



DIVISION OF
CORPORATION FINANCE

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

August 10, 2010

Mr. David H. Fater
Chief Executive Officer and Chief Financial Officer
Vicor Technologies, Inc.
2300 Corporate Boulevard, N.W., Suite 123
Boca Raton, Florida 33431

**Re: Vicor Technologies, Inc.
Form 10-K for the Fiscal Year Ended December 31, 2009
Filed March 31, 2010
Form 10-Q for the Fiscal Quarter Ended March 31, 2010
File No. 0-51475**

Dear Mr. Fater:

We have reviewed your response letter dated July 30, 2010 and filings and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Fiscal Year Ended December 31, 2009

Note 4. Current Debt, page F-17

1. We note your response to prior comment 4. Please tell us how you considered FASB ASC 470-50-40-2, which states that the difference between the reacquisition price and the net carrying amount of the extinguished debt should be recognized currently in income of the period of extinguishment as losses or gains and *identified as a separate item*.
2. Your response to prior comment 12 in our June 22, 2010 comment letter stated that the induced conversions related to the 15% and 10% promissory notes and that you *induced the conversion* of these notes through the issuance of common stock. Your response to prior comment 5 from our July 20, 2010 letter only discussed the preferred stock issued for the 2004 notes and 12% convertible notes. Please explain to us how you accounted for the transactions with the 15% and 10% promissory notes and why.
3. Further, your response to prior comment 12 from our June 22, 2010 letter stated that you accounted for the extinguishment of the 2004 notes and the 12% promissory notes in accordance with ASC 470-50-40 wherein the holders of the 2004 notes and 12% promissory notes received shares of Series B Junior convertible preferred stock for the conversion of the notes. You told us that you valued the Series B Junior convertible preferred stock for each extinguishment on the date of extinguishment and compared the value of the new securities to the value of the old notes. In response to prior comment 6 from our July 20, 2010 letter you state that the extinguishment also included warrants. Please tell us how you valued and accounted for the warrants and why.

Note 5. Long-Term Debt, page F-18

4. Further to your response to prior comment 7, please provide us with your analysis in determining that you have sufficient authorized and unissued shares as of December 31, 2009. Refer to FASB ASC 815-40-25-19 through 25-24.

Note 6. Preferred Stock, page F-19

5. Your response to prior comment 10 states that you will include the liquidation preference amounts in the notes to your financial statements. Under FASB ASC 505-10-50-4, if the preference in involuntary liquidation is considerably in excess of the par or stated value, then you should disclose the preference in the *equity section* of your balance sheet in the aggregate. Please revise or advise.

Note 9. Fair Value of Financial Instruments, page F-23

6. We note that in your proposed disclosure in response to prior comment 12, you continue to combine the disclosures for the preferred stock and debt. Since you are required by FASB ASC 820-10-50-2 and paragraph 320-10-50-1B to separately reflect the value of each major security type within your derivative liabilities, please separate your disclosure related to the preferred stock conversion feature and the convertible notes conversion feature.
7. In your July 7, 2010 response letter related to prior comment 24, you told us that the line item "Included in earnings – realized" represents gains and losses resulting from conversion of financial instruments into common stock or the exercise of warrants. Please explain in further detail the nature of the line item and how that line item is different from the line item for "Purchases, sales and other" which also includes conversion of financial instruments into common stock or the exercise of warrants.
8. Further to your response to prior comment 13, we note that there were no conversions in 2009. Please tell us why the amounts reflected for "Purchases, sales and other" are negative if these amounts only reflect changes due to the addition of the fair values of derivative financial instruments related to debt and equity instruments sold to investors. If these amounts represent settlements, please explain the nature of the settlements and where any revaluation gains or losses are reflected. Refer to FASB ASC 820-10-50-2(c).

Form 10-Q for the Quarterly Period Ended March 31, 2010

9. Please amend your Form 10-Q, as applicable, to incorporate changes to your disclosures that you are making to your Form 10-K as a result of our comments.

Note 3. Summary of Significant Accounting Policies and Basis of Presentation, page 9

Revenue Recognition, page 11

10. We have considered your response to our prior comment 15 in our letter of July 20, 2010, your prior response to comment 28 in our letter of June 22, 2010, and your disclosures on page 20 of your Form 10-Q. For the sales to your distributors, please further clarify for us the exact payment terms of each sale, the date(s) of the sale, the number of units sold and the unpaid balance as of March 31, 2010.
11. Please tell us how you considered and evaluated each of the factors under the guidance of FASB ASC 985-605-25-36 to conclude the fixed and determinable fee and collectability criteria for revenue recognition were met.

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You may contact Gary Newberry at (202) 551-3761 or Kate Tillan, Assistant Chief Accountant, at (202) 551-3604 if you have any questions. You may also contact me at (202) 551-3671.

Sincerely,

Martin James
Senior Assistant Chief Accountant