



DIVISION OF
CORPORATION FINANCE

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

July 10, 2012

Via E-mail

John A. Moore
Chief Executive Officer
Acorn Energy, Inc.
4 West Rockland Road
Montchanin, DE 19710

**Re: Acorn Energy, Inc.
Form 10-K for the Year Ended December 31, 2011
Filed March 15, 2012
File No. 1-33886**

Dear Mr. Moore:

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 amending your filing, 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 or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Year Ended December 31, 2011

General

1. Where a comment below requests additional disclosures or other revisions to be made, please show us in your supplemental response what the revisions will look like. With the exception of the comment below that specifically requests an amendment, all other revisions may be included in your future filings.

Item 1. Business, page 1

Customers and Markets, page 3

2. Please revise to disclose the names of any customers who comprise 10% or more of your consolidated revenues. Please refer to Item 101(c)(1)(vii) of Regulation S-K.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations, page 32

Critical Accounting Policies, page 37

3. We note from your disclosures throughout the document that your GridSense subsidiaries operate in the United States and Australia. However, based on your disclosures on page 38, it appears that you consider the U.S. and Australian operations of GridSense to be a single reporting unit for purposes of goodwill impairment testing. Please tell us the factors you considered in deciding to combine these two operating locations into a single reporting unit for goodwill impairment testing purposes. In particular, please tell us how you considered ASC 280-10-50-11 in determining that the two subsidiaries had similar economic characteristics.

Results of Operations, page 41

4. We note that you have not reconciled your segment total column to the relevant GAAP measures. To the extent that amounts presented in the "total" column are different than GAAP amounts, they are considered non-GAAP measures when presented outside of the audited financial statements. Please revise to provide the disclosures required by Item 10(e) of Regulation S-K or revise to remove non-GAAP measures such as total segment depreciation and total segment net income (loss) before income taxes. Please refer to Question 104.04 of the Non-GAAP Compliance and Disclosure Interpretations which is located on our website at: <http://www.sec.gov/divisions/corpfin/guidance/nongaapinterp.htm>
5. Please revise to more fully explain the nature of the operating activities included in your "other" column on page 42. Please also revise your MD&A to discuss the business reasons for material changes in amounts presented in this column from period to period.
6. Your segment table on page 42 includes a measure titled "segment net income before income taxes" but the discussion that follows describes changes between periods in, among other things, segment net income (loss). Please revise your filing so that the amounts presented in the table and the discussion that follows consistently refer to the same measure, which should also be the measure presented in your segment footnote.

Liquidity and Capital Resources, page 46

7. Please separately disclose both the amount of unrestricted cash and cash equivalents held outside the United States and the extent to which your unrestricted cash held in foreign countries could be subject to additional taxation if it were repatriated to the United States. We note your disclosure on page F-57 that you do not expect any foreign earnings to be repatriated to the United States in the near future. Please revise your liquidity section to provide similar disclosures in MD&A about management's expectations to permanently reinvest foreign earnings.

Audited Financial Statements

Note 2 – Summary of Significant Accounting Policies, page F-15

General

8. Please revise your accounting policy footnote to indicate if you include an allocation of your depreciation and amortization to cost of sales. If you do not include an allocation of depreciation or amortization in your cost of sales, please revise your description of cost of sales on the face of your statement of operations and elsewhere throughout the filing to read somewhat as follows: "Cost of sales (exclusive of depreciation and amortization shown separately below)." Please also remove any references in the filing to gross profit or gross profit margin, if you do not include a portion of your depreciation and amortization in cost of sales. See SAB Topic 11:B.

Revenue Recognition, page F-18

9. Please revise to more clearly explain both the types of products and/or services that are included in each of your revenue line items on page F-5 and how your revenue recognition accounting policies differ for each type of product and/or service. For example, your current disclosures explain your policy for recognizing revenue from customer support services on monitoring equipment but it is unclear whether these revenues are recorded in your financial statements under "products", "smart grid distribution products and services" or "other".

Note 22 – Segment Reporting and Geographic Information, page F-60

10. Please revise your table on page F-63 to disclose revenues from customers based in the United States separate from all other countries. Please refer to ASC 280-10-50-41(a).

Exhibit 23.1

11. Please amend your filing to provide a signed consent from your independent registered public accounting firm.

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:

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- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- 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 Lisa Etheredge, Staff Accountant, at (202) 551-3424 or the undersigned at (202) 551-3769 if you have questions.

Sincerely,

/s/ Rufus Decker

Rufus Decker
Accounting Branch Chief