



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 4628

May 25, 2016

Jon Christopher Boswell
Chief Executive Officer
2930 W. Sam Houston Pkway, N., Suite 275
Houston, TX 77043

**Re: Eco-Stim Energy Solutions, Inc.
Registration Statement on Form S-3
Filed May 3, 2016
File No. 333-211072**

Dear Mr. Boswell:

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. 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 registration statement and the information you provide in response to these comments, we may have additional comments.

At the Market Issuance Sales Agreement Prospectus

1. This prospectus references the offering of "up to \$6,200,000" of common stock. Please confirm that this represents a "takedown" from the \$100 million of securities that have been registered in this registration statement. If so, advise us whether you intend to file a prospectus under Rule 424(b) subsequent to effectiveness of the registration statement. If you do not, explain to us why you believe that this prospectus complies with Rule 424(b). In this regard, we note the prospectus indicates that it is offering "up to" rather than a fixed amount of securities and utilizes pricing information as of April 28, 2016.

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.

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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.

You may contact Irene Barberena-Meissner, Staff Attorney, at (202) 551-6548 or me at (202) 551-3745 with any other questions.

Sincerely,

/s/H. Roger Schwall

H. Roger Schwall
Assistant Director
Office of Natural Resources

cc: Brett Riesenfeld, Esq.
Vinson & Elkins LLP