



DIVISION OF  
CORPORATION FINANCE

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

July 13, 2012

Via E-mail

Chris Anthony  
President  
Flux Power Holdings, Inc.  
2240 Auto Park Way  
Escondido, CA 92029

**Re: Flux Power Holdings, Inc.  
Form 8-K  
Filed June 18, 2012  
File No. 000-25909**

Dear Mr. Anthony:

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.

Our Corporate Structure, page 8

1. We refer to the disclosure in the first paragraph of page 8 to the Information Statement on Schedule 14F-1 that you filed on July 3, 2012. Please revise your disclosure to discuss when and how Baytree Capital acquired a controlling interest in your common shares, the consideration they paid for this interest and their board appointments since acquiring control.
2. We note your disclosure on page 9 indicating that "Wheego" obtained a Federal Motor Vehicle Safety Standards validation. Please revise to clarify your relationship with Wheego. Please also revise your disclosure on page 18 under the "Government Regulations" heading to describe governmental regulation of motor vehicle safety in greater detail. Indicate which of your products require the validation referenced on page 9 and whether you have obtained the necessary validation for each product.

Our Products and Services, page 13

3. Please revise to clarify the basis for your statement in the first paragraph that your products “in many cases outperform traditional lead acid technologies” in terms of both cost and performance. Provide similar disclosure for your statement in the first sentence under the heading “Technology” on page 14 that your products “dramatically extend battery system life and improve system performance.”
4. We note your disclosure on page 21 indicating that you have not sold any of your products for use in applications other than electric vehicles. Please revise your discussion of the four products described in this section to indicate clearly whether you have derived material revenues from each product and also indicate the applicable end market in which sales were made.

Marketing and Sales, page 14

5. We note your disclosure that four customers accounted for 87% of your revenues for the nine month period ended March 31, 2012. Please revise to identify your major customers. Please also identify the suppliers/vendors referenced in the penultimate paragraph on page 15.

Strategic Relationship with LHV Power, page 15

6. Please revise to disclose the portion of your sales attributable to products manufactured by LHV Power. Also revise to describe the material terms of your agreements with LHV.

Suppliers, page 15

7. Please revise to identify the vendor who accounted for 53% of your purchases for the nine-month period ended March 31, 2012 and 67% for the year ended June 30, 2011. Also clarify whether you have a supply agreement with this vendor and if so, describe the material terms of the agreement. If you do not have a supply agreement, please revise to state this fact clearly.

Research and Development, page 16

8. We note your disclosure that you “completed grant work with the California Center for Sustainable Energy, Aerovironment, the University of California at Berkeley, and San Diego Gas and Electric.” Please revise to disclose the dates and amounts of the grants you have received, the entities from which you received the grants, the material terms of the grants, and the extent to which any intellectual property developed pursuant to the grants or in conjunction with the grantors is shared with them.

Intellectual Property, page 17

9. Please revise the table at the top of page 18 to indicate the applicable jurisdiction, patent number, and filing date for each disclosed patent pending. Please also briefly describe how and from whom you acquired the technology on which your applications are based. We note from your disclosure on page 47 that you acquired certain technology from a related party.

New Agreements, page 32

10. Please revise here or elsewhere in your filing, as applicable, to summarize all material terms of the NACCO Prototype Agreement, including without limitation the provisions of Articles 3, 4 and 5 concerning reimbursement of costs and fees, ownership of intellectual property rights and term and termination provisions. Provide similar disclosure of your agreement with GreenTech Automotive, Inc.

Future Liquidity Needs, page 38

11. Please tell us whether Baytree Capital has provided the \$1 million in financing referenced in the final paragraph of page 38 or whether it remains obligated to do so.

Business Experience, page 40

12. Please expand your disclosure in this section to provide adequate disclosure of the prior business experience of each of your directors and executive officers. For instance, describe the principal business of each entity in which your directors and executive officers carried on their occupations or employment, and state whether the entity is your affiliate. Please also describe the nature of the responsibility undertaken by each director or executive officer in his prior positions. Refer to Item 401(e) of Regulation S-K.

Transactions with Related Persons, page 46

13. Please revise the third paragraph on page 47 to identify the parties and the related-party affiliation. Please also revise your disclosure under the "Production process" heading on page 14 to describe the right of first refusal to manufacture your battery management systems. Also, please file the agreement as an exhibit.

Exhibits

14. Please file a complete copy of your current charter as amended. In this regard, we note your disclosures on pages 8 and 9 referencing several charter amendments filed since 1999. Please also file an executed copy of Exhibit 10.9, and ensure that you have filed all the schedules and attachments to each exhibit, such as Exhibit 10.10.

Exhibit 99.1

Note 3. Summary of Significant Accounting Policies, page 9

Revenue Recognition, page 10

15. We note that “when implied right of return exists,” you recognize revenue when inventory is sold to the end user. Please tell us and revise to further describe the terms of your agreements which indicate there is an “implied right of return.” Please clarify whether the agreements specifically allow for returns or if your business practices are to accept them in lieu of formal agreements. Please also tell us and revise to disclose the amounts of gross deferred revenues and gross deferred costs of sales included in the deferred revenue caption of your balance sheet for each period presented.

Exhibit 99.3

16. It is inappropriate to disclaim responsibility for your disclosure. Please revise the eighth paragraph in the Introduction to the Unaudited Pro Forma Combined Financial Information to remove the disclaimer concerning “responsibility for the accuracy or completeness of the information provided by the other party.”

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;
- 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.

Chris Anthony  
Flux Power Holdings, Inc.  
July 13, 2012  
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You may contact Kevin Kuhar at (202) 551-3662 or Gary Todd at (202) 551-3605 if you have questions regarding comments on the financial statements and related matters. Please contact Joseph McCann at (202) 551-6262 or Mary Beth Breslin, Senior Attorney, at (202) 551-3625 with any other questions.

Sincerely,

/s/ Mary Beth Breslin for

Amanda Ravitz  
Assistant Director

cc (via e-mail): John P. Yung, Esq. – Locke Lord LLP