

November 12, 2009

Via EDGAR

Ms. Mary Beth Breslin
Senior Attorney
Securities and Exchange Commission
Mail Stop 3030
100 F Street, N.E.
Washington, D.C. 20549-0306

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

Dear Ms. Breslin:

This letter is submitted on behalf of Vicor Corporation (“Vicor” or “the Company”) in response to comments of the staff of the Division of Corporation Finance (the “Staff”) of the Securities and Exchange Commission (the “Commission”) with respect to the Company’s Form 10-K for the year ended December 31, 2008, as set forth in the letter dated October 30, 2009 from the Staff to Mr. James A. Simms (the “Comment Letter”).

For reference purposes, the text of the Comment Letter has been reproduced herein with responses below each numbered comment.

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.*

Response to Comment No. 1

The Company made its last investment in Great Wall Semiconductor Corporation (“GWS”) in February 2008 of \$1 million in exchange for non-voting convertible preferred stock. At that time, the Company considered the requirements under FIN 46(R) and determined that GWS is a

variable interest entity (“VIE”), but that the Company was not the primary beneficiary. As disclosed in Note 8 to the consolidated financial statements, the key factors identified by the Company in reaching its conclusion that it was not the primary beneficiary in GWS are as follows:

- The CEO of GWS (“CEO”) is the member of the related party group (consisting of Vicor and the CEO) that is more closely related to the operations of GWS;
- The Company’s investment in GWS does not entitle the Company to any voting rights;
- The Company does not have, nor is it entitled to have, a representative on the GWS board of directors;
- The Company has no significant decision making ability with respect to the operations of GWS; and
- The Company does not have contractual commitments to provide any future equity funding for GWS.

While an independent third party holds the largest ownership percentage in GWS, the CEO is the holder of the majority of the voting shares in GWS and is a Board member. By virtue of his also being a member of the Company’s Board of Directors, both the CEO and the Company represent a related party group within GWS. The combined interests of the CEO and the Company exceed the ownership interest of the independent third party noted above. Paragraph 17 of FIN 46(R) provides the guidance in this situation in determining the primary beneficiary:

If two or more related parties (including de facto agents described in paragraph 16) hold variable interests in the same variable interest entity, and the aggregate variable interests held by those parties, if held by a single party, identify that party as the primary beneficiary, then the party, within the related party group, that is most closely associated with the variable interest entity is the primary beneficiary. The determination of which party within the related group is most closely associated with the variable interest entity requires judgment and shall be based on an analysis of all relevant facts and circumstances, including:

- a. *The existence of a principal-agency relationship between parties within the related party group.*
- b. *The relationship and significance of the activities of the variable interest entity to the various parties within the related party group.*
- c. *A party’s exposure to the expected losses of the variable interest entity.*
- d. *The design of the variable interest entity.*

The following summarizes the Company’s considerations for each section of paragraph 17 of FIN 46(R):

- 17.a. — There is no principal-agency relationship between the Company and the CEO.
- 17.b. — The CEO is substantially involved with the daily operations of GWS, while the Company is not. He is a member of the GWS Board and the holder of the majority of the voting shares. The Company does not hold a Board seat and holds only non-voting preferred stock in GWS. Thus, the CEO has the direct ability to make decisions with a significant impact on the success of the VIE. The Company does not have any decision making authority with respect to the operations of GWS, sells no products to GWS and has no employees involved in managing the operations of GWS.
- 17.c. — The expected loss allocation performed at the time of the Company's February 2008 investment in GWS showed an approximately equal proportion of losses to the CEO and the Company. In addition, GWS has a line of credit arrangement with the CEO under which GWS has drawn from and is therefore under obligation of repayment to the CEO.
- 17.d. — GWS was not formed in contemplation of any relationship with the Company. The Company did not participate in the formation of GWS.

Based on these considerations, the Company concluded that the CEO would be designated as the primary beneficiary, as he is the party within the related party group that is most closely associated with GWS.

With regard to the licensing, development, and other agreements with GWS subsequent to December 31, 2008, the Company evaluated these under the guidelines of paragraphs 7 and 15 of FIN 46(R) and concluded that entering these agreements did not constitute a reconsideration event of whether GWS is a VIE or the determination of the primary beneficiary. The transactions under the agreements do not represent an additional equity investment in GWS, do not change the percentage ownership of the equity holders and do not change the structure or design of GWS. Therefore, the Company concluded that the transactions contemplated under the agreements do not change the determination that the CEO is the primary beneficiary in GWS since he would continue to be the party within the related group that is most closely associated with GWS.

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*
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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).

Response to Comment No. 2

We agree with your comment. We will remove the language in our future filings, including any amendments to our Form 10-K.

* * * * *

In connection with providing our responses to your comments, we acknowledge that:

- The Company is responsible for the adequacy and accuracy of the disclosure in its filings with the Commission;
- Staff comments or changes to disclosure in response to Staff comments do not foreclose the Commission from taking any action with respect to the Company’s filings with the Commission; and
- 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.

If you should have any questions concerning these responses, please contact either Jamie Simms at (978) 749-3215 or Dick Nagel at (978) 749-3424.

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Senior Attorney
Securities and Exchange Commission
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Regards,

/s/ Patrizio Vinciarelli

Patrizio Vinciarelli
President
Chief Executive Officer

/s/ James A. Simms

James A. Simms
Vice President
Chief Financial Officer

/s/ Richard J. Nagel, Jr.

Richard J. Nagel, Jr.
Vice President
Chief Accounting Officer