting techniques by creating a "Regulatory Budget" that begins to quantify the enormous "hidden tax" found in excessive regulations and rules. [See, Viewpoint, IBD (Dec. 29, 2010) page A11].

<sup>9</sup> Unfortunately, the courts have been exploited and used to expand the regulatory reach by advocates who have used them (often outside of their expertise or scientific knowledge – sometimes influenced by faulty or even fraudulent data, as in the case of CO2 emissions) to get favorable regulatory outcomes that far exceeded the rulemaking process or Congressional intent. However more recently, the courts have come down hard on some excessive reaches by the FCC (in the case of "net neutrality" proposed rules), EPA (7<sup>th</sup> Circuit remanded the 2009 construction storm water rule), and DoI's mandatory oil drilling moratorium which was struck down as arbitrary and capricious, as well as potential repeal of portions of the massive health care bill.

January 19, 2011

The Honorable Darrell Issa  
Chairman  
House Committee on Oversight and Government Reform  
2157 Rayburn House Office Building  
Washington, D.C. 20515

Dear Chairman Issa:

Thank you for your January 11 letter seeking assistance in identifying existing or proposed regulations that may negatively impact job growth in the wireless industry. CTIA – The Wireless Association® (“CTIA”) greatly appreciates the opportunity to respond and to highlight several areas where on-going regulatory activity threatens to impose significant new costs that will inevitably slow job growth, chill investment, impair innovation, and raise end-user costs to the detriment of the American economy.

CTIA is an international nonprofit membership organization that has represented the wireless communications industry since 1984. Membership in the association includes wireless carriers and their suppliers, as well as providers and manufacturers of wireless data services and products. Our membership is part of an industry that now serves more than 290 million U.S. subscribers, directly employing more than 235,000 people, while investing more than \$20 billion annually to expand and upgrade America’s wireless networks.

The investment, innovation, and competition that characterize the U.S. wireless industry have produced a marketplace in which Americans enjoy more choices and consume more minutes of use, while paying a lower price per minute, than consumers in other developed nations. It is not an overstatement to say that the mobile revolution that has occurred over the last quarter century has changed the way we work, learn, shop, and play, all while driving economic growth in a positive direction. The mobile broadband services offered by CTIA’s members are a key component of the United States’ efforts to increase broadband availability and adoption.

Global leadership in the wireless industry is not guaranteed to us, however, and policymakers must realize that the wireless industry’s “engine for growth” can be slowed or stalled by ill-conceived, unnecessary, or burdensome regulations. In the balance of this letter, I provide a high-level description of several proposed regulations that would seem to fit squarely within the scope of your inquiry.

- 1. FCC Proceeding re: Amendment of Parts 1, 22, 24, 27, 74, 80, 90, 95, and 101 To Establish Uniform License Renewal, Discontinuance of Operation, and Geographic Partitioning and Spectrum Disaggregation Rules and Policies for Certain Wireless Radio Services**

In May 2010, the Federal Communications Commission (“FCC” or “Commission”) issued a notice of proposed rulemaking addressing certain licensing and license renewal rules.<sup>1</sup> Specifically, proposed Section 1.949 requires a “detailed description” of the licensee’s service during “the entire license period,” addressing the following factors:



- (1) the level and quality of service, including population, area served, number of subscribers, services offered;
- (2) the date service commenced and whether service was ever interrupted, and the duration of any interruptions or outages;
- (3) the extent to which service is provided to rural areas;
- (4) the extent to which service is provided to tribal lands; and
- (5) any other factors associated with the level of service to the public.

Without any countervailing benefit to the public, the proposed rules would introduce significant new burdens to the licensing process for applicants and the Commission alike. Over the next 10 years, this increased burden would be applied to the nearly half million renewals that will be submitted to the FCC. These reporting requirements will impose both significant financial and personnel resource burdens on wireless licensees – resources that could be better spent in the provision of wireless broadband services and in increasing deployment to unserved and under-served areas.

This is by no means the only overly burdensome information collection requirement the Commission is proposing. But, as a result of the Commission's vague descriptions of what will comprise a sufficient renewal showing, it is difficult to highlight specific additional concerns about the overall impact of the data collection, only that they will be extensive and costly. However the Commission defines the nebulous "other factors associated with the level of service to the public," in order to comply, licensees will require additional resources, including the identification and training of new staff. Collecting data regarding cell site transmitter stations, types of facilities in operation, descriptions of investments, expansion plans, and more would require extensive training and divert employees from other important responsibilities. None of these burdens seem to be reflected in the Commission's discussion of the proposed collection requirement.

## 2. FCC's "Bill Shock" Proceeding

On October 14, 2010, the FCC issued a notice of proposed rulemaking<sup>2</sup> addressing the alleged problem of wireless "bill shock," which the Commission defines as "sudden, unexpected increases in [consumers'] monthly bills that are not caused by intentional changes in their service plans." In its NPRM, the Commission proposes to mandate the delivery of one-size-fits-all "usage alerts delivered via text message, other usage controls, and online comparison tools," while ignoring the variety of tools already available from numerous mobile providers for consumers who wish to monitor, track, or limit their wireless usage.

To put the scope of the alleged "bill shock" epidemic in context, the FCC's Consumer & Governmental Affairs Bureau asserted last October that it expected to receive approximately 1,500 "bill shock" complaints in 2010.<sup>3</sup> Since the number of wireless subscribers rose to almost 293 million by June 2010,<sup>4</sup> this expected number of complaints equates to about five per million subscribers – a complaint rate of just five ten-thousandths of one percent.

Nonetheless, the Commission appears to be moving forward with its proposed regulations, and is even considering applying these obligations to prepaid mobile services, which by definition are not billed after charges are incurred, thereby eliminating any risk that any prepaid wireless service customer will ever receive a bill containing unanticipated charges.

Beyond the fact that the Commission lacks a sound rationale for imposing “bill shock” rules, the Commission seems also to have radically understated the cost of complying with its proposed regime, which it suggests could be accomplished for as little as \$16,000.<sup>5</sup> This estimate is challenged by T-Mobile’s comments in the proceeding, which note that:

“The NPRM grossly underestimates the costs associated with implementing the proposed rules. In its submission to the Office of Management and Budget pursuant to the Paperwork Reduction Act, the Commission estimates that many wireless providers may “on occasion” make “some modifications to their existing billing systems to comply with the proposed requirement to offer usage alert notifications.” The Commission further estimates that within each organization, the proposed rules can be implemented by one person within each organization, based upon 140 hours of work annually, for less than \$16,000. These estimates do not come anywhere remotely close to reflecting the reality of the wireless marketplace and the resources necessary to implement the proposed rules.”<sup>6</sup>

T-Mobile’s criticism was echoed in the comments of the Rural Cellular Association, which noted that its “members estimated the cost to implement the FCC’s proposed real-time notifications and alerts to be around \$2 million per carrier,” which, with an average RCA member having about 20,000 subscribers, would cost approximately \$100 per subscriber, roughly what an RCA member might expect a consumer to pay for two months of service.<sup>7</sup> Thus, while the Commission suggests that billing system modifications sufficient to comply with the obligations proposed in the NRPM could be accomplished for as little as \$16,000, the carriers that possess actual expertise in dealing with complex billing systems provide estimates that are several orders of magnitude larger.

The FCC should refrain from initiating prescriptive rules that not only would likely cost carriers (and therefore consumers) tens, if not hundreds, of millions of dollars to put into practice, but that also would raise numerous legal issues, create substantial implementation challenges, and force companies to adhere to a set of one-size-fits-all government standards instead of creatively competing in the provision of service to customers. Differentiation through competition will best serve consumers and ensure the efficient allocation of carrier resources.

### **3. The PHMSA Lithium Battery Shipment Proceeding**

On January 11, 2010, the Pipeline and Hazardous Materials Safety Administration (“PHMSA”) proposed to adopt a new set of regulations governing the cargo transportation of lithium batteries and products containing them –laptops, cell phones, medical devices, and many others. The regulations would be inconsistent with international standards adopted by most U.S. trading partners, ignoring the fact that the market for lithium batteries and the products containing them is global in nature. PHMSA received over 100 substantive comments – including from CTIA - on the rule, all but a handful of which opposed the proposal.<sup>8</sup>

While PHMSA estimated the first-year cost of implementing its proposed rules at less than \$10 million, private sector evaluations of the rules suggest that PHMSA has grossly underestimated the cost of compliance with its proposed rules. Implementation of the rules proposed by PHMSA would require the restructuring of existing distribution practices of wireless carriers and their suppliers, as the rules would effectively preclude current “just in time” inventory supply management and create

requirements for more warehousing space and investment to carry unshipped inventory. The impact of such restructuring has been estimated by Campbell Aviation Consultants and TransSystems ("CAC/T"), at the request of the Portable Rechargeable Battery Association, to exceed \$1.1 billion in the first year alone. Individual and proprietary estimates by several CTIA member companies suggest that large as it is, CAC/T's evaluation may in fact understate these costs. But even if CAC/T's estimate is taken as correct, PHMSA's estimate – like the FCC's in the "bill shock" proceeding – falls short by two orders of magnitude.

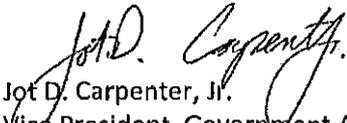
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Each of these regulatory efforts seeks to impose broad new burdens on one of America's greatest success stories. Taken collectively, these three proceedings suggest the need for regulators to exercise greater rigor in the estimation of the costs associated with proposed regulation, and for Congress to engage in vigorous oversight of agencies' cost estimates before rules are adopted.

A potential solution to the type of problems raised in these proceedings would be for Congress to enact legislation that would reimpose the framework contained in Executive Order 13422. That action, taken by President George W. Bush in January 2007 and rescinded by President Barack Obama in January 2009 by means of Executive Order 13497, required agencies to identify in writing the specific market failure or problem that warrants a new regulation, while providing their best estimates of the cumulative regulatory costs and benefits of the rules they expect to publish in the coming year, coupled with an expansion of the review to be conducted by the Office of Information and Regulatory Affairs. Codifying that process and extending it to cover all Executive branch and independent agencies with rulemaking authority would go a long way toward ensuring that regulatory efforts are narrow, targeted, and minimally burdensome, thereby preserving American industry's ability to invest, innovate, and grow.

Thank you for the opportunity to provide this input to the Committee. CTIA looks forward to working with you during the 112<sup>th</sup> Congress.

Sincerely,

  
Jot D. Carpenter, Jr.  
Vice President, Government Affairs

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<sup>1</sup> In the Matter of Amendment of Parts 1, 22, 24, 27, 74, 80, 90, 95, and 101 To Establish Uniform License Renewal, Discontinuance of Operation, and Geographic Partitioning and Spectrum Disaggregation Rules and Policies for Certain Wireless Radio Services, WT Docket 10-112, Notice of Proposed Rulemaking (released May 25, 2010).

<sup>2</sup> In the Matter of Empowering Consumers to Avoid Bill Shock; Consumer Information and Disclosure, CG Docket No. 09-158, CC Docket No. 98-170, WC Docket No. 04-36, Notice of Proposed Rulemaking, FCC 10-180 (rel. October 14, 2010).

<sup>3</sup> Federal Communications Commission Consumer & Governmental Affairs Bureau, White Paper on Bill Shock, October 13, 2010, at 3. Paper available at <http://fcc.gov/stage/Bill-Shock-White-Paper.pdf>.

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<sup>4</sup> CTIA survey, available at [http://files.ctia.org/pdf/CTIA\\_Survey\\_Midyear\\_2010\\_Graphics.pdf](http://files.ctia.org/pdf/CTIA_Survey_Midyear_2010_Graphics.pdf).

<sup>5</sup> Specifically, the Commission estimates that system modifications for usage alerts can be undertaken by one individual and that they can be accomplished within 100 hours for a total annual expenditure of \$6,236. The Commission also estimates that implementing the proposed rule regarding disclosure methods for capping and reviewing usage will similarly be done "on occasion" by one individual within each organization, and only take 40 hours of work at an annual cost of \$2,514. The Commission further estimates that the annualized capital costs that

providers may expend for upgrading software and other equipment will be around \$6,666 per year. See T-Mobile comments, CG Docket 10-207, at 16, note 40.

<sup>6</sup> Comments of T-Mobile, CG Docket 10-207, at 16-17.

<sup>7</sup> RCA comments, CG Docket No. 10-207, at 7.

<sup>8</sup> See <http://www.regulations.gov/#!docketDetail;D=PHMSA-2009-0095>.



Credit Union National Association

cuna.org

**BILL CHENEY**  
President & CEO

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January 5, 2011

The Honorable Darrell Issa  
Chairman  
Committee on Oversight and Government Reform  
United States House of Representatives  
Washington, DC 20515

Dear Chairman Issa,

On behalf of the Credit Union National Association (CUNA), I am writing in response to your letter of December 10, 2010, requesting information on regulations that have had a negative effect on job growth in the credit union system. CUNA is the nation's largest credit union advocacy organization, representing approximately 90 percent of the 7,700 state and federal credit unions in the United States and their 93 million members.

Relieving credit unions' regulatory burden is a key objective for CUNA. Credit unions are not-for-profit financial cooperatives; the only owners of a credit union are its members, who receive the benefit of ownership through reduced fees, lower interest rates on lending products and higher dividends on savings products. Because of this structure, the cost of a credit union's compliance with unnecessary and unduly burdensome regulation impacts its members more directly than bank customers. Every dollar that a credit union spends complying with regulation is a dollar that is not used to the benefit of the credit union's membership.

Credit unions support reasonable safety and soundness rules as well as meaningful consumer protection laws. However, the fact is that credit unions are the most highly regulated financial institutions in the United States, and the regulatory burdens continue to multiply with little or no regard for the costs of each requirement or the cumulative impact on the institutions that must comply.

In addition to the regulatory hurdles that have a negative effect on job growth, there are also statutory constraints that keep credit unions from doing more to help their members promote job creation and economic growth. In response to your request for information, we will discuss both the statutory and regulatory hurdles, noting that we also intend to raise these issues with the Committee on Financial Services.

#### *Regulation of Debit Interchange*

For credit unions and their members, the most chilling effect of the *Dodd-Frank Wall Street Reform and Consumer Protection Act* will be the implementation of Section 1075 related to the regulation of interchange fees.<sup>1</sup>



<sup>1</sup> 15 USC 920, 921 and the Federal Reserve Board's proposed rule issued December 16, 2010.

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January 5, 2011  
Page Two

Seventy percent of credit unions offer debit cards to their members; while the statute exempts issuers under \$10 billion in total assets (all but three credit unions) from the regulations promulgated by the Federal Reserve Board, we have long held that the exemption is meaningless because the law does not explicitly extend to the Board the authority to enforce the exemption, and nothing in the law requires the payment card networks to operate a two-tier interchange system to protect the smaller issuers. Without a meaningful way to enforce the exemption, smaller issuers may be subjected to the same, severe limitations on debit interchange fees that the Board has proposed for large issuers.

Complicating matters further, the law only permits the Board to consider a very limited set of cost factors when setting the debit interchange rate. Because the Board cannot consider all costs when setting the rate, the rate that it sets will necessarily be lower than the costs of providing the service. It is a reasonable – but at this point academic – question: should the federal government be setting rates in the first place? However, if the government is going to set a rate, the rate ought to be high enough to cover the costs of providing the service. The Board's proposed rate of 12 cents per transaction is estimated to result in a 70% decrease in interchange revenue. As a result, credit unions and other issuers – including those Congress intended to exempt from the regulation – will have to find other ways to cover the costs of providing these services.

The implementation of this provision of the *Dodd-Frank Act* will absolutely hit the pocketbooks of Americans holding debit cards. Anecdotally, credit union executives have told us they may be forced to impose monthly checking account fees in the neighborhood of \$15-\$20. This is heartbreaking for managers of credit unions who work every day to reduce the cost of access to financial services for their members. Congress needs to repeal this provision of the *Dodd-Frank Act* before those who are least able to afford it end up paying for it. Recognizing that the process of repealing this provision will take some time, we encourage the Committee, in conjunction with the Committee on Financial Services, to encourage the Board to delay the implementation of its proposed rule.

#### *Credit Union Net Worth Restrictions*

If there has been one lesson learned from the recent financial crisis, it is that, for financial institutions, capital is king. Financial regulators in the United States and around the globe have been looking at ways to increase capital requirements for banks and other financial institutions in order to ensure that we never again experience failures like those that were caused by the recent crisis. It is in everyone's best interest that all financial institutions – including credit unions – have access to the capital building tools necessary to meet reasonable capital standards.

Credit unions are the only depository institutions in this country that do not have the legal authority to supplement their capital by issuing capital instruments. And, credit

The Honorable Darrell Issa  
January 5, 2011  
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unions are the only depository institutions in the United States that must meet specific capital levels set by statute – not only by regulation – or face asset restrictions and other sanctions that limit growth. The *Federal Credit Union Act* requires credit unions to have 7% net worth to be considered well-capitalized and 6% net worth to be adequately capitalized.<sup>2</sup>

Over the last two years, as many banks have failed and depositors have sought the safety and stability of credit unions, some credit unions have had to turn away members' deposits or ask members to withdraw deposits in order to retain their current net worth level or increase it. Credit unions exist to serve members, not turn them away.

Compounding the problem for credit unions are examiners who, in the current economic environment, expect even higher net worth, which credit unions can only build through retained earnings. While sufficient capital is important to individual credit unions as well as the system as a whole, maintaining arbitrarily high capital levels may result in credit unions having to curtail services or outreach to their communities so that their net worth ratios will not be negatively affected.

We will be asking Congress to permit the use of supplemental capital instruments to boost credit unions' net worth and permit them to continue to fully serve their members. We hope that the Committee, in conjunction with the Committee on Financial Services, will give some attention to the inconsistent and arbitrary standards being applied by field examiners.

*Member Business Lending Cap*

Credit unions have been providing business loans to their members since they were first established in the United States over one hundred years ago. They want to lend more to their members who own small businesses, but they are restricted in the amount they can lend by a statutory cap imposed in 1998.

In the last Congress, when the Administration proposed spending \$30 billion of taxpayer money to encourage community banks to lend to small businesses, credit unions encouraged Congress to pass legislation to increase the credit union member business lending cap from its current level, 12.25% of total assets to 27.5% of total assets. The National Credit Union Administration, the federal regulator for credit unions, has testified that any risk associated with additional credit union business loans is manageable and that the cap is not needed for safety and soundness reasons.

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<sup>2</sup> 12 USC 1790d and 12 CFR 702.

The Honorable Darrell Issa  
January 5, 2011  
Page Four

Bipartisan legislation (H.R. 3380 and S. 2919) was introduced in both chambers in 111<sup>th</sup> Congress. Mr. Chairman, we appreciate your having cosponsored this legislation, which also earned the endorsement of the Obama Administration. We estimate that if this legislation became law, credit unions could lend \$10 billion to their small business owning-members within the first year of implementation, helping to create over 100,000 new jobs. This proposal is economic stimulus that does not cost the taxpayers a dime, and would not increase the size of government. It is a commonsense proposal that Congress should swiftly enact.

*NCUA's Regulatory Flexibility Program*

In 2001, NCUA adopted the "Regulatory Flexibility (RegFlex) Program" to allow well managed credit unions to avoid a limited number of requirements that were imposed on credit unions by the agency and not directly required by statute.<sup>3</sup> This program was terminated by the agency in October 2010. The result will be increased compliance costs for the many credit unions that were eligible to participate in the RegFlex program.

*NCUA Budget*

In late 2010, the NCUA approved a 12% budget increase for fiscal year 2011 that features a 6.1% salary adjustment for agency union workers, a 3% increase for other NCUA personnel, and funding for several new positions. Unlike other federal agencies which receive appropriations from Congress, NCUA is funded almost exclusively by credit unions. Credit unions are extremely concerned that, at a time when they are having to cut back on staff and other resources, NCUA is expanding its budget and workforce in a manner that is inconsistent with the rest of the federal government.

We have urged NCUA to constrain its budget and to look for ways to minimize costs, and we hope the Committee will do the same. We also believe that it would be beneficial for the Government Accountability Office (GAO) to regularly conduct an analysis on the allocation of resources and budget processes for federal financial regulators.

*Examination Practices*

Particularly since the onset of the recession, credit unions have raised serious concerns about examiner practices that seek to eliminate risk rather than allow credit unions to manage it through exercising business judgment. Increasingly, examiners are skipping less onerous directives and imposing harsh sanctions when issues arise that the examiner feels need to be addressed, even when the credit union is adequately or well-capitalized.

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<sup>3</sup> 12 CFR 742.

The Honorable Darrell Issa  
January 5, 2011  
Page Five

CUNA and credit unions support reasonable safety and soundness regulation, but examiner micromanagement, which is being reported to us by credit unions across the country, needlessly constrains credit unions' ability to serve their members and support their communities.

### **Recommendations**

The need for regulatory reform for credit unions has never been more critical. While we have discussed a number of concerns in this letter, these just begin to scratch the surface of regulatory hurdles and burdens that prevent credit unions from serving their members even better. The Committee, in conjunction with the Committee on Financial Services, can play a critical role in helping credit unions do even more to help boost the economy and create jobs by supporting the following recommendations for regulatory improvements:

- Eliminate or increase the statutory cap on credit union business lending.
- Amend the statutory capital restrictions to allow credit unions to strengthen their net worth with supplemental capital.
- Review how the exemption for small issuers under Section 1075 of the *Dodd-Frank Act* can be implemented to protect small issuers, as Congress intended.
- Encourage NCUA and state regulators to reward well-run credit unions by imposing fewer regulatory burdens on them. Specific examples of reduced burdens include:
  - Streamlined 5300 (call) reports
  - 18-month examination cycle (instead of 12 months)
  - Automatic waivers from regulatory limitations that are not required by statute.
- Encourage the NCUA to follow federal agency guidelines for salary levels and adjustments for agency personnel.
- Direct the GAO to regularly conduct an analysis and report to Congress on the allocation of resources and budget processes for federal financial regulators.
- Direct the GAO to conduct a review and report to Congress on federal financial regulators' compliance with the *Paperwork Reduction Act* and *Regulatory Flexibility Act*, which requires regulators to take into account the impact of their rules on small institutions.
- Require federal financial regulators to report to Congress annually on steps they have taken in the previous year to reduce the regulatory burden on the institutions they supervise.
- Examine the extent to which the objectives of the *Bank Secrecy Act* and related requirements are being met and recommendations to dramatically reduce the burden associated with these requirements.
- Direct the BCFP to conduct a study and present recommendations on statutory and regulatory improvements to reduce regulatory burdens on financial institutions, consistent with the requirement under the *Dodd-Frank*

The Honorable Darrell Issa  
January 5, 2011  
Page Six

*Act* that the Bureau identify and address unnecessary, outdated and unduly burdensome requirements.

**Conclusion**

We appreciate your recognition of the significant costs to our communities and the economy in general associated with the growing regulatory burden faced by credit unions. We applaud your review of these burdens and welcome the opportunity to discuss these issues further with you and your staff. Please do not hesitate to contact me if there is additional information that you need. On behalf of America's credit unions, thank you very much for your consideration of our concerns and recommendations.

Best Regards,

A handwritten signature in black ink, appearing to read "Bill Cheney", with a long, sweeping underline.

Bill Cheney  
President & CEO

cc: The Honorable Elijah Cummings, Ranking Member, Committee on Oversight and Government Reform  
The Honorable Spencer Bachus, Chairman, Committee on Financial Services  
The Honorable Barney Frank, Ranking Member, Committee on Financial Services  
The Honorable Deborah Matz, Chairman, National Credit Union Administration



The Honorable Darrell Issa  
2347 Rayburn House Office Building  
Washington, DC 20515

January 10, 2011

Dear Congressman Issa,

On behalf of DBA International, the trade association and voice for the debt buying industry, we submit this letter in response to your request to identify existing and proposed regulations that are hurting job creation and economic growth.

Debt buyers are financial institutions which purchase uncollected and charged off accounts from originating lenders for less than the face value of the debt. By creating a secondary debt market, the debt buying industry benefits the economy by encouraging consumer lending; providing lenders with a return on what might otherwise be a lost asset; helping to lower the cost of credit for all consumer borrowers; and helping to make credit available for lower income consumers. Furthermore, because debt buyers purchase accounts for less than the face value of the debt, they are uniquely positioned to offer more attractive repayment options to low and middle income consumers, allowing consumers to improve their credit records and, by doing so, to increase their access to, and reduce their cost of credit.

DBA is very concerned about the Consumer Financial Protection Bureau (CFPB) and the CFPB's rulemaking authority. As you know, the CFPB has been given unprecedented powers; has been given broad jurisdiction; and is somewhat insulated from congressional controls through the appropriations process. A fear of unknown and potentially adverse CFPB rulemakings has already begun to chill activity in the debt industry, especially with regard to possible regulations under the Fair Debt Collection Practices Act (FDCPA).

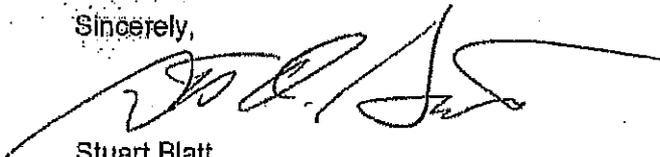
The FDCPA is the primary statutory authority regulating the debt industry. The FDCPA prescribes strong consumer protections, such as restrictions on disclosing

information about a consumer's debt to third parties, and prohibitions on oppressive, harassing or abusive collection behavior. The Federal Trade Commission (FTC) had previously been responsible for enforcing the FDCPA, but the Congress transferred the FDCPA to the CFPB.

The FDCPA is now over 30 years old and during that entire period has never been substantively amended. The Congress should have the opportunity to consider comprehensive amendments to the FDCPA before the CFPB issues FDCPA regulations.

Although your initial letter did not reach out to the debt industry, we hope that you will give consideration to the issues raised in this letter with regard to CFPB rulemaking and other activity. If the DBA can provide you with any additional information, please do not hesitate to contact us.

Sincerely,

A handwritten signature in black ink, appearing to read 'Stuart Blatt', written over a horizontal line.

Stuart Blatt  
President, DBA International



# The Fertilizer Institute

Nourish, Replenish, Grow

January 7, 2011

The Honorable Darrell Issa  
Chairman  
Committee on Oversight and Government Reform  
2157 Rayburn House Office Building  
Washington, DC 20515

Dear Chairman Issa:

Thank you for your letter of December 29, 2010, regarding the impact of existing and proposed federal regulations on the fertilizer industry. The Fertilizer Institute (TFI) represents the nation's fertilizer industry including producers, importers, retailers, wholesalers and companies that provide services to the fertilizer industry. TFI is the leading voice for the nation's fertilizer industry and we appreciate the opportunity to provide our concerns to the Committee on Oversight and Government Reform. While many of the regulations have had or will have an impact on our industry, there are three main issues of concern that we would like to bring to your attention.

Fertilizers nourish crops and supplement the soil with essential nutrients. Experts estimate that fertilizers are responsible for 40 – 60 percent of today's food production. Our industry feeds the economy as well. A report conducted recently by Charles River Associates International (CRA) shows the U.S. fertilizer industry supports 244,000 jobs and adds \$57.8 billion in value to the U.S. economy. The study found that the fertilizer industry directly employs more than 24,800 people who produced fertilizers valued at \$15.1 billion in 2006. These jobs had an average annual compensation of \$76,000, which was almost 80 percent higher than the U.S. average compensation across all industries.

The first issue of regulatory concern for the fertilizer industry is an effort by the U.S. Environmental Protection Agency (EPA) to establish a set of numeric nutrient criteria for Florida's waters. EPA's precedent-setting final rule entitled "Water Quality Standards for the State of Florida's Lakes and Flowing Waters" represents the first time EPA has attempted to displace a state's efforts to manage nutrient impacts by establishing federal numeric nutrient criteria. EPA has also stated that it aims to adopt a similar approach in the Chesapeake Bay and Upper Mississippi River Basin watersheds.

This highly controversial and precedent setting rule would have a devastating impact on Florida's already fragile economy. According to a study conducted by the Florida Department of Agriculture and Consumer Services, the total initial costs for Florida agriculture as a result of the Final Rule will range from \$855 million to \$3.1 billion. The total recurring (annual) costs, which include the amortized initial capital costs, are estimated to range from \$271 to \$974 million.

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Beyond the negative economic impact of the rule, TFI has serious concerns with the disregard for scientific data and methodologies that characterized the development of these criteria. In order to provide the Committee with a greater understanding of this issue, we are submitting the following documents: (1) A joint statement of principles on proposed nutrient standards for Florida, signed by more than 60 national and state trade associations and individual businesses; and, (2) an independent economic analysis of the rule conducted by Cardno Entrix.

We ask the Committee to consider three main actions regarding this rule. First, request that EPA commission a thorough scientific peer-review by its Science Advisory Board; second, request that EPA conduct an independent economic analysis of the rule to show the true cost of implementation; and third, withhold any funding for EPA to implement the rule until both an independent scientific peer-review and economic analysis are conducted and require that EPA incorporate the results of the analysis into the Final Rule.

The second issue of concern is the EPA's proposed Draft Chesapeake Bay Total Maximum Daily Load (TMDL). This is yet another attempt by the EPA to set precedent; this time by establishing a TMDL for an area that encompasses 64,000 square miles in seven jurisdictions. Our concerns with this proposed rule are addressed in the enclosures labeled: (1) Agricultural and Forestry Comments on the Draft Chesapeake Bay TMDL; and, (2) LimnoTech USDA EPA Bay Load Estimate Comparison. We believe these two documents outline areas of concern that have yet to be addressed by the EPA during their rulemaking process.

The third issue of concern is EPA's promulgation of regulations to control stationary source greenhouse gas (GHG) emissions. TFI has provided comments and interacted with EPA on several of these rulemakings. The following rulemakings pertaining to GHG emissions are of the greatest concern to TFI: (1) GHG Mandatory Reporting Rule; and (2) Prevention of Significant Deterioration (PSD) and Title V Greenhouse Gas Tailoring Rule.

The Mandatory Reporting Rule requires reporting of GHG emissions from all sectors of the economy. TFI litigated this final rule, settled and obtained significant concessions for the fertilizer industry. However, TFI remains concerned that EPA refused to remove CO<sub>2</sub> process emissions that are consumed on-site for urea production from ammonia and nitric acid facility reporting. These process emissions are not released to the ambient air from the facility and their reporting exaggerates the GHG footprint for the facility. EPA also proposed to require the reporting of all inputs used to calculate GHG emissions and not to afford such data elements confidential business information status. TFI opposes this effort, which could cause substantial harm to TFI's members. EPA has recently proposed to delay the reporting of these data elements until March 31, 2014, until it can evaluate industries' assertions.

Finally, the PSD and Title V Greenhouse Gas Tailoring Rule "tailors" major source applicability thresholds for GHG emissions under PSD and Title V Clean Air Act programs. This is currently in litigation with 20 different entities involved. TFI has serious concerns regarding EPA's rewriting of the Clean Air Act to "tailor" this Rule's applicability to larger sources. Further, TFI takes issue with EPA's lack of transparency when developing sector-specific approaches and the lack of an appropriate public comment period on the Rule's guidance documents (as an example, the EPA Nitric Acid Production BACT guidance document was not noticed in the *Federal Register*). Furthermore, industry stakeholders were given a mere two weeks to comment on the

guidance, which included the Thanksgiving holiday. This extremely short timeframe is not sufficient for those manufacturers that will be substantially affected by such a major rulemaking to develop a comprehensive set of comments. TFI is also concerned about EPA's claims that it consulted TFI when developing the Nitric Acid Production BACT guidance document. In fact, the Agency did not consult with TFI and there are significant inaccuracies included in the guidance. Furthermore, there is a lack of clarity in terms of what manufacturers must do to meet these new regulations and EPA has provided no guidance on how controls will be implemented and what will constitute BACT. This rulemaking would primarily impact nitrogen and nitric acid production, but also impacts phosphate production to some extent. While the BACT implementation process could result in substantial economic harm to TFI members, a robust economic analysis is not possible at this point given the lack of clarity and transparency thus far in the process.

In closing, TFI asks that Congress and the Administration ensure that any legislation or regulatory actions do not create a competitive disadvantage for America's fertilizer industry. The U.S. fertilizer industry provides high paying jobs to hardworking Americans in manufacturing plants, retail and wholesale businesses and in a host of related industries such as rail, barge and truck transportation. It is therefore critical that any legislative or regulatory actions do not jeopardize the domestic fertilizer industry which is such a vital link in food production, food security and the U.S. economy.

Sincerely yours,

A handwritten signature in cursive script that reads "Ford West".

Ford West  
President

Enclosures



# The Fertilizer Institute

Nourish, Replenish, Grow

William C. Herz  
Vice President,  
Scientific Programs

## JOINT STATEMENT OF CONCERNS AND PRINCIPLES ON PROPOSED NUTRIENT STANDARDS FOR FLORIDA

On January 26, 2010, the U.S. Environmental Protection Agency (EPA) published a notice of proposed rulemaking (NPRM) to establish water quality standards for Florida's lakes and flowing waters. 75 *Fed. Reg.* 4174 (Jan. 26, 2010). The NPRM represents the first time EPA has attempted to displace a state's efforts to manage nutrient impacts by establishing federal numeric nutrient criteria. However, EPA has already asserted that it may establish such criteria for the Chesapeake Bay, and may seek to take similar action in other watersheds. Accordingly, EPA's NPRM may establish a precedent that has national significance. The undersigned entities and/or their members – some of whom operate regulated activities in Florida, and some of whom are located in other states around the country – will all be affected by EPA's action, either directly or by the precedents that it sets. These entities have agreed on this joint statement, which presents shared concerns about the Florida proposal and recommended principles for how EPA and states should move forward in making decisions about development of nutrient water quality criteria and standards.

### CONCERNS REGARDING PROPOSED FLORIDA CRITERIA

In the NPRM, EPA is proposing numeric nutrient criteria for Florida lakes, streams, springs and clear streams, and canals. Key concerns regarding these criteria are as follows:

#### A. Criteria for Lakes

For lakes, EPA is proposing chlorophyll *a*, total nitrogen (TN), and total phosphorus (TP) criteria based on the stressor-response approach. EPA's proposed criteria are based on chlorophyll *a* production (the biological response) related to TN and TP levels (the stressors) in Florida for three categories of lakes: colored, clear and alkaline, and clear and acidic. In practice, these EPA's proposed standards are too broad and, by failing to take into account the biology and diversity of conditions present in Florida's lakes, are often disconnected from designated uses for these lakes. Waters that fail to meet any one of EPA's three proposed criteria would be considered impaired, even if the waters are biologically healthy. As a result, EPA's proposed criteria for lakes are not based on the levels of nutrients needed to protect designated uses.

#### B. Criteria for Rivers and Streams

Neither EPA nor the state of Florida could establish a cause and effect relationship between nutrients and algal growth in Florida rivers and streams. This weakness should lead EPA to the conclusion that it is not possible to establish scientifically defensible regional criteria which means narrative standards are appropriate, in accordance with 40 C.F.R. 131.11(b). Instead,

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EPA is proposing criteria based on the reference approach (identifying unimpaired waters and establishing nutrient criteria based on the levels found in those waters). By establishing criteria for rivers and streams without any consideration of cause- and-effect or consideration of an impairment threshold, EPA has proposed criteria that are not necessary to protect designated uses.

#### C. Downstream Protection Values for Lakes

EPA also is proposing to lower its proposed criteria for streams that discharge into downstream lakes. These downstream protective values (DPVs) are not based on data showing that receiving lakes are impaired. Instead, EPA used the Vollenweider model (which was developed to evaluate deep lakes with long retention times) to calculate the acceptable DPV. Using conservative assumptions, this model projects that even unimpacted streams would be a threat to downstream lakes. As a result, EPA's proposed established criteria would greatly increase the number of Florida waterbodies considered to be impaired. However, EPA's conclusions and its criteria are not scientifically defensible because the model used is simply not appropriate for many shallow Florida lakes.

#### D. Criteria for Springs and Clear Streams

For springs and clear streams, EPA is proposing a nitrate-nitrite criterion that EPA asserts is based on experimental laboratory data and field evaluations that show algal growth in response to nitrate-nitrite concentrations. Again, EPA did not establish a defined impairment level or demonstrate a cause and effect relationship between the stressor and the response. Thus, EPA cannot demonstrate that its proposed criterion for springs is necessary to protect designated uses. EPA even suggests that it may apply nitrate-nitrite criterion to all waters in Florida to assist assessment and management and to "identify increasing trends." *75 Fed. Reg.* at 4211. Under the Clean Water Act, water quality standards are established for the purpose of protecting designated uses, not to assist in assessment and management or to identify trends. EPA has no legal basis for establishing a nitrate-nitrite criterion for all Florida waters.

#### E. Criteria for Canals

For canals in south Florida, EPA is proposing chlorophyll *a*, TN, and TP criteria that EPA asserts are based on levels found in canals that are meeting designated uses with respect to nutrients. The proposed numeric criteria for canals, as with those for streams, are not based on a defined relationship between nutrient levels and use impairment. As a result, it is inevitable that some canals will "fail" the new criteria even though uses are fully supported.

#### F. Implementation Procedures

In the NPRM, EPA admits that its proposed lake criteria do not account for natural lake variability other than that provided by color and alkalinity classification (*75 Fed. Reg.* at 4191), and that its proposed streams criteria "may be either more stringent than necessary or not stringent enough to protect designated uses" (*75 Fed. Reg.* at 4192). However, rather than admit the magnitude of these flaws for defensible and scientifically sound criteria, EPA attempts to

provide relief through variances, changes in designated uses, or the use of site specific alternative criteria. Alternatively, EPA suggests that dischargers may be able to delay meeting the new criteria through compliance schedules or new restoration standards. These tools would be difficult to implement and do not make flawed criteria more scientifically defensible.

## **PRINCIPLES FOR NUTRIENT CRITERIA DEVELOPMENT**

EPA's Science Advisory Board (SAB) has reviewed EPA's *Empirical Approaches for Nutrient Criteria Derivation* (draft EPA 2009). In their review of that guidance, the SAB advised EPA that "[n]umeric nutrient criteria developed and implemented without consideration of system specific conditions (e.g., from a classification based on site types) can lead to management actions that may have negative social and economic and unintended environmental consequences without additional environmental protection." See *1-8-10 Draft Science Advisory Board (SAB) Ecological Processes and Effects Committee Advisory Report*, at page 37.

To prevent these unintended consequences, EPA should adhere to the following principles when developing numeric nutrient criteria in Florida or elsewhere:

First, EPA must demonstrate why imposing federal numeric criteria state-wide would be more consistent with the Clean Water Act than allowing a state to continue to protect water quality through its water quality management program. If EPA cannot make this demonstration, the federal criteria cannot be considered necessary, which is the statutory predicate for promulgating federal standards under section 303(c)(4)(B) of the Clean Water Act.

Second, any federal criteria must meet the requirements of EPA's water quality standards regulations. This means the criteria must be set at a level that is necessary to protect designated uses (40 C.F.R. 131.2), must be based on a "sound scientific rationale," (40 C.F.R. 131.11(a)), and must be developed using "scientifically defensible methods" (40 C.F.R. 131.11(b)). Accordingly, for specific waterbodies, EPA must establish on a cause-and-effect relationship between the nutrient being controlled and the biological response that affects the designated use. In addition, for each waterbody, EPA must establish the threshold below which additional nutrient reductions will result in harm.

Third, EPA must not promulgate nutrient standards below natural background levels.

Fourth, EPA must not base its criteria on inappropriate models.

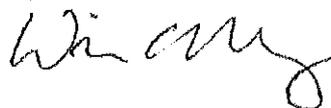
Fifth, criteria should apply only if the specific nutrient is affecting plant growth.

Sixth, criteria must set a level of protectiveness, not a load allocation. Specifically, federal criteria must not usurp site-specific determinations of what concentration or loading of nutrients is protective, including determinations made through the TMDL process.

Seventh, if EPA intends to apply its federal criteria in upstream states, it must fully engage those states in its rulemaking process.

Eighth, EPA must recognize that federal criteria will be directly incorporated into permits, and therefore EPA's cost estimate must fully account for the costs of implementing its proposed standards, to dischargers, to agriculture, to city storm sewer systems, and to the State as a whole. Because nutrients are critical for food production, EPA's economic analysis also must also include the adverse economic impacts from reduced food production resulting from reductions in fertilizer use implemented as a management practice.

Sincerely,



William C. Herz  
Vice President of Scientific Programs

The Undersigned Organizations Support These Comments

AbitibiBowater  
Agricultural Retailers Association  
American Chemistry Council  
American Coke and Coal Chemicals Institute  
American Farm Bureau Federation  
American Forest and Paper Association  
American Iron and Steel Institute  
American Meat Institute  
American Petroleum Institute  
CF Industries, Inc.  
Federal Water Quality Coalition  
Florida Engineering Society  
Florida Fertilizer & Agrichemical Association  
Florida Home Builders Association  
Florida Land Council  
Florida Minerals and Chemical Council  
Florida Nursery, Growers and Landscape Association  
Florida Poultry Federation  
Florida Water Quality Coalition  
Georgia Pacific  
Glatfelter  
Graphic Packaging International, Inc.  
GROWMARK, Inc.  
Illinois Fertilizer & Chemical Association  
Indiana Plant Food & Agricultural Chemicals Association  
Irrigation Association  
Kansas Agribusiness Retailers Association  
Manufacturers Association of Florida  
MeadWestvaco Corp.

Mid America CropLife Association  
Minnesota Crop Production Retailers Association  
Missouri Agribusiness Association  
Monsanto  
National Association of Wheat Growers  
National Association of Homebuilders  
National Cattlemen's Beef Association  
National Corn Growers Association  
National Mining Association  
National Pork Producers Council  
Nebraska Agri-Business Association  
Newpage Corporation  
Packaging Corporation of America  
Ponderay Newsprint Company  
Port Townsend Paper Corporation  
Professional Landcare Network  
Rayonier, Inc.  
Sanitation Districts of Los Angeles County  
Smurfit-Stone Container Corporation  
Sonoco Products Company  
South Dakota Agri-Business Association  
Southern Crop Production Association  
Sugar Cane Growers Cooperative  
The Alabama Pulp & Paper Council  
The Fertilizer Institute  
The Georgia Paper and Forest Products Association  
Tri-TAC  
United Egg Producers  
United States Steel Corporation  
Virginia Agribusiness Council  
White Springs Agricultural Chemicals, Inc. D/B/A Pcs Phosphate- White Springs  
Wisconsin Crop Production Association  
Wyoming Ag-Business Association  
Wyoming Crop Improvement Association  
Wyoming Wheat Growers Association



INTERNATIONAL

**REPORT**

**Prepared For:**

The Fertilizer Institute  
Washington, DC

# Economic Contributions of the U.S. Fertilizer Manufacturing Industry

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Date: August 2009.

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## 1. EXECUTIVE SUMMARY

Fertilizers are well known for their contribution to the world's food supply. They provide nutrients to soils to support increased yields of healthy crops that feed the world's populations. One often cited statistic regarding this contribution is that fertilizers are responsible for between 40 and 60 percent of the world's food supply.<sup>1</sup> While this is an impressive contribution, there is another significant economic contribution that has not received the same level of attention – the economic value and jobs provided by the fertilizer manufacturing industry.

The United States has a significant fertilizer manufacturing industry, with production plants and distribution facilities across the country that provide jobs, create value for investors, and support a large network of suppliers that also provide jobs and create value. The economic contribution of the U.S. fertilizer manufacturing industry is an increasingly important topic. The industry faces serious challenges from changes in energy markets and proposed federal policies such as climate change legislation.

The following is a summary of the estimated contributions of the U.S. fertilizer manufacturing industry in the year 2006:

- The industry directly employed over 24,800 people who worked to produce over \$15.1 billion in output. These jobs had an average compensation of \$76,000, which was almost 80 percent greater than the U.S. average compensation across all industries.
- The purchase of materials and services to support fertilizer manufacturing led to an additional 73,000 jobs along the supply chain.
- The total economic contribution of the industry was \$57.8 billion. This value includes direct contributions of the manufacturers, contributions through suppliers, and household and government spending related to compensation, investment returns, and taxes. The total number of jobs provided was over 244,500.
- Economic contribution can be evaluated by sector: The sectors are defined by the three main nutrient types: nitrogen, phosphorus, and potassium.
  - Nitrogenous fertilizer manufacturing – This sector provided a total economic contribution of \$23.7 billion and 80,000 jobs, of which \$10.3 billion and 7,565 jobs were direct. The sector purchased a significant amount of its inputs from the domestic natural gas production and pipeline sectors. The

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<sup>1</sup> W.M. Stewart et al., "The Contribution of Commercial Fertilizer Nutrients to Food Production," in *Agronomy Journal*, January-February 2005, pp.1

economic activity was predominantly located in states with ammonia plants or large wholesalers of fertilizer. The states with the most economic activity in this sector included Oklahoma, Louisiana and Iowa.

- o Phosphatic fertilizer manufacturing – This sector provided a total economic contribution of \$21.2 billion and almost 90,000 jobs, of which \$6.6 billion and 7,410 jobs were direct. The sector purchased a significant amount of goods and services from the domestic mining, trucking, and rail sectors. The economic activity was predominantly located in states with phosphate mines and production plants. The states with the most economic activity in this sector included Florida (with half of the direct contribution), North Carolina, Idaho and Louisiana.
- o Potash fertilizer manufacturing – Economic contribution data for the potash fertilizer manufacturing sector is not as available as the other sectors due to non-disclosure rules. Despite the significant U.S. consumption of potassium fertilizers, there are only a few potash producing facilities in the United States. Over 85 percent of potash consumed in the United States is from international sources, primarily Canada. The potash manufactured in the United States is produced in New Mexico, Michigan and Utah. While total economic contribution was not calculated for this sector, a survey of firms provided an estimate of 1,774 direct jobs.

The contribution values omit some other areas of economic contribution of the fertilizer manufacturing industry. First, there is value in maintaining a domestic fertilizer manufacturing industry versus relying on imports. This value is difficult to quantify, but avoiding the risk of supply constraints of a major and necessary input in our food production system from unstable countries provides a real economic value. Second, there is a “use” value of domestically produced fertilizer in terms of its contribution to the agricultural sector and world food supplies. Quantifying fertilizer “use” value is not the purpose of this report, although it is discussed qualitatively in the final section of the report.

This report provides an analysis of the economic contributions of the U.S. fertilizer manufacturing industry: Section 1 provides a background of the industry. The approach and methodology are briefly discussed in Section 2 (a more detailed methodology is provided as Appendix A). Section 3 presents the economic contribution analysis, including analysis by sector and a focus on two states with significant economic activity in fertilizer manufacturing. Section 4 further expands on the economic value of using domestically produced fertilizer.

## 2. INTRODUCTION

This report provides an analysis of the economic contributions of the U.S. fertilizer manufacturing industry. The contributions are considered along the entire fertilizer value chain, although the focus is on the manufacturing and mixing activities. The report examines the economic contributions of the entire fertilizer manufacturing industry as a whole and also as separate sectors for each of the three main types of fertilizer nutrients (nitrogen, phosphorus and potassium) and an additional sector focused on the mixing of fertilizer products.

### 2.1. THE U.S. FERTILIZER INDUSTRY

The fertilizer manufacturing industry has existed in the U.S. since the early 1800s. Initially used to mend nutrient deficient soils resulting from poor colonial farming practices, fertilizers emerged as the key to improving agricultural productivity. New technologies and growing demand in the early 1900s caused the fertilizer industry to become one of the largest in the country.<sup>2</sup> The U.S. is currently the second ranked fertilizer producing country in the world, behind China.<sup>3</sup> The country is both a major exporter (third in the world) and importer (first in the world) of fertilizer products. Table 14 in Appendix B shows the top three countries in fertilizer activity in terms of consumption, production, imports and exports.

#### Nutrient types define the sectors within the industry

To understand the U.S. fertilizer manufacturing industry, it is important to differentiate between the three major types of fertilizer nutrients that are produced and consumed in the U.S.: nitrogen, phosphorus and potassium. The differentiation is important because each of the three primary plant nutrients has unique production characteristics and each is derived from different natural resources.

**Nitrogen** – A primary building block for all organisms, nitrogen is found in abundance in the earth's atmosphere. However, the majority of plants cannot fix nitrogen from the air, and thus rely on nitrogen from the soil which is usually added through fertilizers, as natural replacement rates cannot support the high levels of growth required in modern agriculture.

Anhydrous ammonia is the source of nearly all the nitrogen fertilizer used in the United States. It is synthesized through the Haber-Bosch process, a chemical process that combines atmospheric nitrogen with hydrogen. Nitrogen can be obtained from the air, but the hydrogen is derived predominantly from natural gas. Anhydrous ammonia may be applied directly to the soil or converted into other

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<sup>2</sup> Nelson, Lewis, *History of the U.S. Fertilizer Industry*, Tennessee Valley Authority, 1990, pp. 99.

<sup>3</sup> International Fertilizer Industry Association data for 2005-2006. (see Appendix B, Table 14).

nitrogen fertilizers such as urea, ammonium nitrate, nitrogen solutions and ammonium sulfate. These nitrogen materials can be transported by ship, rail or truck, and in the case of anhydrous ammonia, also via pipeline.

The U.S. nitrogenous fertilizer manufacturing sector has decreased its production over the past several years and imports now provide over 55 percent of the nation's supply.<sup>4</sup> A total of 26 U.S. ammonia plants have closed since 1999, representing 42 percent of the U.S. nitrogen fertilizer production capacity.<sup>5</sup> The key driver for the closures has been increasing domestic natural gas prices, which can constitute over 90 percent of the input costs for a manufacturer.

**Phosphorus** – Phosphorus is an element found in every living cell and plays vital roles in shaping DNA and providing energy for cell activity. It is not found in its elemental form in nature. To produce phosphatic fertilizer, phosphate rock is mined and treated with sulfuric acid. This process creates phosphoric acid, which is the basic material for most phosphatic fertilizers. The reliance on phosphate rock means that the sector is heavily integrated with phosphate mining and plants are mostly located near the largest reserves of phosphate rock. The United States is fortunate to be endowed with 6.8 percent of the world's phosphate rock reserves (third behind Morocco and China using government supplied numbers) and in 2007 had 19 percent of the world's production.<sup>6</sup> Florida is by far the most active state in the production of phosphatic fertilizer.

**Potassium** – Potassium is a nutrient that is essential for the plant growth process, especially water utilization and the regulation of photosynthesis. It is found in potash, a name for various mined and manufactured salts that contain potassium in a water-soluble form. Despite significant consumption of potash in the United States, the domestic potash manufacturing sector is smaller than those for nitrogenous and phosphatic fertilizer manufacturing. This is due to mineral reserve locations. The majority of potash consumed in the United States is imported, primarily from Canada, the largest potash producer in the world. The potash manufactured in the United States is produced in New Mexico, Utah and Michigan.

#### The fertilizer value chain includes a diverse network of firms

There are many types of firms operating along the fertilizer value chain, including: suppliers, manufacturers, mixers, wholesalers, retailers and equipment suppliers and operators. As mentioned, the suppliers vary by nutrient type. While most suppliers do not exist solely to

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<sup>4</sup> Computed from fertilizer production and trade data reported by the U.S. Dept of Commerce.

<sup>5</sup> *North America Fertilizer Capacity*, International Center for Soil Fertility and Agricultural Development, December 2008, and data provided to The Fertilizer Institute (TFI) by Blue, Johnson and Associates.

<sup>6</sup> U.S. Geological Survey, *Mineral Commodity Summaries*, January 2006. (see Appendix B, Table 19).

support the fertilizer manufacturing industry (e.g., natural gas production), there are some that would not exist without it (e.g., phosphate mines). The major manufacturing firms tend to focus on a particular nutrient type, but there are several diversified firms that produce all three types in various locations across the country.

Once raw fertilizer ingredients are made at fertilizer production plants, they are either mixed on-site or distributed for mixing in multiple locations across the country. The mixing facilities may either be owned by the manufacturers or by separate entities, including large wholesalers. The mixing and warehousing companies range in size from small rural co-ops with less than five employees to major wholesalers with brand name fertilizer products that can be found on retail shelves across the country. A variety of retailers exist to support the farmers, landscapers and household consumers of fertilizers. The application of fertilizer to fields and yards is supported by equipment manufacturers and equipment operators.

## 2.2. APPROACH

The economic contributions of the U.S. fertilizer manufacturing industry can be evaluated along the entire value chain, from the production of raw materials used in manufacturing fertilizer all the way to the product's role in bringing food products to consumers. To analyze the contributions along the value chain, segmentation was required. Focus began on the direct contributions of manufacturers, then "upstream" activities were considered (materials sourcing, support services, etc.), and finally the "downstream" value of U.S.-produced fertilizer was examined. The following categories of contributions were considered:

1. **Direct contributions of manufacturing** – These contributions include direct value added by the fertilizer manufacturers and mixers. They include employee compensation, returns to investors, income on property and payments to government business taxes.
2. **Indirect contributions of manufacturing** – These contributions result from the payments to industries that support and supply fertilizer manufacturers and mixers. The payments to suppliers lead to payments to other suppliers, who pay other suppliers, and so on, in a ripple effect that ends with leakage out of the region. This leakage mostly occurs through the purchase of imported goods. The payments to suppliers are transferred to employees, investors and government in a manner similar to the way direct contributions are distributed.
3. **Induced contributions of manufacturing** – The industry's economic contributions do not end when it prints paychecks for employees, pays its suppliers, distributes dividends to its shareholders or remits taxes to the government. That money is filtered back into the economy by household and government spending, thus greatly increasing the contribution of the industry.
4. **Value of U.S.-produced fertilizer** – The production value of fertilizer is captured in the direct contributions of manufacturing. However, the value of the fertilizer

produced can actually be greater than the revenues of the manufacturing industry. First, there are “downstream” industries that gain value from the fertilizer, such as garden stores and fertilizer equipment manufacturers. Second, there is significant value created by the fertilizer’s application in the agricultural sectors.

The first three categories of economic contributions (direct, indirect and induced contributions of manufacturing) were calculated using the IMPLAN model. IMPLAN aggregates industry information from a variety of public data sources and quantifies the relationships between industries at the national, state and local levels. The year 2006 was selected as it is the most recent year for which IMPLAN provides segregated data for the various fertilizer manufacturing sectors (nitrogenous fertilizer manufacturing, phosphatic fertilizer manufacturing and fertilizer mixing). These sectors are defined by 6-digit NAICS codes. A detailed description of the methodology for using IMPLAN in this analysis, including a description of the sectors, is provided in Appendix A. The results are in Section 3 of this report.

The final category of economic contributions focuses on: 1) the value of maintaining a domestic fertilizer manufacturing industry versus relying on imports, and 2) the “use” value of domestically produced fertilizer in terms of its contribution to the agricultural sector and world food supplies. These two analyses were more qualitative and are found in Section 4 of this report.

### 3. ECONOMIC CONTRIBUTIONS OF THE U.S. FERTILIZER MANUFACTURING INDUSTRY

The economic contributions of the fertilizer manufacturing industry can be segmented by types of contributions (direct, indirect and induced), as well as by sectors within the industry.

#### 3.1. DIRECT CONTRIBUTIONS

Table 1 shows the share of direct contributions of the fertilizer manufacturing industry by sector for both 2002 and 2006. The direct contributions include output, value added and employment, which are addressed separately in this section.

Table 1: Fertilizer manufacturing industry output, value added and employment

2006	% of industry total		jobs
	Output	Value Added	Employment
Nitrogenous Fertilizer Manufacturing	57%	57%	7,565
Phosphatic Fertilizer Manufacturing	29%	20%	7,411
Fertilizer Manufacturing, Mixing Only	13%	22%	8,094
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>23,070</b>
<i>Potash Fertilizer Manufacturing/Mixing</i>			<i>1,774</i>
<i>Total (including potash)</i>			<i>24,844</i>

2002	% of industry total		jobs
	Output	Value Added	Employment
Nitrogenous Fertilizer Manufacturing	35%	42%	8,728
Phosphatic Fertilizer Manufacturing	41%	27%	7,767
Fertilizer Manufacturing, Mixing Only	25%	32%	8,245
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>24,739</b>

Percent change, 2002 to 2006	% change in total		
	Output	Value Added	Employment
Nitrogenous Fertilizer Manufacturing	195%	93%	-13%
Phosphatic Fertilizer Manufacturing	28%	8%	-5%
Fertilizer Manufacturing, Mixing Only	-5%	0%	-2%
<b>Total</b>	<b>77%</b>	<b>41%</b>	<b>-7%</b>

Output<sup>7</sup>

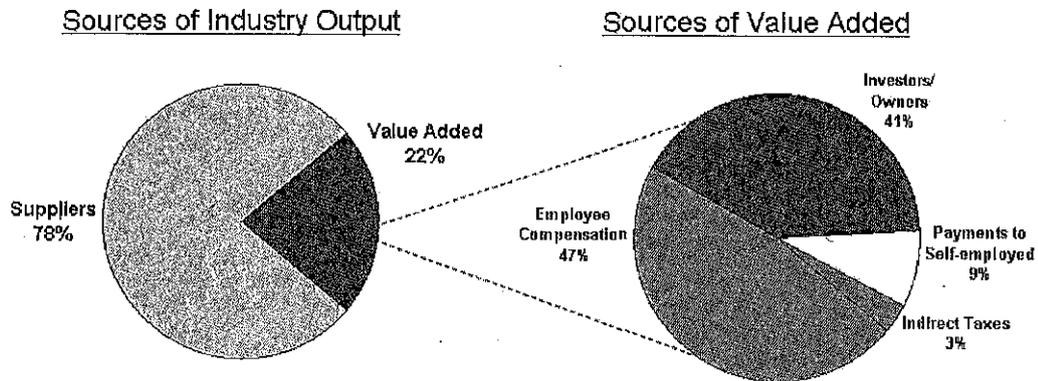
The U.S. fertilizer manufacturing industry's 2006 calendar year production value, or output, was \$15.1 billion. Combined production values for the sectors in the fertilizer industry were actually \$21.1 billion, but \$6.0 billion of that involved sales between and within the industry's sectors. This output value represents a 77 percent increase since 2002,<sup>8</sup> when the U.S. fertilizer industry output was \$8.5 billion (or combined sector production values of \$10.5 billion).

The most significant increase in output was seen in the nitrogenous fertilizer manufacturing sector, which went from representing a third of the industry total to over half. The production value increase in this sector was not driven by quantity of sales, as plants were actually closing during that time period, but rather by an increase in prices. The price for a ton of anhydrous ammonia rose by 100 percent from 2002 to 2006.<sup>9</sup>

Value Added

Another measure of the contribution of an industry is its value added, which is the value of an industry's output that is not created by other industries, but rather through the industry's productive activities. In 2006, the value added by the fertilizer manufacturing industry was \$3.7 billion. As seen in Figure 1, this represents 22 percent of the output value for the industry.

**Figure 1: Sources of fertilizer manufacturing industry output and value added**



<sup>7</sup> Output is computed as industry outlays (purchases) plus value-added. It can also be considered as the value of sales adjusted for changes in inventories. The output for the fertilizer manufacturing industry is equal to the combined production values of the individual sectors, adjusted for the sales that occur within the industry. This figure does not include potash manufacturing/mining.

<sup>8</sup> All percentage changes from 2002 to 2006 are nominal.

<sup>9</sup> Data collected by TFI from *Green Markets*, a publication of BNA Subsidiaries, LLC., and from *Fertilizer Week America*, a publication of CRU.

The value added by an industry is returned to its employees and investors and remitted to the government in the form of taxes. Of the \$3.7 billion added by the fertilizer manufacturing industry, over \$2 billion was returned to employees in the form of compensation. Compensation is calculated as the industry's payroll costs, which include wages, salaries and benefits.

The value added by the industry increased by 41 percent during the period from 2002 to 2006. This increase can be compared to the growth in U.S. GDP, which is essentially a sum of the value added by all industries in the country. The total value added by all industries in the U.S. economy grew by 26 percent from 2002 to 2006.

Employment

In 2006, the fertilizer manufacturing industry directly employed over 24,800 workers. This number includes the 1,774 jobs reported by firms in the potash fertilizer sector. The non-potash jobs in the industry were fairly evenly distributed between the industry sectors, as shown in Table 2. The compensation per employee was considerably higher than the U.S. average, at \$75,701 per employee vs. a U.S. average of \$42,636 across industries. These higher salaries, wages, benefits and other forms of compensation were a result of a very high output per employee ratio. The fertilizer industry generates over \$900,000 in output per worker, which is over six times the U.S. average across industries. These per employee numbers are even higher if the mixing sector is excluded.

**Table 2: Fertilizer manufacturing industry employment and compensation (excluding Potash)**

	Nitrogenous	Phosphatic	Mixing	Fertilizer Total	US Average
Employment	7,565	7,411	8,094	23,070	
Output per worker	\$1,359,213	\$891,339	\$517,173	\$913,488	\$141,793
Compensation per worker	\$87,738	\$84,484	\$56,408	\$75,701	\$42,636

There is a diverse range of types of jobs in the fertilizer manufacturing industry. There is also diversity in the size of firms for which the employees work. Table 15 in Appendix B shows the employment in the fertilizer manufacturing industry by firms' employment size. Employment in the nitrogenous and phosphatic manufacturing sectors is more centralized than in the mixing sector. This is due to the large plants in the first two sectors versus the geographically dispersed mixing facilities, which are located closer to consumption.

### 3.2. ADDITIONAL CONTRIBUTIONS

In addition to direct contributions, the industry also provides additional value to the economy through the secondary impacts of its payments to suppliers, employees, investors and the government. Suppliers' productive activities result in payments to other suppliers, who in turn pay other suppliers. Value distributed to households and government is returned to the economy through consumption, which is distributed across all industries. These impacts represent a multiplier effect for all purchases made in a single industry.

In the case of the fertilizer industry, these additional contributions are larger than the direct contributions. The total economic contributions of the fertilizer industry in 2006 were \$57.8 billion in output and 244,500 jobs, as shown in Table 3.

**Table 3: Fertilizer manufacturing industry total economic contributions**

<u>Output</u>			
	Direct Contribution	multiplier	Total Contribution
Nitrogenous Fertilizer Manufacturing	\$10,282	2.3	\$23,711
Phosphatic Fertilizer Manufacturing	6,606	3.1	20,780
Fertilizer Manufacturing, Mixing Only	4,186	3.2	13,307
<b>Total</b>	<b>\$21,074</b>		<b>\$57,798</b>
<i>Combined total (adjusted for intra-industry sales)</i>	\$15,068		
<u>Employment</u>			
	Direct Contribution	multiplier	Total Contribution
Nitrogenous Fertilizer Manufacturing	7,565	10.6	80,083
Phosphatic Fertilizer Manufacturing	7,410	11.9	88,180
Fertilizer Manufacturing, Mixing Only	8,096	6.8	55,128
Potash Fertilizer Manufacturing/Mining	1,774	11.9 *	21,111
<b>Total</b>	<b>24,845</b>		<b>244,502</b>

\* assumes potash employment multiplier = phosphatic employment multiplier

The most striking number in the above table is the large number of jobs supported by the industry that are not considered direct jobs. This high "employment multiplier" is driven by the exceptional level of output per worker and employee compensation in the industry. High output per worker suggests a significant number of jobs with suppliers that receive payments from the fertilizer manufacturing industry. The higher levels of compensation lead to higher than average consumption levels by employees.

### 3.3. REGIONAL DISTRIBUTION OF CONTRIBUTIONS

The economic contributions of the fertilizer manufacturing industry can be examined on a regional level. Contributions were examined for the four regions defined by the U.S. Census Bureau, as shown in Figure 2.

Figure 2: Regions evaluated for economic contribution



Table 4 shows the total economic contributions of the fertilizer manufacturing industry by region. Individual sectors of the industry tend to be concentrated in some regions more than others. For example, phosphatic fertilizer manufacturing is naturally more concentrated in states with phosphate resources, which places a majority of the activity in the South. Despite the natural tendency to cluster near key natural resource inputs, fertilizer manufacturing activities as an aggregate occur in all parts of the U.S. The main exception is the Northeast, which has neither production facilities nor significant amounts of agricultural productivity (only 0.4 percent of U.S. farmland acreage in 2006, according to the USDA) and therefore has lower contribution levels than the other regions. Additional regional detail is available in Table 17 of Appendix B.

Table 4: Regional distribution of total economic contributions

Region	All	Nitrogenous	Phosphatic	Mixing
Northeast	9%	8%	9%	12%
Midwest	28%	33%	17%	37%
South	42%	35%	57%	32%
West	21%	24%	18%	18%
Total	100%	100%	100%	100%

### 3.4. DETAIL ON ECONOMIC CONTRIBUTIONS BY TYPE OF FERTILIZER

#### 3.4.1. Nitrogenous fertilizer manufacturing

In 2006, the U.S. nitrogenous fertilizer manufacturing sector (NAICS: 325311) produced a total economic contribution of \$23.7 billion in output and over 80,000 jobs. These contributions were located across the country, but the greatest contributions were reported in states with either ammonia plants (e.g., Louisiana, Oklahoma) or large wholesalers and retailers. Table 5 shows the economic contribution of the sector, including a list of the top contributing states that have ammonia plants.

**Table 5: Economic contribution at state and national level, nitrogenous fertilizer manufacturing (states with plants)**

	<i>Contribution to state economies</i>			
	<u>Direct</u>		<u>Total</u>	
	<b>Output (billion)</b>	<b>Employment</b>	<b>Output (billion)</b>	<b>Employment</b>
Louisiana	\$0.8	621	\$1.3	3,396
Oklahoma	\$0.8	272	\$1.5	4,004
Iowa	\$0.7	494	\$1.3	3,125
Alabama	\$0.4	297	\$0.6	1,855
Other states w/ plants	\$3.3	2,233	\$7.2	22,989
States w/out plants	\$4.3	3,648	\$11.8	44,714
<b>US Total</b>	<b>\$10.3</b>	<b>7,565</b>	<b>\$23.7</b>	<b>80,083</b>

For states with ammonia plants, their contributions mirror their shares of total U.S. production capacity. Table 6 shows the top five states in the United States by ammonia production capacity in 2006, which account for 66 percent of all U.S. capacity. Note that these states are generally located near major natural gas production facilities or pipelines.

**Table 6: Ammonia plant capacity by state (2006)**

<b>State</b>	<b>Capacity per year*</b>	<b>Percent</b>
Louisiana	2,810	24%
Oklahoma	2,590	22%
Iowa	791	7%
Georgia	758	6%
Kansas	694	6%
Others	4,023	34%
<b>Grand Total</b>	<b>11,666</b>	<b>100%</b>

(\*Thousand short tons per year)

A second category of states, those without ammonia plants, show high levels of economic activity that can be attributed to the wholesalers and distributors in those states reporting to the BLS under the nitrogenous fertilizer manufacturing NAICS code. Ohio is home to the

headquarters for the largest fertilizer wholesalers in the U.S., one of which employs over 1,000 individuals in its headquarters. California and Florida have high levels of agricultural activity that requires significant fertilizer distribution and manufacturing-related activity, and thus also have a number of enterprises who identify themselves as being part of the nitrogenous fertilizer manufacturing sector, albeit without manufacturing capacity *per se* within the state. According to the USDA, California's agricultural production represented over 11 percent of the U.S. total in 2007, by value. Both of these states produce fruits and vegetables that require greater fertilizer application rates than grains and oilseeds.

**Table 7: Economic contribution at state level, nitrogenous fertilizer manufacturing (states without plants)**

	<u>Direct Contribution</u>		<u>Total Contribution</u>	
	<u>Output (billion)</u>	<u>Employment</u>	<u>Output (billion)</u>	<u>Employment</u>
Ohio	\$2.1	1,470	\$3.4	9,256
California	\$1.5	1,284	\$3.2	9,711
Florida	\$0.6	515	\$1.3	4,896

One interesting trend to note is the significant increase in economic contribution of this sector over time. Between 2002 and 2006, the direct output of the sector increased from \$3.1 billion to \$10.3 billion, an increase of 233 percent. This increase in production value occurred during a time when ammonia plants were shutting down and the employment in the sector decreased by 13 percent. The increase in value was attributable to a rise in fertilizer prices, which was driven by an increase in energy and feedstock costs and increased global demand. The contribution of this sector to the U.S. economy was rising, but its share of global supply was simultaneously falling. Thus, despite booming growth in its economic contribution, the U.S. manufacturing facilities were losing ground to international sources, and the U.S. was becoming more reliant on imports to meet its needs.

Natural gas represents 70-90 percent of production costs. The production of one ton of anhydrous ammonia requires about 32.5 million British thermal units (MMBtu) of natural gas. In 2002, one MMBtu of natural gas cost customers in the industrial sector \$3.94 per MMBtu, and by 2006, it cost \$7.72 per MMBtu.<sup>10</sup> During this time, the average wholesale value of ammonia increased from \$137 to \$301 per ton.<sup>11</sup>

Given the input share of natural gas, the majority of suppliers to the nitrogenous fertilizer manufacturing sector are related to producing or delivering natural gas. Table 8 shows the top ten sectors in terms of input value.

<sup>10</sup> EIA natural gas industrial prices from: <http://onto.eia.doe.gov/dnav/ng/hist/n3035us3a.htm> (converted to \$/MMBtu).

<sup>11</sup> Data collected by TFI from *Green Markets*, a publication of BNA Subsidiaries, LLC.

Table 8: Value added and sector inputs: nitrogenous fertilizer manufacturing

	Value (millions)	% of Output
<b>Value Added by the sector</b>	<b>\$2,134</b>	<b>21%</b>
<b>Inputs from sectors not in fertilizer manufacturing industry</b>		
Oil and gas extraction	\$3,500	34%
Pipeline transportation	751	7%
Petroleum refineries	478	5%
Natural gas distribution	301	3%
Management of companies and enterprises	191	2%
Wholesale trade	163	2%
Power generation and supply	123	1%
Scientific research and development services	74	1%
Legal services	48	0%
Truck transportation	45	0%
Other	845	8%
<b>Total</b>	<b>\$6,518</b>	<b>63%</b>
<b>Inputs from fertilizer manufacturing sectors</b>		
Nitrogenous fertilizer manufacturing	\$1,631	16%
<b>Total</b>	<b>\$1,631</b>	<b>16%</b>
<b>Sector Output</b>	<b>\$10,282</b>	

### 3.4.2. Phosphatic fertilizer manufacturing

In 2006, the U.S. phosphatic fertilizer manufacturing sector (NAICS: 325312) produced a total economic contribution of \$21.2 billion in output and almost 90,000 jobs. These contributions were located across the country, but the greatest contributions were reported in states with either phosphatic fertilizer plants (e.g., Florida, North Carolina) or large wholesalers and retailers. Table 9 shows the economic contribution of the sector.

Table 9: Economic contribution to state economies, phosphatic fertilizer manufacturing

	<i>Contribution to state economies</i>			
	<u>Direct</u>		<u>Total</u>	
	Output (billion)	Employment	Output (billion)	Employment
Florida	\$3.3	3,666	\$6.0	23,690
North Carolina	\$0.9	1,023	\$1.8	6,768
Idaho	\$0.7	756	\$1.1	4,340
Louisiana	\$0.4	444	\$0.9	3,274
Texas	\$0.3	340	\$1.1	5,155
Others	\$1.0	1,181	\$10.2	6,934
<b>US Total</b>	<b>\$6.6</b>	<b>7,410</b>	<b>\$21.2</b>	<b>89,741</b>

The distribution of contribution levels across states closely reflects the distribution of phosphate mining activity across the United States. This is expected as production facilities are often collocated with phosphate mines due to the relatively high cost of transporting phosphate rock versus the cost of transporting derived products. Florida is the key example as it is the most productive state for phosphate mining and also represents more than half of the direct contribution for the sector. Table 10 shows the location of phosphate mines in the United States and the phosphate rock capacities by state. It also shows the capacities by state for production of wet phosphoric acid, the basic material for producing most phosphatic fertilizers.

Table 10: Phosphate rock mining and phosphoric acid production by state

State	Phosphate Rock			Wet Phosphoric Acid	
	Number of Mines	Capacity	Percent	Capacity	Percent
Florida	7	24,300	60%	6,082	58%
North Carolina	1	6,600	16%	1,325	13%
Idaho	3	5,594	14%	863	8%
Louisiana	-	-	-	1,053	10%
Texas	-	-	-	400	4%
Utah	1	4,000	10%	-	-
Others	-	-	-	820	8%
	12	40,494	100%	10,543	100%

(capacity in thousand short tons per year)

The key suppliers to the phosphatic fertilizer manufacturing sector include mining and transportation, as shown in Table 11. The mining contribution is expected considering that over 90 percent of phosphate rock mined in the United States is used to produce phosphoric acid, predominantly used for fertilizer manufacturing.<sup>12</sup> In regards to transportation, phosphatic fertilizer relies more heavily on the trucking and rail sectors than nitrogenous fertilizer, which is often shipped in a gaseous or liquid state via pipeline. There are over 7,000 jobs in the trucking sector that are supported by the phosphatic fertilizer manufacturing sector.

Table 11: Value added and sector inputs: phosphatic fertilizer manufacturing

	Value (millions)	% of Output
<b>Value Added by the sector</b>	<b>\$755</b>	<b>11%</b>
<b>Inputs from sectors not in fertilizer manufacturing industry</b>		
Truck transportation	791	12%
Other basic inorganic chemical manufacturing	494	7%
Pesticide and other agricultural chemical manufacturing	377	6%
Other nonmetallic mineral mining	303	5%
Wholesale trade	255	4%
Management of companies and enterprises	192	3%
Oil and gas extraction	176	3%
Rail transportation	89	1%
Power generation and supply	76	1%
Other	934	14%
<b>Total</b>	<b>\$3,686</b>	<b>56%</b>
<b>Inputs from fertilizer manufacturing sectors</b>		
Nitrogenous fertilizer manufacturing	\$1,551	23%
Phosphatic fertilizer manufacturing	613	9%
<b>Total</b>	<b>\$2,165</b>	<b>33%</b>
<b>Sector Output</b>	<b>\$6,606</b>	

<sup>12</sup> Jasinski, Stephen M., 2007 *Minerals Yearbook: Phosphate Rock*, U.S. Geological Survey, August 2008, p.56.1.

### 3.4.3. Potash fertilizer manufacturing

An analysis similar to those for the nitrogenous and phosphatic fertilizer manufacturing sectors is not feasible for the potash fertilizer manufacturing sector using IMPLAN. Data for the potash manufacturing sector is buried within NAICS code 32518, Other Basic Inorganic Chemical Manufacturing. The reason for this is the low number of potash mining facilities in the country, which causes nondisclosure issues. The government is not permitted to publish most output and employment data if it can be traced back to particular firms or facilities.

In lieu of publicly available data, a recent survey conducted by TFI was used to determine that there were 1,774 direct jobs in the sector in 2006. Total jobs can be estimated by using the direct-to-total jobs ratio, or multiplier, that was calculated for the phosphatic fertilizer manufacturing sector. It was determined that this sector was the closest match for potash. Using the phosphatic multiplier, it was estimated that the potash manufacturing sector was responsible for 21,111 total jobs in the U.S..

### 3.4.4. Fertilizer mixing

In 2006, the U.S. fertilizer mixing sector (NAICS: 325314) produced a total economic contribution of \$13.5 billion in output and over 56,000 jobs. These contributions were located across the country. Table 12 shows the economic contribution of the sector, including a list of the top contributing states.

Table 12: Economic contribution to state economies, fertilizer mixing

	<i>Contribution to state economies</i>			
	<u>Direct</u>		<u>Total</u>	
	<b>Output (billion)</b>	<b>Employment</b>	<b>Output (billion)</b>	<b>Employment</b>
Indiana	\$0.8	1,365	\$1.5	5,084
Florida	\$0.4	781	\$0.9	4,205
Texas	\$0.4	751	\$1.0	4,302
California	\$0.4	717	\$1.1	5,427
Ohio	\$0.2	415	\$0.6	2,521
Others	\$2.1	4,067	\$8.4	34,550
<b>US Total</b>	<b>\$4.2</b>	<b>8,096</b>	<b>\$13.5</b>	<b>56,089</b>

The economic activity in the fertilizer mixing sector is more dispersed than in the nitrogenous and phosphatic fertilizer manufacturing sectors. This is because the economic activity in this sector is not concentrated in large plants, but rather at numerous smaller facilities located near the cropland where mixed products are consumed. One study estimates that there are up to 6,000 fertilizer mixing facilities located across the country.<sup>13</sup>

The main suppliers to the fertilizer mixing sector are actually the other sectors within the fertilizer manufacturing industry. As shown in Table 13, over 53 percent of the output of the sector results from inputs from the nitrogenous and phosphatic fertilizer manufacturing sectors. This is expected as mixing operations exist to purchase fertilizers, process them (mixing), and then sell them to wholesalers or retailers.

<sup>13</sup> Adrienas, Paul and Harry Vroomen, *Seven Farm Input Industries, Fertilizer*, U.S. Department of Agriculture, September 1990.

Table 13: Value added and sector inputs: fertilizer mixing

	<u>Value (millions)</u>	<u>% of Output</u>
<b>Value Added by the sector</b>	<b>\$832</b>	<b>20%</b>
<b>Inputs from sectors not in fertilizer manufacturing industry</b>		
Other basic inorganic chemical manufacturing	149	4%
Wholesale trade	143	3%
Coated and uncoated paper bag manufacturing	107	3%
Management of companies and enterprises	105	3%
Truck transportation	93	2%
Stone mining and quarrying	51	1%
Scientific research and development services	40	1%
All other miscellaneous professional and technical	36	1%
Other	421	10%
<b>Total</b>	<b>\$1,143</b>	<b>27%</b>
<b>Inputs from fertilizer manufacturing sectors</b>		
Nitrogenous fertilizer manufacturing	\$1,389	33%
Phosphatic fertilizer manufacturing	821	20%
<b>Total</b>	<b>\$2,210</b>	<b>53%</b>
<b>Sector Output</b>	<b>\$4,186</b>	

## 4. ECONOMIC VALUE OF DOMESTIC FERTILIZER PRODUCTION

The sizable output, value added, and employment contributions of the U.S. fertilizer manufacturing industry described in Section 3 exist because the manufacturing occurs domestically. That is, those specific domestic manufacturing activities drive economic outcomes in a range of other domestic sectors. For example, if there were no domestic nitrogenous fertilizer manufacturing sector due to a complete shift to imports, there would be a decrease in demand for the U.S. 'oil and gas extraction' sector. These economic contributions are additional to the enormous value of the fertilizers themselves in driving agricultural productivity. The latter could be gained even with 100 percent imported fertilizers, as long as such supplies were cheap and highly reliable. However, one can also argue that the economic contribution of a robust *domestic* manufacturing capability exceeds the measurable contributions documented in Section 3 because excessive reliance on imports could create unacceptable risks for the stability of the supply chain of U.S. agriculture, which directly accounts for hundreds of billions of dollars of U.S. output, and indirectly contributes to far more of the U.S. economy.

This additional, unmeasured value can be thought of as a "risk premium." It derives from several dimensions of supply chain assurance, including fertilizer price stability and limiting our nation's dependence on potentially risky international sources of supply.

### 4.1. LIMITING DEPENDENCE ON UNSTABLE IMPORTS

Excessive reliance on imports can be an added supply security concern if the non-domestic sources are in countries that are not generally among the most stable, politically or economically. The United States is already the largest importer of fertilizer in the world, with more than half of its nitrogen and over 85 percent of its potash coming from international sources.<sup>14</sup> In the case of potash, this is not a major concern as the majority of imports come from Canada, a stable trading partner. However, nitrogenous fertilizer productive capacity is most likely to increase in natural gas producing countries – particularly those that are not easily able to export their gas to supply centers. These countries are not generally considered to be as politically and economically stable as countries such as Canada.

The top supplier of nitrogen fertilizer products to the United States in 2008 was Trinidad. Several U.S. firms have production facilities in that country which take advantage of the relatively cheaper natural gas supplies. The second largest supplier is Canada. However, the fastest growing suppliers include Russia and the Ukraine, the top two exporters of nitrogen in the world. Recent history in the European natural gas markets show that there is risk in relying on these countries for a significant share of commodity supply. Another

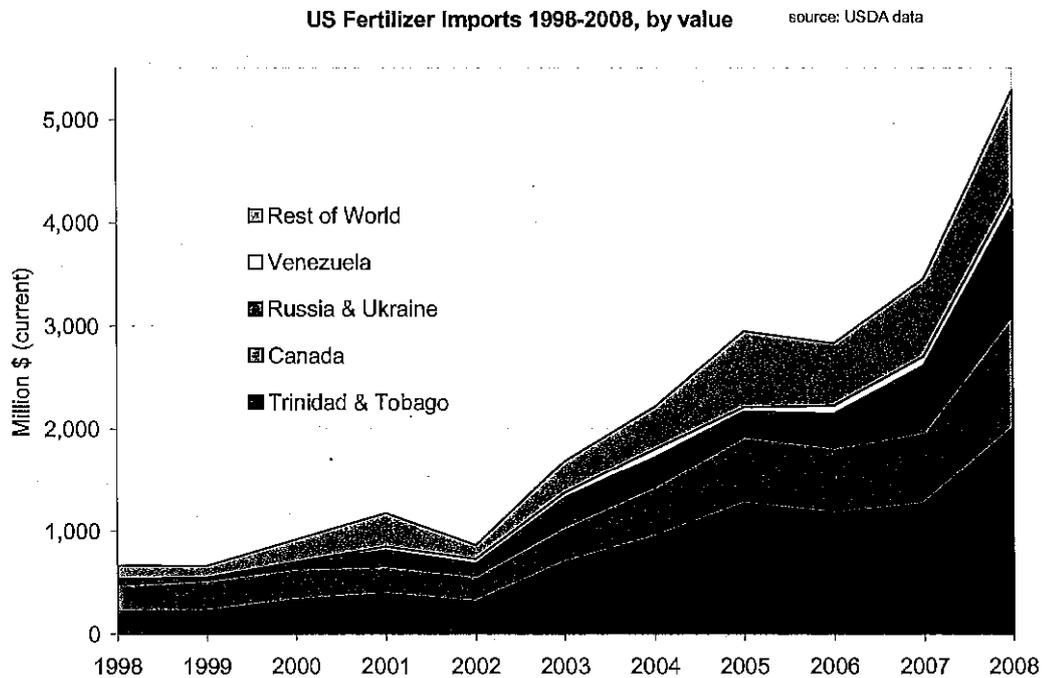
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<sup>14</sup> U.S. Department of Agriculture, data from "US Fertilizer Imports/Exports, 2008," Economic Research Service.

growing source of imports for the U.S. is Venezuela. Figure 3 shows the increasing level of U.S. fertilizer imports and their countries of origins.

An unstable U.S. fertilizer supply would introduce significant risk not just to U.S. agriculture but, by extension, to the entire world food supply. There is economic value in the continued presence of a U.S.-based nitrogenous fertilizer manufacturing industry to the extent that it minimizes reliance on global sources that may one day prove unreliable.

Figure 3: U.S. fertilizer imports from 1998 to 2008



#### 4.2. "USE" VALUE OF FERTILIZER

The United States is the third largest consumer of fertilizer in the world, behind China and India. This fertilizer consumption supports an agriculture industry that produces a large share of the world's food supply. The agricultural products grown using fertilizer are not only consumed in the United States, but are also sold into the world markets and delivered to developing countries as aid. In 2006, 22 percent of U.S. agricultural commodity production

was exported.<sup>15</sup> In 2008, the value of U.S. agricultural exports was \$115 billion (compared to imports of \$80 billion, for a trade balance of \$35 billion).<sup>16</sup>

It is estimated that fertilizers are responsible for between 40 and 60 percent of the world's food supply.<sup>17</sup> A quick calculation shows that if 50 percent of U.S. agricultural production is dependent on fertilizer, fertilizer use in the United States alone provides an economic value of up to \$300 billion.<sup>18</sup> If even half of the fertilizer is assumed to be domestically produced, that translates to a domestic "use" value of \$150 billion, or 10 times the production value for the industry. There are obviously very significant assumptions that go into such a calculation, but it serves to show just how large the economic contribution might be.

The "use" value goes beyond economic value to the U.S. agriculture industry. In a world market struggling to keep food supplies apace with growing demand, agricultural products and fertilizers exported from the United States are important on a humanitarian level. If costs of U.S. agricultural products are increased as a result of a less-than-stable U.S. supply of fertilizers, the economic consequences could be large. This value of the U.S. fertilizer industry could well exceed the substantial measurable portion of the economic contributions of domestic fertilizer manufacturing that were estimated in this report.

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<sup>15</sup> "Statistical Abstract of the United States: Table 813: *Percent of US Agricultural Commodity Exported, 1990 to 2006.*" U.S. Census Bureau. Available at: <http://www.census.gov/compendia/statab/tables/09s0813.pdf>

<sup>16</sup> Compiled by U.S. Department of Agriculture, Economic Research Service using data from U.S. Census Bureau.

<sup>17</sup> W.M. Stewart et al., "*The Contribution of Commercial Fertilizer Nutrients to Food Production,*" in *Agronomy Journal*, January-February 2005, pp.1

<sup>18</sup> In the publication *Amber Waves*, the USDA used BEA statistics to estimate that the agriculture and related industry's share of the U.S. GDP was 4.8%. This translates to \$570 billion. (<http://www.ers.usda.gov/AmberWaves/June06/>)

## APPENDICES

### APPENDIX A: METHODOLOGY

The goal of this report was to examine the fertilizer manufacturing industry's contributions to the U.S. economy, with a focus on employment and production value. Basic information and data about the industry was gathered from various government agencies, industry associations, and academic studies. Commonly accepted methods/tools for determining economic contributions were used. In order to examine contributions beyond direct employment and output, IMPLAN was selected as the input-output model of choice.

#### About IMPLAN<sup>19</sup>

IMPLAN (IMpact analysis for PLANning) was originally developed by the U.S. Department of Agriculture Forest Service in 1979 and was later privatized by the Minnesota IMPLAN Group (MIG). The model uses the most recent economic data from public sources such as the U.S. Bureau of Economic Analysis (BEA), the U.S. Department of Labor's Bureau of Labor Statistics (BLS), and the U.S. Census Bureau. It uses this data to predict effects on a regional economy from direct changes in employment and spending. Regions, or study areas, may include the entire U.S., states, counties, or multiple states or counties. Over 500 sectors and their interactions are represented in the data set.

Details of the IMPLAN model can be found in the manual:

[http://implan.com/index2.php?option=com\\_docman&task=doc\\_view&gid=66&Itemid=65](http://implan.com/index2.php?option=com_docman&task=doc_view&gid=66&Itemid=65)

#### Using IMPLAN to determine economic contribution

IMPLAN is designed for running economic impact analyses, which are useful in evaluating the economic contribution of a sector of the economy. The contribution can be determined by evaluating the impact of removing the industries' productive activities from the economy and quantifying the effects on all sectors combined. The impacts can be broken into three types: direct, indirect, and induced.

1. **Direct** – These contributions include direct value added by a sector. They include employee compensation, returns to investors, income on property, and payments to government.
2. **Indirect** – These contributions result from the payments to industries that support and supply a sector. The payments to suppliers lead to payments to other

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<sup>19</sup> Minnesota IMPLAN Group, Inc., IMPLAN System (19xx/20xx data and software), 1725 Tower Drive west, Suite 140, Stillwater, MN 55082, [www.implan.com](http://www.implan.com), 1997.

suppliers, who pay other suppliers, and so on, in a ripple effect that ends with leakage out of the region. This leakage mostly occurs through the purchase of imported goods. These payments to suppliers are transferred to employees, investors and government in a manner similar to the way direct contributions are distributed.

- 3. Induced** – The sector's economic contributions do not end when it prints paychecks for employees, pays its suppliers, distributes dividends to its shareholders or remits taxes to the government. That money is filtered back into the economy by household and government spending, thus greatly increasing the contribution of the industry.

For the sake of improving accessibility of this report, the indirect and induced contributions were not presented separately, but rather as "additional contributions" as a subset of total contributions.

#### **Industry selection**

NAICS codes were identified for the sectors that together constitute the production segment of the fertilizer value chain. Production was assumed to include mining, manufacturing and mixing. Focusing on the production sectors leaves out the wholesale and retail sectors of the industry which were not a focus of this report.

The nitrogenous fertilizer manufacturing, phosphatic fertilizer manufacturing and fertilizing mixing sectors matched one-to-one with IMPLAN sectors. Mining was accounted for as a supplier, but phosphate rock mining, which exists primarily to support phosphatic fertilizer manufacturing and could be considered part of the fertilizer industry, was not isolated because IMPLAN aggregates it into a more generic mining sector code ("other nonmetallic mineral mining"). However, IMPLAN data shows that the mining sector does represent a significant portion of the input into the phosphatic fertilizer manufacturing sector, and therefore the output from the phosphate rock mining sector was, to a degree, included in direct output. The jobs in phosphate rock mining appear in the "total contribution" calculation.

Potash manufacturing (which can also be considered "potash mining") was also difficult to isolate. Due to non-disclosure issues related to the low number of facilities, it does not have its own sector designation in IMPLAN. It is included within "other basic inorganic chemical manufacturing." An attempt was made to obtain potash sector data directly from relevant firms, which is how direct employment numbers were included in the report. This sector had at least some of its output included as part of the phosphatic fertilizer manufacturing sector and the fertilizer mixing sectors; however any output that was not sold within the industry was not included in the contributions.

#### **Adjustments for double counting**

When evaluating the contribution of an industry that consists of multiple sectors, special attention must be paid to avoid double counting the economic activity that exists between

those sectors. The fertilizer industry is no exception. There are significant intra-industry, and even intra-sector, sales. These were removed from the combined output calculation. This double counting is not an issue in direct employment because those numbers come directly from a public data source and all occur within the respective sectors. Total contributions were also adjusted to prevent double counting.

### **Regional analysis**

IMPLAN data is available at the national, state and county levels. This analysis not only examined economic contributions at the national level, but also contributions to each of the 50 states and the District of Columbia. State-level contributions were calculated as not only the contributions from in-state fertilizer industry activity, but also the activity in each state supporting fertilizer activity in all other states. Induced contributions in each of the states led to a more even distribution of contributions across the country. The state level modeling allowed for the regional analysis, the ranking of states by contribution, and the state analyses for Louisiana and Florida.

**Official NAICS definitions for the sectors in the fertilizer manufacturing industry (as listed by the NAICS association (website: <http://www.naics.com/search.htm>))**

**NAICS 325311: Nitrogenous Fertilizer Manufacturing:** This U.S. industry (sector) comprises establishments primarily engaged in one or more of the following: (1) manufacturing nitrogenous fertilizer materials and mixing ingredients into fertilizers; (2) manufacturing fertilizers from sewage or animal waste; and (3) manufacturing nitrogenous materials and mixing them into fertilizers.

- Ammonia, anhydrous and aqueous, manufacturing
- Ammonium nitrate manufacturing
- Ammonium sulfate manufacturing
- Anhydrous ammonia manufacturing
- Fertilizers, mixed, made in plants producing nitrogenous fertilizer materials
- Fertilizers, natural organic (except compost), manufacturing
- Fertilizers, of animal waste origin, manufacturing
- Fertilizers, of sewage origin, manufacturing
- Nitric acid manufacturing
- Nitrogenous fertilizer materials manufacturing
- Plant foods, mixed, made in plants producing nitrogenous fertilizer materials
- Urea manufacturing

**NAICS 325312: Phosphatic Fertilizer Manufacturing:** This U.S. industry (sector) comprises establishments primarily engaged in (1) manufacturing phosphatic fertilizer materials or (2) manufacturing phosphatic materials and mixing them into fertilizers.

- Ammonium phosphates manufacturing
- Defluorinated phosphates manufacturing
- Diammonium phosphates manufacturing
- Fertilizers, mixed, made in plants producing phosphatic fertilizer materials
- Phosphatic fertilizer materials manufacturing
- Phosphoric acid manufacturing
- Plant foods, mixed, made in plants producing phosphatic fertilizer materials
- Superphosphates manufacturing

**NAICS 325314: Fertilizer Manufacturing, Mixing Only:** This U.S. industry (sector) comprises establishments primarily engaged in mixing ingredients made elsewhere into fertilizers.

- Compost manufacturing
- Fertilizers, mixed, made in plants not manufacturing fertilizer materials
- Mixing purchased fertilizer materials
- Nitrogenous fertilizers made by mixing purchased materials
- Phosphatic fertilizers made by mixing purchased materials
- Potassic fertilizers made by mixing purchased materials
- Potting soil manufacturing

**APPENDIX B: ADDITIONAL DATA TABLES**

**Table 14: Top three countries in fertilizer activity: consumption, production, imports and exports**

	<b>All Fertilizer</b>	<b>Nitrogen</b>	<b>Phosphorus</b>	<b>Potash</b>
<b>Consumption</b>				
1	China	China	China	China
2	India	India	India	United States
3	United States	United States	United States	Brazil
<b>Production</b>				
1	China	China	China	Canada
2	United States	India	United States	Russia
3	Russia	United States	India	Belarus
<b>Imports</b>				
1	United States	United States	Brazil	China
2	China	China	India	United States
3	Brazil	Brazil	China	Brazil
<b>Exports</b>				
1	Russia	Russia	United States	Canada
2	Canada	Ukraine	Russia	Russia
3	United States	Canada	China	Belarus

Source: The Fertilizer Institute, *Global Industry at a Glance*, 2005-2006.