



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-7010

Mail Stop 7010

May 25, 2006

via U.S. mail and Facsimile

Ronald H. Miller
President & Chief Executive Officer
Aventine Renewable Energy Holdings, Inc.
1300 South 2nd Street
Pekin, IL 61555

**Re: Aventine Renewable Energy Holdings, Inc.
 Form S-1/A filed May 8, 2006
 File No. 333-132860**

Dear Mr. Miller:

We have reviewed your filing and have the following 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 supplemental information so we may better understand your disclosure. After reviewing this information, we may or may not 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.

Form S-1/A filed May 8, 2006

General

1. Please revise your disclosure to discuss recent legislative proposals calling for the repeal or suspension of the imported ethanol tariff. To the extent known or reasonably knowable, please include a risk factor discussing the possible consequences of changes in the imported ethanol tariff to your business

Prospectus Cover Page

2. Please delete the reference to “joint book-running managers.”

Business Overview, page 5

3. We note your response to comment 18 of our letter dated April 26, 2006. Please revise to briefly disclose here with more detail in your business section, the development of your business, including your organization and your entry into the ethanol industry. See Regulation S-K, Item 101(a)(1).

Commodity Prices, page 45

4. We note your disclosure concerning the large amount of excess corn and how that should “limit the volatility of, and increases in, corn prices well into the 2006 spring planting season.” Please update your disclosure, if necessary.

Principal and Selling Stockholders, page 79

5. We note your response to prior comment 37. Please revise your disclosure to provide the names of the members of the investment committee and/or advisory committee that have authority to make investment decisions with respect to the shares held by Aventine Holdings LLC.
6. We note your response to prior comment 38 however; it appears that you have not revised the registration statement to disclose how the selling shareholders obtained the shares registered for resale. Please revise accordingly.

10. Stock-Based Compensation, page F-22

7. We have reviewed your response to our prior comment 49. Please reconcile for us the number of options granted during 2005 presented in Annex 1 of your response (1,576) to the number of options granted during 2005 in your table on page F-23 (1,269).

Closing Comments

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.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain that they have provided all information investors

require for an informed decision. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as a confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

Please direct accounting comments to Ryan Rohn, Staff Accountant, at (202) 551-3739 or, in his absence, to Al Pavot, Senior Staff Accountant, at (202) 551-3738. Direct questions on disclosure issues to Tamara Brightwell, Staff Attorney, at (202) 551-3751 or, in her absence, to Lesli Sheppard, Senior Staff Attorney, at (202) 551-3708, or the undersigned at (202) 551-3760.

Sincerely,

Pamela A. Long
Assistant Director

Aventine Renewable Energy Holdings, Inc.

May 25, 2006

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cc: Richard D. Truesdell, Jr., Esq.
Davis Polk & Wardwell
450 Lexington Avenue
New York, NY 10017