

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

September 5, 2023

Jin Jo Chief Financial Officer Ascent Solar Technologies, Inc. 12300 Grant Street Thornton, Colorado 80241

> Re: Ascent Solar Technologies, Inc. Registration Statement on Form S-1 Filed August 25, 2023 File No. 333-274231

Dear Jin Jo:

This is to advise you that we have not reviewed and will not review your registration statement.

Please refer to Rules 460 and 461 regarding requests for acceleration. 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 Gregory Herbers at 202-551-8028 with any questions.

Sincerely,

Division of Corporation Finance Office of Manufacturing

cc: James H. Carroll