

February 5, 2007

Mail Stop 6010

Jeffrey R. Mistarz  
Chief Financial Officer and Treasurer  
Lime Energy Co.  
1280 Landmeier Road  
Elk Grove Village, Illinois 60007

**Re: Lime Energy Co.  
Amendment No. 2 to Registration Statement on Form S-1  
Filed January 26, 2007  
File No. 333-137236**

Dear Mr. Mistarz:

We have limited our review of your filing to those issues we have addressed in our comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

1. Please ensure that amendments you file disclose all required updated information. For example, you should include executive compensation information for the last completed fiscal year. See Release 33-8732A (August 29, 2006).

Exhibit 5.1

2. Please file a legal opinion covering all of the subscription rights and shares of common stock included in the fee table.

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As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested supplemental information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

Please contact Donald C. Hunt at (202) 551-3647 or me at (202) 551-3617 with any questions.

Sincerely,

Russell Mancuso  
Branch Chief

cc (via fax): Andrew H. Connor, Esq. – Schwartz Cooper Greenberger & Krauss, Chtd.