

September 4, 2008

Mail Stop 6010

David P. Vieau  
Chief Executive Officer  
A123 Systems, Inc.  
Arsenal on the Charles  
321 Arsenal Street  
Watertown, Massachusetts 02472

**Re: A123 Systems, Inc.  
Registration Statement on Form S-1  
Filed August 8, 2008  
File No. 333-152871**

Dear Mr. Vieau:

We have reviewed your filing and have the following comments. Where indicated, we think you should revise your document in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may raise additional comments.

Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Prospectus

1. Please confirm that any preliminary prospectus you circulate will include all non-Rule 430A information. This includes the price range and related information based on a bona fide estimate of the public offering price within that range, and other information that was left blank throughout the document. Please note that we may have additional comments after you file this information.

Graphics

2. Based on your disclosure on pages 1 and 78, it appears that you are working to develop electric grid services but these services have not been deployed to date. Please add prominent disclosure that your electric grid business is in the developmental stages, and if true, disclose that you have not generated any revenues from this market to date.
3. Your graphic next to the “Electric Grid” caption prominently features wind turbines. If retained, please explain in an appropriate location in the filing how your battery systems are related to wind turbines, or tell us why you are using this graphic.

Prospectus Summary, page 1

4. Please revise your disclosure in the summary to define technical terms, such as nanoscale materials, nanophosphate chemistry, and ultra capacitor technology.
5. Please provide support for statements of superior performance for your batteries, including those made under this caption. Also provide independent support for industry statistics used throughout the filing. For any studies you furnish, please tell us whether the registrant commissioned the studies, whether any of your parties affiliated with the registrant participated in the studies, and whether any of the authors of the studies have or are expected to receive compensation from the registrant.

Risks That We Face, page 4

6. Expand the disclosure beginning at the bottom of page 4 to describe the risks that relate to the pending patent infringement litigation, and identify the customer who you agreed to indemnify. Also briefly describe the risks that relate to manufacturing your products and doing business in China, as described beginning on page 25.

Summary Consolidated Financial Data, page 7

7. Please disclose how you determined the pro forma net loss per share, basic and diluted, and pro forma weighted average shares outstanding.
8. Please explain the pro forma changes to your redeemable common stock. Please similarly revise your presentation in Capitalization on page 35.

Because of the research funding we receive..., page 21

9. Please refer to the final paragraph of this risk factor. Please revise your disclosure to clarify how this risk applies to your business. For instance, please briefly describe the technology or technologies subject to march-in rights and address the portion of your business that would be affected by exercise of such rights. Please describe the conditions which might prompt the U.S. government to exercise its march-in rights.

Use of Proceeds, page 34

10. Please indicate the approximate amount you intend to spend to fund expansion of manufacturing facilities, research and development and sales and marketing. Please refer to Item 504 of Regulation S-K.

Capitalization, page 35

11. Please revise to remove the caption relating to cash and cash equivalents from your presentation of capitalization.
12. Please tell us why you believe it is appropriate to exclude the 6,152,553 shares of your series E convertible preferred stock issued in May and June 2008 at a purchase price of \$16.59 per share for aggregate proceeds of \$102,085,005 from the pro forma presentation. Please similarly address for your pro forma presentations in the Summary Consolidated Financial Data on page 7.

Stock-Based Compensation, page 50

13. Once you have a pricing range, please provide the following disclosures in MD&A:
  - The aggregate intrinsic value of all outstanding options based on the midpoint of the estimated IPO price range; and
  - A discussion of each significant factor contributing to any difference between the estimated fair value as of the date of grant and the estimated IPO price (or pricing range) for options granted during the twelve months prior to the date of the most recent balance sheet.

Results of Operations, page 56

14. We see your costs of product revenue exceeded your product revenue in the last two fiscal years and in the interim period where the excess is 23%. Please specifically address the reasons why.

Compelling balance of price and performance, page 73

15. Your disclosure in this paragraph discusses your costs but does not address your prices. Please revise your disclosure to address the prices of your products relative to their performance or revise the subheading.

Customers and Development Partners, page 78

16. As applicable, please disclose the existence of material exclusivity provisions in referenced supply agreements.

Competition, page 82

17. Please briefly explain the term “flywheel technologies.”

Legal Proceedings, page 84

18. Revise the disclosure to describe more specifically the PTO reexamination process with regard to the ‘382 patent. Explain the significance of the PTO issuing a reexamination certificate. We note you refer to a reexamination of only the ‘640 patent as ongoing. If the PTO reached a decision regarding the ‘382 patent, describe it and explain the impact on the registrant.
19. In view of the materiality of this patent litigation, describe the issues opined upon by counsel, identify counsel, and file counsel’s consent.

Annual Cash Incentive Bonus, page 94

20. You disclose that you utilize annual cash incentive bonuses to reward performance achievements and have in place annual target incentive bonuses for each of your named executive officers. Please provide a quantitative discussion of the terms of the necessary financial or individual performance objectives to be achieved in order for your named executive officers to earn their respective incentive cash compensation for fiscal 2007. Please disclose the specific items of company performance and how your incentive awards are specifically structured around such performance goals. See Item 402(b)(2)(v) and Instruction 2 to Item 402(b) of Regulation S-K. Please note that qualitative goals generally need to be presented to conform to the requirements of Item 402(b)(2)(v). To the extent you believe that disclosure of the information would result in competitive harm such that the information could be excluded under Instruction 4 to Item 402(b), please provide us with a detailed explanation supporting your conclusion.

Stock Options, page 95

21. Although we note your disclosure regarding general policies relating to your new equity awards in 2007, please include a more focused discussion that provides substantive analysis and insight into how the compensation committee determined the actual award amounts. For example, please discuss and analyze how the compensation committee determined the actual number of shares underlying the stock options awarded to each named executive officer and set forth the rationale for the variances of these awards among the named executive officers.

Summary Compensation Table, page 97

22. Please revise footnote 1 to clarify that the bonus reflecting 12% of base salary is recorded in the table as Non-Equity Incentive Plan Compensation.

Principal and Selling Stockholders, page 108

23. Please disclose the natural person or persons who exercise the sole or shared voting and/or dispositive powers with respect to the shares held in the name of entities identified in the table.

Where You Can Find More Information, page 122

24. You do not appear to be subject to the information and periodic reporting requirements of the Exchange Act. Please revise or advise.

Undertakings, page II-4

25. Please note that due, in part, to the language of Securities Act Rule 430C(d), the undertakings included in Items 512(a)(5)(ii) and 512(a)(6) of Regulation S-K should be included in filings for initial public offerings. Please revise your filing to include those undertakings.

Consolidated Financial Statements, page F-1

26. Please update the financial statements as required by Rule 3-12 of Regulation S-X.

Consolidated Balance Sheets, page F-3

27. Please revise the pro forma column to present only the pro forma capitalization section. Please also disclose the number of shares authorized, issued and outstanding for redeemable common stock on a pro forma basis.

Note 1. Nature of Business, page F-7

28. Please tell us why you do not include a discussion of your research and development services in addition to your discussion of product sales.

Note 2. Summary of Significant Accounting Policies, page F-7

Unaudited Pro Forma Information, page F-7

29. Please disclose whether you expect the automatic conversion of your preferred stock to occur based upon a Qualifying Public Offering, as disclosed in Notes 16 and 20.

Segment, Geographic and Significant Customer Information, page F-11

30. We note that you show geographic information for North America, Asia and Europe. Please revise to report your revenues from external customers and long-lived assets information separately for your country of domicile, as required by paragraph 38 of SFAS 131. Also, if the amounts attributed to an individual foreign country are material, then please disclose those amounts separately.

Revenue Recognition, page F-12

31. You disclose that “[w]hen sales arrangements contain multiple elements, the Company applies the provisions of the Emerging Issues Task Force (“EITF”) Issue No. 00-21, *Revenue Arrangements with Multiple Deliverables*, or EITF 00-21, to determine if separate units of accounting exist within the arrangement.” Please tell us and disclose the contract elements permitting separate revenue recognition and describe how they are distinguished. Explain how contract revenue is allocated among the elements.
32. Please disclose your customary shipping terms (for example, FOB shipping point or FOB destination). Also, with respect to ‘other contingencies,’ please disclose the nature of the contingencies.
33. Please disclose the nature of your warranty, where you classify costs related to warranties in your statements of operations and the methodology you used in determining your liability for product warranties, consistent with paragraphs 13(a) and 14(a) of FIN 45.

34. You disclose that “[w]hen the Company is unable to reasonably determine its obligation for warranty of new products, revenue from the sale of the products is deferred until expiration of the warranty period or until such time as the warranty obligation can be reasonably estimated.” Please tell us the amount of such revenue deferred as of each balance sheet date. Tell us and disclose how you accounted for the related costs for the products. Tell us the nature of your warranty obligation and whether the warranty obligation may ever exceed the amount of revenue deferred. Tell us why you cannot estimate the warranty costs for these products.
35. With respect to your research and development arrangements, please tell us and disclose the significant terms of your research and development arrangements (including royalty arrangements, purchase provisions, license agreements, and commitments to provide additional funding) as of the date of each balance sheet presented.

Deferred Revenues, page F-13

36. We note that deferred revenue is \$10,908,000 as of March 31, 2008. Please tell us the significant components of this balance by type of deferred revenue consistent with your disclosure. Tell us why the amount of deferred revenue increased from December 31, 2007. Tell us and disclose how you distinguish between current and long-term deferred revenue.
37. Further, please tell us the nature of the transaction whereby you receive cash from the customer but title has not transferred or customer acceptance has not occurred. Discuss the extent to which these amounts represent customer deposits versus deferred revenue.

Note 6. Property Plant and Equipment, page F-23

38. Please expand the information about your capital leases to present the costs of the assets under capital lease and the related accumulated depreciation at the end of each period, as required by paragraph 13 of SFAS 13.

Note 11. Product Warranties, page F-26

39. Please revise your tabular reconciliation of the changes in your aggregate product warranty liability to present the aggregate reductions in that liability for payments made (in cash or in kind) under the warranty, the aggregate changes in the liability for accruals related to product warranties issued during the reporting period, and the aggregate changes in the liability for accruals related to

preexisting warranties (including adjustments related to changes in estimates), consistent with paragraph 14(b) of FIN 45.

Note 13. Financing Arrangements, page F-29

40. In the table for your long-term debt, please label the note payable as from a related party.

Note 15. Stock-Based Compensation, page F-33

41. Please provide us with a schedule showing in chronological order, the date of grant, optionee, number of options granted, exercise price and the fair value of the underlying shares of common stock for the options issued during the last 12 months. Please indicate the compensation recorded for each of these issuances and reconcile to the amounts recorded in the financial statements.
42. Describe to us the objective evidence and analysis which supports your determination of the fair value at each grant and stock issuance date. Highlight any transactions with unrelated parties believed by management to be particularly evident of an objective fair value per share determination. Also, provide us with a chronological bridge of management's fair value per share determinations to the current estimated IPO price per share. Please indicate when discussions were initiated with your underwriter(s) about possible offering price ranges.
43. Please note that we are deferring any final evaluation of stock compensation until the estimated offering price is specified, and we may have further comments in that regard when you file the amendment containing that information.

Note 20. Subsequent Events, page F-42

44. Please tell us and disclose how you considered the variable rate conversion feature of the Series E preferred stock in your pro forma presentations throughout the filing.

Exhibits

45. Given their prominence in the discussion on page 1 of the summary, it appears that your agreements with GM and BAE are material and should be filed as exhibits. Please file them, or tell us why you believe that they are not required to be filed.



Consents of Independent Registered Public Accounting Firms – Exhibits 23

46. We see that the consent regarding the use of the report on Enerland does not present the conformed signature, location, or date signed. Please provide a revised consent in your amendment.
47. Please include currently dated and signed consents from your independent auditors prior to requesting effectiveness.

Confidential Treatment Request

48. We note your pending application for confidential treatment. We will provide any comments on your application separately. All comments must be resolved and your application must be complete before the effective date of your registration statement may be accelerated.

As appropriate, please amend your registration statement in response to these comments. You may wish to provide us with marked copies of the amendment to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your amendment and responses to our comments.

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 all information required under the Securities Act of 1933 and that they have provided all information investors require for an informed investment decision. 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.

Notwithstanding our comments, in the event the company requests acceleration of the effective date of the pending registration statement, it should furnish a letter, at the time of such request, acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and

David P. Vieau  
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September 4, 2008  
Page 10

- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in connection with our review of your filing or in response to our comments on your filing.

We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. We will act on the request and, pursuant to delegated authority, grant acceleration of the effective date.

We direct your attention to Rules 460 and 461 regarding requesting acceleration of a registration statement. Please allow adequate time after the filing of any amendment for further review before submitting a request for acceleration. Please provide this request at least two business days in advance of the requested effective date.

You may contact at Jeanne Bennett at (202) 551-3606 or Brian Cascio, Accounting Branch Chief, at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Joseph McCann at (202) 551-6262 or me at (202) 551-3800 with any other questions.

Sincerely,

Peggy Fisher  
Assistant Director

cc (via fax): John H. Chory, Esq.— Wilmer Cutler Pickering Hale and Dorr LLP