



DIVISION OF
CORPORATION FINANCE

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

December 17, 2010

Magnus Ryde
Chief Executive Officer
DayStar Technologies, Inc.
1010 South Milpitas Boulevard
Milpitas, California 95035

**Re: DayStar Technologies, Inc.
Registration Statement on Form S-3
Amended November 30, 2010
File No. 333-169945**

Dear Mr. Ryde:

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. Please expand the analysis you provided in response to prior comment 1 to address the relevant facts that occurred subsequent to the end of your last fiscal year and whether those facts gave rise to a new event of default under the lease agreement subsequent to the end of the prior fiscal year. In this regard, we note that under Section 5 of the settlement agreement dated December 16, 2009, the modified payment terms for rent under Section 4 of the settlement agreement did not relieve you of your obligation to pay the full amount of rent, and that all amounts due pursuant to the lease or the settlement agreement continued to accrue and were due and payable pursuant to the terms of the lease and the settlement agreement.

Selling Stockholders, page 11

2. Please expand your analysis provided in response to prior comment 2 to address the extent to which the numerous amendments of the terms of the convertible notes and warrants, as well as the reductions in the exercise price of outstanding warrants issued in connection with subsequent issuances of convertible notes, impact your analysis as to whether the offering may be registered in reliance on rule 415(a)(1)(i). Further, it is not clear how you determined that Messrs. Gorman and Moretti are unaffiliated third parties, given their ownership of significant percentages of your common stock.

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 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.

Magnus Ryde
DayStar Technologies, Inc.
December 17, 2010
Page 3

You may contact Aslynn Hogue at (202) 551-3841 or Mary Beth Breslin, Senior Attorney, at (202) 551-3625 with any questions.

Sincerely,

Russell Mancuso
Branch Chief

cc (by facsimile): Stephen T. Adams, Esq. — Greenberg Traurig, LLP