

June 23, 2006

The Honorable Samuel W. Bodman  
Secretary of Energy  
U.S. Department of Energy  
1000 Independence Ave., SW  
Washington, DC 20585

Dear Mr. Secretary:

The National Lime Association ("NLA"), representing approximately 95% of U.S. commercial lime production, is pleased to submit its second biennial report on lime industry trends in greenhouse gas intensity of lime products. This report is made pursuant to NLA's June 11, 2003 commitment under the President's ClimateVISION program.

#### **BACKGROUND**

As described in NLA's 2003 commitment letter, the members of NLA have established a collective goal of reducing the intensity of carbon dioxide (CO<sub>2</sub>) emissions from energy use in the lime industry. NLA members are pursuing this goal by, on an aggregate basis, reducing energy-related CO<sub>2</sub> emissions per ton of product by 8% between 2002 and 2012.

Lime companies are employing a variety of strategies to achieve this goal, including physical modifications to kilns to improve energy efficiency, operational changes, increased reuse of byproducts, use of alternative fuels, use of green power, transferable credits, and offsets. Because this is an aggregate goal, not all lime companies have the same intensity goal, depending on what efficiency improvements have already been achieved before 2002, and what kind of equipment the company operates.

To support this goal, NLA has developed a *CO<sub>2</sub> Emissions Calculation Protocol for the Lime Industry*. This protocol for calculating carbon dioxide (CO<sub>2</sub>) emissions from lime manufacturing is designed to allow the lime industry to achieve consistency, comparability and transparency in accounting for CO<sub>2</sub> emissions and reductions, and to ensure that technically supported emission factors and other standards are used. The protocol and its accompanying forms are completed by NLA members on an annual basis.

NLA collects, reviews, and tabulates the data collected from its members. NLA submitted its first biennial report to DOE, reflecting 2002 and 2003 data, on June 18, 2004.

### IMPROVED CARBON INTENSITY TRENDS

NLA is pleased to report that between 2002 and 2005, the energy-related CO<sub>2</sub> intensity of lime products produced by NLA member companies has been reduced by an aggregate 1.3%. This shows significant progress in the last two years, (as intensity was essentially unchanged between 2002 and 2003), as reflected in the chart below:

Year	Energy-Related Emissions of CO <sub>2</sub> (million tons)	Product Produced (million tons)	Emissions Intensity from Energy Use (Energy-Related CO <sub>2</sub> tons per ton of product)
2002	12.9	19.1	0.68
2003	13.7	20.2	0.68
2004	14.6	21.5	0.68
2005	14.4	21.6	0.67

This improvement in energy-related CO<sub>2</sub> intensity is the result of decisive actions taken by lime companies. Although many efforts contributed to the result, the largest reductions in intensity came as a result of (1) replacement of inefficient production capacity with more efficient capacity and (2) an increase in the recycling of lime byproducts.

During the last two years, approximately 6% of the U.S. lime production capacity was decommissioned, and replaced with new, energy-efficient equipment. On average, the energy-related, carbon intensity of lime from the new equipment is 35% lower than from the retired equipment. These changes required substantial capital expenditures by the lime industry.

Furthermore, several companies have made great strides in increasing the recycling of lime byproducts. Industry-wide, the quantity of lime byproducts recycled has increased by more than 300,000 tons since the start of the program. From 2004 to 2005 alone, byproduct recycling as a percent of generation increased by 3½ % (or the quantity recycled increased by nearly 5%). As more byproducts are reused or sold as product, the total amount of energy used per ton of usable product is reduced, and thus intensity is reduced.

Several companies have improved byproduct recycling or the energy efficiency of their kilns to such an extent that they have already met their share of the aggregate industry commitment for 2012.

## **PROSPECTS FOR FUTURE IMPROVEMENTS**

NLA member companies are pursuing additional projects and strategies that will result in further reductions in energy-related CO<sub>2</sub> intensity over the course of the 10-year commitment period. In many cases, significant further intensity reductions can only be achieved by means of physical changes to lime plants, including replacement or modification of kilns and other equipment. As explained in our first biennial report, most such changes require several years from concept to completion, primarily due to prolonged environmental reviews. Once permits are issued, construction takes more than a year to complete

For the next reporting period (2006-07), several projects are already underway which should further contribute to the lime industry meeting its ClimateVISION goal. By example, permits for six new lime kilns have been issued in recent years that have the collective capacity to produce annually more than 2.4 million tons of lime that was not reflected in the 2004-05 report. These new kilns are expected to be 25% more energy efficient than the current industry average.

In addition, several more projects for new kilns are currently in the permit review process. Although obtaining permits is increasingly more difficult and time-consuming to achieve, NLA member companies are optimistic that permits will be granted, thus enabling them to reduce the energy-related carbon intensity of the lime they produce. Retirement of inefficient capacity will accompany some of the new installations.

## **COOPERATION WITH LIME CUSTOMERS**

The steel industry is a major market for lime, and its requirements can affect the energy efficiency of lime companies. But the steel market is also a prime example of opportunities for lime companies to reduce their emissions intensity by obtaining the cooperation of their customers. Steelmakers have historically purchased lime with very low levels of sulfur, and low-sulfur lime is generally made in relatively inefficient straight rotary kilns. Lime producers could modify such kilns to perform more efficiently if the steel industry would accept lime with slightly higher levels of sulfur.

Since 2002, NLA and its members have been working with steel companies and with the American Iron and Steel Institute to determine whether steelmakers can tolerate increased sulfur levels. Physical modifications to the lime kilns in question can be made only after this issue is resolved. Although some steel companies have been receptive to accepting lime with higher sulfur levels, significant further progress on this front remains. The lime industry will explore other opportunities to work with customers (and suppliers) to improve efficiency and reduce intensity.

## THE LIME INDUSTRY'S ONGOING COMMITMENT

NLA and its members reaffirm their intention to use their best efforts to achieve our ClimateVISION goals. Among its other commitments, NLA pledged to "provide support and education for its members in their efforts to achieve its goals, through meetings, publications, and other methods." NLA continues to fulfill this pledge, covering climate issues and strategies extensively in its publications and at its meetings—including NLA's Annual Meeting for strategic managers on June 12-13, 2006, as well as its meeting for lime plant operators on September 18-20, 2006.

The ability of the lime industry to achieve, or exceed, its goals will depend on many factors, including partnership with the government and other entities, the state of the economy, and the economic health of the lime industry. NLA and its members look forward to working with your Department on meeting the goals of the program together.

Very truly yours,

A handwritten signature in blue ink that reads "Michael A. DeCola". The signature is fluid and cursive, with a long horizontal stroke at the end.

Michael A. DeCola  
Mississippi Lime Company  
President, National Lime Association

A handwritten signature in blue ink that reads "Arline M. Seeger". The signature is cursive and elegant, with a long horizontal stroke at the end.

Arline M. Seeger  
Executive Director, National Lime Association