



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-4631

July 2, 2010

Mr. Michael Barth
Chief Financial Officer
Acorn Energy, Inc.
4 West Rockland Road
Montchanin, Delaware 19710

RE: Acorn Energy, Inc.
Form 10-K for the Year Ended December 31, 2009
Form 10-Q for the Period Ended March 31, 2010
File No. 1-33886

Dear Mr. Barth:

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 this letter within ten business days by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Year Ended December 31, 2009

Item 1. Business

Customers, page 4

1. We note arrangements with customers that you appear to be substantially dependent upon but for which you have not filed any contracts with these customers as material exhibits. For example, we note that 60% of DSIT's revenues were concentrated in two customers and that you have a significant relationship with Allegheny Energy. Please advise if you considered filing your agreements with these customers as material exhibits under Item 601(b)(10)(ii)(B) of Regulation S-K.

Legal Proceedings, page 34

2. For each legal proceeding, please tell us and revise future filings, to disclose:

- The amount of damages sought if, specified;
- The amount of any accrual, if necessary for an understanding of the contingency;
- The range of reasonably possible loss or additional loss; or
- State that such a loss cannot be estimated.

If you believe that any losses are remote, please explain in your response.

For example, we note that CoaLogix is being sued by Environmental Energy Services. However, on page 35, you indicate that you believe that Environmental Energy Services' allegations are without merit. It is unclear, from this disclosure, whether it is reasonably possible that losses may result, regardless of your views as to the merit of the allegations.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Overview and Trend Information, page 41

3. We note the disclosure relating to the work of an outside firm that assisted with determining the economic viability of MetalliFix. We also note that you have an outstanding effective registration statement (File No. 333-161315) for which the filing of the Form 10-K will serve as a Section 10(a)(3) update. Please tell us what consideration you have given to naming the third party and obtaining the third party's consent. Refer to Interpretation 233.02 of the Division's Securities Act Rules Compliance and Disclosure Interpretations.

Critical Accounting Policies

Goodwill and Intangibles, page 46

4. In the interest of providing readers with a better insight into management's judgments in accounting for long-lived assets, including goodwill and intangibles, please consider disclosing the following in future filings:
- Sufficient information to enable a reader to understand what method you apply in estimating the fair value of your long-lived assets, including but not limited to your use of a combination of discounted cash flow methodology;
 - How you group long-lived assets for impairment and your basis for that determination; and

- Explain how the assumptions and methodologies in the current year have changed since the prior year highlighting the impact of any changes.

As a related matter, if any of your reporting units have estimated fair values that are not substantially in excess of the carrying value and to the extent that goodwill for these reporting units, in the aggregate or individually, could materially impact your operating results, please provide the following disclosures for each of these reporting units:

- Identify the reporting unit;
- The percentage by which fair value exceeds the carrying value as of the most-recent step-one test;
- The amount of goodwill;
- A description of the assumptions that drive the estimated fair value;
- A discussion of the uncertainty associated with the key assumptions. For example, assuming you use a discounted cash flow model, to the extent that you have included assumptions in your discounted cash flow model that materially deviates from your historical results, please include a discussion of these assumptions; and
- A discussion of any potential events and/or circumstances that could have a negative effect on the estimated fair value.

If you have determined that the estimated fair value substantially exceeds the carrying value for all of your reporting units, please disclose this determination. Please refer to Item 303 of Regulation S-K and Sections 216 and 501.14 of the Financial Reporting Codification for guidance.

Financial Statement

Balance Sheet, page F-2

5. Please separately disclose notes receivable pursuant to Rule 5.02.3 of Regulation S-X.

Income Statement, page F-3

6. We note that your share in the losses of Paketeria was \$1.6 million for the period ended December 31, 2008. Please provide us your calculations for the asset, investment and income test of significance pursuant to Rule 3-09 of Regulation S-X.
7. In future filings please present summarized information of subsidiaries not consolidated and 50 percent or less owned persons pursuant to Rule 4-08(g) of

Regulation S-X. If applicable, provide the specified separate financial statements of any subsidiaries not consolidated and 50 percent or less owned persons required by Rule 3-09 of regulation S-X.

Exhibits 31.1 and 31.2

8. We note that the identification of the certifying individual at the beginning of the certification required by Exchange Act Rule 13a-14(a) also includes the title of the certifying individual. In future filings, the identification of the certifying individual at the beginning of the certification should be revised so as not to include the individual's title.
9. You have replaced the word "report" with "quarterly report" in paragraphs 3 and 4 of your certifications. In future filings, please revise your certifications to use the word "report" instead of the description of the incorrect corresponding report. Your certifications should be in the exact form as required in Item 601(b)(31) of Regulation S-K.

Form 10-Q for the Period Ended March 31, 2010

Note 4: US Sensor Systems Inc. (USSI), page 7

10. We note your analysis concerning the consolidation of USSI as a VIE. Please provide for us an expanded analysis of the circumstances involving your determination of USSI as a variable interest entity and the determination that you are the primary beneficiary. Please address each of the factors you considered and support your conclusions for each factor through reference to existing GAAP.

* * * *

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;

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- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

You may contact Ernest Greene, Staff Accountant at (202) 551-3733 or me at (202) 551-3689 if you have questions regarding comments on the financial statements and related matters. Please contact Dorine Miller, Financial Analyst at (202) 551-3711 or Jay Ingram, Legal Branch Chief at (202) 551-3397 with any other questions.

Sincerely,

John Hartz
Senior Assistant
Chief Accountant