Rigetti Computing, Inc. 775 Heinz Avenue Berkeley, CA 94710

April 21, 2022

VIA EDGAR

United States Securities and Exchange Commission Division of Corporation Finance 100 F Street, N.E. Washington, D.C. 20549

Attention: Austin Pattan, Staff Attorney

Joshua Shainess, Legal Branch Chief

Re: Rigetti Computing, Inc.

Registration Statement on Form S-1

Filed March 23, 2022 File No. 333-263798

To the addressees set forth above:

This letter sets forth the responses of Rigetti Computing, Inc. (the "Company," "we," "our" and "us") to the comments set forth in the comment letter of the staff of the Securities and Exchange Commission (the "Staff") dated April 5, 2022 (the "Comment Letter") relating to Registration Statement on Form S-1 filed on March 23, 2022 (the "Registration Statement"). The Company has also revised the Registration Statement in response to the Staff's comments and, concurrently with delivery of this letter, filed with the Securities and Exchange Commission an amendment to the Registration Statement ("Amendment No. 1") which reflects these revisions and generally updates certain information in the Registration Statement.

To assist your review, set forth below in bold are the comments of the Staff contained in the Comment Letter and immediately below each comment is the response of the Company with respect thereto or a statement identifying the location in Amendment No. 1 of the requested disclosure or revised disclosure. Please note that all references to page numbers in our responses refer to the page numbers of the prospectus included in Amendment No. 1. Capitalized terms used but not defined herein have the meanings ascribed to such terms in Amendment No. 1.

Cover Page

1. For each of the shares and warrants being registered for resale, disclose the price that the selling securityholders paid for such shares, warrants, or units overlying such securities.

The Company respectfully acknowledges the Staff's comment and has revised the disclosure on the cover page and page 45 of Amendment No. 1 to disclose the purchase price paid by various selling securityholders for such shares and warrants.

- 2. Disclose the likelihood that warrant holders will not exercise their warrants. Provide similar disclosure in the prospectus summary, risk factors, MD&A and use of proceeds section and disclose that cash proceeds associated with the exercises of the warrants are dependent on the stock price. Describe the impact on your liquidity and update the discussion on the ability of your company to fund your operations on a prospective basis with your current cash on hand.
 - The Company respectfully acknowledges the Staff's comment and has revised the disclosure on the cover page and pages 14, 50, 53 and 62 of Amendment No. 1 to disclose that the cash proceeds associated with the exercise of the warrants are dependent on the stock price and also to describe any impact on our liquidity.
- 3. We note the significant number of redemptions of your common stock in connection with your business combination and that the shares being registered for resale will constitute a considerable percentage of your public float. Highlight the significant negative impact sales of shares on this registration statement could have on the public trading price of the common stock. In this regard, highlight that certain of the shares being registered for resale were purchased by the selling securityholders for prices below the current market price of the common stock and that such securityholders would have an incentive to sell.

The Company respectfully acknowledges the Staff's comment and has revised the disclosure on the cover page and pages 10, 19, 45-46 and 62-63 of Amendment No. 1 to disclose that the securities being registered for resale represent approximately 63.5% of shares outstanding as of March 31, 2022 (after giving effect to the issuance of shares upon exercise of outstanding public warrants, private placement warrants, Rigetti assumed warrants and options and settlement of outstanding restricted stock units), and that the sale of shares by the selling securityholders, or the perception in the market that the selling securityholders of a large number of shares intend to sell shares, could increase the volatility of the market price of our common stock or result in a significant decline in the public trading price of our common stock.

Prospectus Summary

Background, page 1

4. In light of the significant number of redemptions and the unlikelihood that the company will receive significant proceeds from exercises of the warrants because of the disparity between the exercise price of the warrants and the current trading price of the common stock, expand your discussion of capital resources to address any changes in the company's liquidity position since the business combination. If the company is likely to have to seek additional capital, discuss the effect of this offering on the company's ability to raise additional capital.

The Company respectfully acknowledges the Staff's comment and has revised the disclosure on pages 53 and 62-63 of Amendment No. 1.

Risk Factors

Additional Risks Related to Ownership of Our Securities-Future sales, or the perception of future sales, by us or our stockholders in the public market..., page 42

5. To illustrate the risk that potential sales of shares pursuant to this registration statement could put negative pressure on the trading price, disclose the purchase price of the securities being registered for resale and the percentage that these shares currently represent of the total number of shares outstanding. Also disclose that even though the current trading price is significantly below the SPAC IPO price, certain private investors may have an incentive to sell because they purchased their shares at prices lower than the public investors.

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The Company respectfully acknowledges the Staff's comment and has revised the disclosure on the cover page and pages 45-46 of Amendment No. 1 to disclose the purchase price paid by various selling securityholders for such shares and warrants, the percentage of the total outstanding and reserved shares of common stock the shares being registered for resale represent, and the fact that certain selling securityholders may have an incentive to sell their securities as they purchased their shares at prices lower than the current public trading price of our common stock.

6. You state on page 42 that "future" resales of the common stock issued in connection with the Merger may cause the market price of your securities to drop significantly. This statement should be updated given that this prospectus is facilitating those sales.

The Company respectfully acknowledges the Staff's comment and has revised the disclosure on page 45 of Amendment No. 1.

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We hope the foregoing answers are responsive to your comments. Please direct any questions or comments regarding this correspondence to our counsel, Rupa Briggs, Sarah Sellers and Yoon-jee Kim of Cooley LLP at (212) 479-6525, (212) 479-6370 or (212) 479-6792, respectively.

Very truly yours,

Rigetti Computing, Inc.

By: /s/ Rick Danis
Name: Rick Danis
Title: General Counsel

cc: Chad Rigetti, Rigetti Computing, Inc.