



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 3030

February 11, 2016

Via E-mail

Scott A. Bibaud
Chief Executive Officer
Atomera Incorporated
750 University Avenue, Suite 280
Los Gatos, California 95032

**Re: Atomera Incorporated
Amendment No. 1 to
Draft Registration Statement on Form S-1
Submitted January 22, 2016
CIK No. 0001420520**

Dear Mr. Bibaud:

We have reviewed your amended draft registration statement 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 this letter by providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. 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 the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

Our Business, page 14

MST Commercialization, page 17

1. We note your revised disclosure in response to comment 5. Please also explain how you define "successful" as used in the first two complete paragraphs of page 18 relating to "process and subsequent product qualification" and "process development and equipment certification."

Risk Factors, page 6

2. We note your disclosure that test element group transistors using your technology “consistently demonstrated increased performance, speed, reliability and energy efficiency.” Are the results of your tests showing these results published? Please provide us copies of the simulation studies and tell us additional details about the conditions under which these tests were conducted. Your response should demonstrate how you used objective, empirical evidence to reach the conclusions about performance set forth in the quoted language above.

Intellectual Property Rights, page 19

3. Refer to the final paragraph under this heading. It is not clear why you are unable to definitely conclude which products are subject to the ASM license royalty and what date the patents expire. Please explain the facts that give rise to this uncertainty.

Executive Compensation, page 24

4. Please revise to update your disclosure throughout this section to reflect compensation for the most recently completed fiscal year.

Underwriting, page 40

Underwriting Discount and Expenses, page 40

5. We note your revised disclosure in response to comment 13. Please revise the table to include the value of the warrant you have agreed to issue to your underwriter as compensation. See Regulation S-K Item 508(e).

Scott A. Bibaud
Atomera Incorporated
February 11, 2016
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Please contact Caleb French at (202) 551-6947 or me at (202) 551-3528 with any questions.

Sincerely,

/s/ Amanda Ravitz

Amanda Ravitz
Assistant Director
Office of Electronics and Machinery

cc: Daniel K. Donahue