



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 3030

February 10, 2017

Victor Lee
Chief Executive Officer
Ascent Solar Technologies, Inc.
12300 Grant Street
Thornton, Colorado 80241

**Re: Ascent Solar Technologies, Inc.
Preliminary Proxy on Schedule 14A
Filed January 23, 2017
File No. 001-32919**

Dear Mr. Lee:

We have limited our review of your filing 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 these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments.

Purpose of the Authorized Share Increase, page 8

1. Please revise your disclosure to discuss your recent reverse stock split of common stock and your recent increase in authorized shares from 450 million to 2 billion shares on September 15, 2016. In this regard, please clarify the events that have taken place since the prior reverse stock split and increase in authorized shares that have necessitated the additional increase in authorized shares from 2 billion to 20 billion shares.
2. Please expand your disclosure to discuss the variable conversion price of each convertible security you mention in the bullet points on page 9 and disclose how the variable conversion prices have impacted your estimated conversion shares since you last sought shareholder approval of an increase in authorized shares on September 15, 2016. As examples only, we note the significant increases in the number of conversion shares of your Series G preferred shares and your convertible notes.

Victor Lee
Ascent Solar Technologies, Inc.
February 10, 2017
Page 2

3. Please revise your disclosure to discuss the material terms of your issuance of Series J preferred shares and your issuance of 333 million shares to an affiliate of your executive officer, including the consideration paid, the reasons underlying the issuances and the conversion rate for the convertible securities.

We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Please contact Heather Percival at (202) 551-3498 or Tim Buchmiller, Senior Attorney, at (202) 551-3635 with any questions.

Sincerely,

/s/ Tim Buchmiller for

Amanda Ravitz
Assistant Director
Office of Electronics and Machinery

cc: James Carroll
Faegre Baker Daniels LLP