



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 3561

May 30, 2017

Zamir Rauf
Chief Financial Officer
Calpine Corporation
717 Texas Avenue, Suite 1000
Houston, Texas 77002

**Re: Calpine Corporation
Form 10-K for the Fiscal Year Ended December 31, 2016
Response dated May 15, 2017
File No. 001-12079**

Dear Mr. Rauf:

We have reviewed your May 15, 2017 response to our comment letter 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. Unless we note otherwise, our references to prior comments are to comments in our April 19, 2017 letter.

Form 10-K for the Fiscal Year Ended December 31, 2016

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

Adjusted EBITDA, page 58

1. We note your response to comment 1. We do not concur with your conclusion that it is appropriate to exclude major maintenance expense from Adjusted EBITDA. Please omit major maintenance expense from your reconciliation of Adjusted EBITDA. However, we would not object to the presentation of major maintenance expense as supplemental information.

2. We note your response to comment 2. Please address the following:

- Explain to us why adjusting for contract amortization in arriving at Adjusted EBITDA is useful to investors.
- Tell us how much of the contract amortization adjustment separately relates to 1) items associated with intangible assets or derivative assets and liabilities that were recorded at fair value at the time of business combinations and 2) the amount related to long-term forward physical power sales contracts which were initially accounted for as derivatives prior to your election of the normal purchases normal sales derivative accounting exemption during 2015.
- Tell us the average remaining life of the acquired commodity contracts and the average remaining life of the power contracts previously accounted for as derivatives. In this regard, tell us the average remaining period over which you will amortize these fair value adjustments.
- We note that the adjustment for each year adds back a net expense amount. Explain to us whether the amortization of any acquired commodity contracts or any power contracts previously accounted for as derivatives has a positive impact on your earnings, and if so, whether they are included in this contract amortization adjustment.

Item 8. Financial Statements and Supplementary Data

Form 8-K Filed on February 10, 2017

Exhibit 99.1

Net Income (Loss), As Adjusted Reconciliation, page 19

3. We note your response to comment 6. Please explain to us in more detail why you have proposed to present an effective tax rate that differs from your consolidated effective tax rate for the specific items for which you are adjusting when calculating net income/loss, as adjusted. To assist us in understanding your response, please show us how your presentation of this measure would have differed for each of the year ended December 31, 2016 and the quarter ended March 31, 2017, including a detailed explanation of how the tax effect would have been calculated. Your response should clearly explain how these specific adjustments, if hypothetically made in these specific periods, would have changed the consolidated amount of current and deferred income tax expense recorded on your books, and why your proposed methodology of averaging your state and foreign tax rates is a reasonable estimate of that tax effect given the tax jurisdictions to which these adjustments relate.

Zamir Rauf
Calpine Corporation
May 30, 2017
Page 3

You may contact Robert Babula, Staff Accountant at (202) 551-3339, or me at (202) 551-3737 if you have questions regarding comments on the financial statements and related matters or any other questions.

Sincerely,

/s/ Jennifer Thompson

Jennifer Thompson
Accounting Branch Chief
Office of Consumer Products