



DIVISION OF
CORPORATION FINANCE

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

January 13, 2011

David Gelbaum
Chief Executive Officer
Entech Solar, Inc.
13301 Park Vista Boulevard, Suite 100
Fort Worth, Texas 76177

Re: Entech Solar, Inc.
Registration Statement on Form S-1
Filed December 20, 2010
File No. 333-171296

Dear Mr. Gelbaum:

We have limited our review of your registration statement to those issues we have addressed in our comments. 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 by amending your registration statement and providing the requested information. Where 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 registration statement and the information you provide in response to these comments, we may have additional comments.

1. We note that comments have been issued by us on your Form 10-K for the fiscal year ended December 31, 2009. Please confirm that you will resolve any comments on your Form 10-K before requesting acceleration of the effective date of this registration statement.

Prospectus Cover Page

2. We note that the selling stockholder is offering up to \$6,750,000 shares of common stock underlying warrants. Please note that information regarding the number of securities to be offered is not information that may be omitted pursuant to Rule 430A of the Securities Act.

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3. Please tell us why you believe it is appropriate to register this transaction at this time. Cite all authority on which you rely. In your response please address:
- the waiver provision in Section 6.3 of the Amended and Restated Preferred Stock Purchase Agreement. Please explain what “in the case of a waiver, by the party against whom enforcement of such waiver is sought” means and how it operates. It would appear that the investor could waive conditions to closing under this language;
 - clause (y) of Section 1.1.1 of the Amended and Restated Warrant to Purchase Common Stock indicates that the exercise price for the warrants could be paid for with a promissory note issuable by the selling stockholder; and
 - Section 1.2 of the Amended and Restated Warrant to Purchase Common Stock provides for the adjustment of the exercise price and the number of shares to be issuable upon exercises under the warrant.

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 the information the Securities Act of 1933 and all applicable Securities Act rules require. 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 you request acceleration of the effective date of the pending registration statement please provide a written statement from the company 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.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under

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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. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Jay Mumford at (202) 551-3637 or Tim Buchmiller, Senior Attorney, at (202) 551-3635 with any questions.

Sincerely,

Russell Mancuso
Branch Chief

cc (via facsimile): Laurie Cerveney, Esq. — Bingham McCutchen LLP