



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

Mail Stop 3030

October 30, 2009

Via Facsimile and U.S. Mail

Mr. James A. Simms  
Chief Financial Officer  
Vicor Corporation  
25 Frontage Road,  
Andover, MA 01810

**Re: Vicor Corporation  
Form 10-K for the Year Ended December 31, 2008  
Filed March 13, 2009  
File No. 000-18277**

Dear Mr. Simms:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your documents in future filings in response to these comments. If you disagree, we will consider your explanation as to why our comments are 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 any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Form 10-K for the Year Ended December 31, 2008

Item 8. Financial Statements and Supplementary Data, page 36

1. We note that you determined that the investment in GWS is a variable interest entity and that you are not the primary beneficiary even though a director of your company is the founder, chairman, president and chief executive officer of GWS.

We further note here and within your June 30, 2009 Form 10-Q that you entered into licensing, development, and other agreements with GWS subsequent to December 31, 2008. Please provide to us your basis for your conclusions under FIN 46(R) at December 31, 2008 and June 30, 2009 and revise future filings as necessary.

Item 9A. Controls and Procedures, page 73

2. We note your disclosure that your “management has concluded that [your] internal control over financial reporting was effective as of December 31, 2008, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with generally accepted accounting principles.” The language that is currently included after the word “effective as of December 31, 2008” in your disclosure appears to be superfluous, since the meaning of internal control over financial reporting is established by Rule 13a-15(f) of the Exchange Act. Please remove the language in your future filings including any amendments to your Form 10-K, or revise the disclosure so that the language that appears after the word “effective” is substantially similar in all material respects to the language that appears in the entire definition of internal control over financial reporting set forth in Rule 13a-15(f).

As appropriate, please respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a cover letter that keys your responses to our comment and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment 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.

In connection with responding to our comments, please provide, in writing, a statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and

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- the company may not assert staff comments 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 our review of your filing or in response to our comments on your filing.

You may contact Tara Harkins, Staff Accountant, at (202) 551-3639 or Lynn Dicker, Reviewing Accountant, at (202) 551-3616 if you have questions regarding comments on the financial statements and related matters. Please contact Joseph McCann at (202) 551-6262 or me at (202) 551-3625 if you have questions on any other comments.

Sincerely,

Mary Beth Breslin  
Senior Attorney