



500 Capitol Mall, Suite 1800
Sacramento, CA 95814
Telephone: 916-930-2500
Fax: 916-930-2501
www.lockelord.com
John P. Yung
Direct Telephone: 916-930-2524
Direct Fax: 916-720-0343
jyung@lockelord.com

August 6, 2012

VIA EDGAR

Amanda Ravitz
Assistant Director
Securities and Exchange Commission
Division of Corporation Finance
100 F Street N.E.
Washington, DC 20549

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

Dear Ms. Ravitz:

On behalf of Flux Power Holdings, Inc. (the "Company"), we hereby respond to the Staff's comment letter of July 13, 2012, issued in connection with the Company's Form 8-K, filed on June 18, 2012. The Company has filed an amendment to the Form 8-K ("Form 8-K/A") in response to Staff's comment and to update additional information. A marked copy of the amended Form 8-K showing changes between the amended filing and the prior filing will be delivered via Federal Express to you for your convenience.

The following responses are numbered to correspond to the questions set forth in the Staff's comment letter. For the Staff's convenience, the Staff's comments are indicated in italics followed by the Company's response.

Our Corporate Structure, page 8

- 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.*

Response: The disclosure in the Schedule 14F-1 refers to the Baytree Capital LLC's acquisition of controlling interest in 2008. The Company has revised its disclosure on page 10 of the Form 8-K/A to disclose that Baytree Capital LLC ("Baytree") obtained a controlling interest in the Company's common shares pursuant to a Stock Purchase Agreement dated November 26, 2008.

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.*

Response: Pursuant to the Staff's comment, the Company revised its disclosure to clarify its relationship with Wheego, to provide additional information to describe government regulation of motor vehicle in greater detail and additional information relating to the products validation requirement, and it has amended its disclosures accordingly. (See pages 11 and 22).

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.”*

Response: Pursuant to the Staff's comment, the Company revised its disclosure to provide the basis of the statements, and it has amended its disclosures accordingly. (See pages 14 and 16).

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.*

Response: Pursuant to the Staff's comment, the Company revised its disclosure to provide information relating to revenues generated from each product and the respective end market in which sales were made. The Company has amended its disclosures accordingly. (See page 15).

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.*

Response: Pursuant to the Staff's comment, the Company revised its disclosure to identify its major customers, suppliers and vendors and it has amended its disclosures accordingly. (See pages 16 and 18).

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.*

Response: Pursuant to the Staff's comment, the Company revised its disclosure to identify the portion of its sales attributable to products manufacture by LHV, to include the material terms of Company's agreements with LHV, and it has amended its disclosures accordingly. (See pages 17 and 18).

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.*

Response: Pursuant to the Staff's comment, the Company revised its disclosure to identify Global Fluid Power Solutions, LLC as the vendor, and the existence of a non-exclusive supply agreement with this vendor and related material terms of such agreement. Under the supply agreement, the Company is not obligated to purchase a minimum number of products from the vendor and the Company may purchase the batteries from other vendors at any time in its sole discretion. Accordingly, the Company is not dependent on vendor and the supply agreement is not a material agreement. he Company has amended its disclosures accordingly. (See page 18).

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.*

Response:: Pursuant to the Staff's comment, the Company has revised its disclosure to provide the dates and amounts of the grants received by the Company, 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. (See page 19).

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.*
-

Response: Pursuant to the Staff's comment, the Company has revised the table to provide additional information relating to each of the Company's patent application and has provided additional disclosure regarding the Company's acquisition of the technology underlying the patent applications. (See pages 20 through 22).

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.*

Response: Pursuant to the Staff's comment, the Company revised its disclosure to provide the material terms of the NACCO Prototype Agreement and Purchase Order Agreement with GreenTech Automotive, Inc. and has amended its disclosures accordingly. (See pages 36 and 37).

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.*

Response: On June 29, 2012, Baytree Capital, its designees or assignees, provided at least \$1,000,000 in financing, and as a result their commitment was satisfied.

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.*

Response: Pursuant to the Staff's comment, the Company has amended its disclosure to expand on the business experience of the Company's directors and executive officers, and has identified whether any entity in which Company's directors and executive officers carried on their occupations or employment is an affiliate of the Company. (See page 44).

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.*

Response: Pursuant to the Staff's comment, the Company has amended its disclosure to identify the parties and related party affiliation in the third paragraph and has revised its disclosure to describe the rights of first refusal held by LHV Power Corporation to manufacture our battery management systems. The right of first refusal was granted under Section 5.1 of the Manufacturing Implementation Agreement dated August 1, 2009 by and between LHV Power Corporation and Flux Power, which was previously filed as Exhibit 10.8 to the Original Filing. (See pages 51 and 52).

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.*

Response: The Company filed a Restated Articles of Incorporation with the Nevada Secretary of State on July 19, 2012 (the "Restated Articles"). The Restated Articles has been filed as an exhibit to the Form 8-K/A. Pursuant the Staff's comment, the Company has filed an executed copy of Exhibit 10.9 and filed all schedules and attachments to Exhibits 10.9 and 10.10, with certain information redacted. Please note that the Company will make a separate written request for confidential treatment of certain schedules and attachments which contains confidential information.

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.*

Response: Pursuant to the Staff's comment, the Company revised its disclosure to clarify whether its agreements and/or business practices allow for returns. The Company also revised its disclosure to disclose the amounts of gross deferred revenues, costs, and revenue caption. (See page 10 to the Financial Statements For the year ended June 30, 2011 and the eight month period ended June 30, 2010, and page 8 to the Financial Statements For the nine month periods ended March 31, 2012 and 2011).

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."*

Response: Pursuant to the Staff's comment, the Company revised its disclosure to remove the disclaimer, and it has amended its disclosures accordingly.

Closing Comment

We believe the foregoing addresses all of the Staff's comments set forth in its comment letter dated June 18, 2012.

If you have any questions or for further discussions relating to this matter please feel free to contact me 916-930-2524 or Deborah Seo at 415-299-2101.

Very truly yours,

/s/ John P. Yung
John P. Yung

JPY:dh

ACKNOWLEDGEMENT

Flux Power Holdings, Inc., a Nevada corporation (the "Company") hereby acknowledges the following:

1. The Company is responsible for the adequacy and accuracy of the disclosure in the filing;
2. Staff's comments or changes to disclosure in response to the Staff's comments do not foreclose the United States Securities and Exchange Commission (the "Commission") from taking any action with respect to the filing; and
3. The Company may not assert the Staff's comments as a defense in any proceeding initiated by the Commission or any other person under the federal securities laws of the United States.

Dated: August 6, 2012

Flux Power Holdings, Inc.

By: /s/ Chris Anthony
Chris Anthony, Chief Executive Officer
