



DIVISION OF
CORPORATION FINANCE

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

Mail Stop 3030

December 22, 2016

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

Re: Ascent Solar Technologies, Inc.
Form 10-K for the fiscal year ended December 31, 2015
Filed March 11, 2016
File No. 001-32919

Dear Mr. Lee:

We have reviewed your filing and have the following 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.

Item 1A. Risk Factors, page 11

1. We note your disclosure on page 35 that Victor Lee, your Chief Executive Officer and Director, is also the managing director of Tertius Financial Group Pte Ltd, a boutique corporate advisory and private investment firm he founded in February 2009. We also note that according to your disclosure, Mr. Lee is the only executive officer of the company and is serving as both principal executive officer and as acting principal financial officer. In your future filings as appropriate, add risk factor disclosure regarding any potential conflicts of interest that may arise from the business activities of your officer and disclose the number of hours that Mr. Lee devotes to your business.

Comparison of the Years Ended December 31, 2015 and 2014, page 28

2. We note your disclosure that your revenues during 2015 increased as compared to 2014. It does not appear, however, that you have provided any discussion and analysis regarding the material factors driving that increase. Similarly, in your Form 10-Q for the

quarterly period ended September 30, 2016, we note that your revenues decreased for the three and nine months ended September 30, 2016, but that you have not quantified the effect of each material factor that drove the decrease in your revenues. When individual line items disclosed in your statements of operations significantly fluctuate in comparison to the comparable prior period, management should quantify and disclose the nature of each item that caused the significant change. Please revise your future filings in response to this comment. For further guidance, please refer to Item 303 and the related instructions in Regulation S-K as well as SEC Interpretive Release No. 34-48960 (December 19, 2003).

Related Party Transactions, page 42

3. We note your disclosure on page 15 that “TFG Radiant may have the ability to prevent any transaction that requires the approval of stockholders” but that as of March 9, 2016 TFG Radiant owned approximately 3% of your common stock. In future filings, please clarify in this section and in your risk factor how TFG could prevent transactions that require stockholder approval. File any related stockholder agreement as required by Item 601(b)(10).

Signatures, page 46

4. Please revise your future filings to indicate who has signed your Form 10-K in the capacity of controller or principal accounting officer. Refer to General Instruction D(2)(a) to Form 10-K.

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