

PAUL HASTINGS

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April 11, 2012

VIA EDGAR AND OVERNIGHT MAIL

United States Securities and Exchange Commission
Division of Corporation Finance
100 F Street N.E.
Washington, D.C. 20549
Attention: Ms. Sherry Haywood
Ms. Pamela Long

Re: Gevo, Inc.
Registration Statement on Form S-3 (File No. 333-180097)
Pre-Effective Amendment No.1

Dear Ms. Haywood and Ms. Long:

Enclosed for electronic filing via EDGAR pursuant to the Securities Act of 1933, as amended (the "Securities Act"), on behalf of our client, Gevo, Inc. (the "Company"), is Pre-Effective Amendment No. 1 ("Amendment No. 1") amending the Company's Registration Statement on Form S-3 filed with the Securities and Exchange Commission (the "Commission") on March 14, 2012 (the "Initial Registration Statement"). Amendment No. 1 is marked to show changes from the Initial Registration Statement. The Initial Registration Statement, as amended by Amendment No. 1 and all future amendments, is referred to herein as the "Registration Statement."

Amendment No. 1 is being filed in response to comments received from the staff of the Commission (the "Staff") by letter dated April 5, 2012 with respect to the Initial Registration Statement. The numbering of the paragraphs below corresponds to the numbering in the comment letter, the text of which we have incorporated into this response letter for convenience. Page references in the text of this response letter correspond to the page numbers of Amendment No. 1.

Staff Comments and Company Responses

General

1. *We note that the aggregate market value of your voting and non-voting common equity held by non-affiliates appears to be less than \$75 million during the 60 days prior to filing the registration statement, so that you would not meet the requirement of General Instruction I.B.1 to use Form S-3. If you are relying on General Instruction I.B.6 to use Form S-3, please include the information on your prospectus cover page that is required by Instruction 7 to General Instruction I.B.6. Alternatively, please tell us how you meet the public float requirement of General Instruction I.B.1.*

The Company respectfully advises the Staff that it has determined that the aggregate market value of its voting and non-voting common equity held by non-affiliates exceeded \$75 million during the 60 days prior to the filing of the Initial Registration Statement and that it meets the requirements set forth in General Instruction I.B.1 to Form S-3. The Company acknowledges that

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in past filings, including its Annual Report on Form 10-K filed with the Commission on February 28, 2012, it has taken a conservative approach to determining the aggregate market value of its voting and non-voting common equity held by non-affiliates. Out of an abundance of caution, when performing this calculation, the Company has generally excluded all directors, executive officers and stockholders owning 5% or more of the Company's outstanding common stock. The Company has historically used this threshold as a conservative benchmark for determining persons that may be deemed to be affiliates of the Company. When this conservative benchmark was used, the Company was careful to note that such determination of affiliate status was not necessarily a conclusive determination for other purposes.

In calculating the Company's aggregate market value for purposes of determining its eligibility to use Form S-3 for the registration of securities under the Securities Act, the Company examined the definition of "affiliate" set forth in Rule 405 of the Securities Act ("Rule 405") and determined that its "affiliates" include all of its directors and executive officers and the following stockholders of the Company: Khosla Ventures, together with its affiliated entities ("Khosla"), Virgin Green Fund I, L.P., together with its affiliated entities ("Virgin"), and Malaysian Life Sciences Capital Fund Ltd. ("MLSCF") (together, the "Company Affiliates").

Under Rule 405, an "affiliate" of an issuer is defined as "a person that directly, or indirectly through one or more intermediaries, controls or is controlled by, or is under common control with, the person specified." An individual or entity's status as an "affiliate" is a fact-specific inquiry which must be determined by considering all relevant facts and circumstances; however, the Commission has indicated that status as an officer, director or 10% stockholder is one fact which must be taken into consideration in such inquiry. See American-Standard, SEC No-Action Letter 1972 WL 19628 (October 11, 1972). Khosla owns approximately 27% of the outstanding voting securities of the Company. Based on Khosla's high percentage ownership of the Company's voting securities, the Company has determined that Khosla is an "affiliate" under the standard set forth in Rule 405. Virgin owns approximately 10.5% of the Company's outstanding voting securities and Mr. Shai Weiss, who serves as the Chairman of the Company's board of directors, is a partner of Virgin Green Fund I, L.P. Based on Virgin's high percentage ownership of the Company's voting securities, together with the fact that a partner of Virgin Green Fund I, L.P. currently serves as Chairman of the Company's board of directors, the Company has determined that Virgin is an "affiliate" under the standard set forth in Rule 405. MLSCF owns approximately 6.3% of the Company's outstanding voting securities and Ganesh Kishore, Ph.D., one of the Company's directors, is the Chief Executive Officer of MLSCF. Based on MLSCF's moderately high percentage ownership of the Company's voting securities, together with the fact that the Chief Executive Officer of MLSCF currently serves on the Company's board of directors, the Company has determined that MLSCF is an "affiliate" under the standard set forth in Rule 405.

When evaluating potential "affiliates", the Company looked closely at the following stockholders, each of which owns 5% or more of the Company's voting securities: Total Energy Ventures International, Burrill Life Sciences Capital Fund III, L.P., LANXESS Corporation and Capital World Investors (the "5% Stockholders"). In conducting its evaluation, the Company considered it important that each of the 5% Stockholders is a passive investor and that no 5% Stockholder has a designee on the Company's board of directors or the ability to appoint a director. Further, no 5% Stockholder is involved, directly or indirectly, in any management role of the Company and the Company has no ownership stake in or management rights over any of the 5% Stockholders. Accordingly, the Company has determined that none of the 5% Stockholders are "affiliates" under the standard set forth in Rule 405.

After evaluating the totality of the circumstances, including an appraisal of each person's influence upon management and the policies of the Company, the Company concluded that no person, other than the Company Affiliates, by virtue of his, her or its ownership of the Company's voting securities, by contract, or otherwise, has the ability to direct or cause the direction of the management and policies of the Company, nor is any other person under common control with a party that controls the Company.

Conventions that Apply to this Prospectus

2. *We note your statements in the first paragraph concerning the third party data that you use in the prospectus.*
 - *Please delete the fourth sentence in this paragraph as you are responsible for the information that you choose to include in the prospectus and cannot disclaim responsibility for such information; and*
 - *If you funded or were otherwise affiliated with any of the sources that you cite, please disclose this information. Otherwise, please confirm that these sources are widely available to the public. If any sources are not publicly available, either file consents or explain to us why you are not required to do so under Rule 436 of the Securities Act of 1933, as amended.*

The Company respectfully acknowledges the Staff's comment and confirms that the Company has not funded and is not affiliated with any of the sources cited under the heading "Conventions that Apply to this Prospectus." All of these publications, surveys and forecasts are publicly available, some free of charge and some for a nominal fee. Additionally, in response to the Staff's comment, the Company has revised its disclosure in the section entitled "Conventions that Apply to this Prospectus" on page 1 of Amendment No. 1 to delete the sentence referenced by the Staff and to encourage investors to review the section of the Registration Statement entitled "Cautionary Statement Regarding Forward-Looking Statements."

Signatures, Page II-7

3. *Please revise the second signature section to include the signature of your principal financial officer and your controller or principal accounting officer. We note that while you have included the signatures of your principal financial officer and principal accounting officer on behalf of the company, you have not included their signatures in their individual capacity.*

In response to the Staff's comment, the Company has revised page II-7 of Amendment No. 1 to include the signature of its principal financial and accounting officer in his individual capacity.

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Exhibit Description

4. *Please note that if you intend to designate the trustee on a delayed basis, you should file each Form T-1 separately under the electronic form type "305B2", rather than on Form 8-K or post-effective amendment. Refer to Section 206 of the Trust Indenture Act of 1939 Compliance and Disclosure Interpretations, which are available on our website at <http://www.sec.gov/divisions/corpfin/guidance/tiainterp.htm>.*

In response to the Staff's comment, the Company has revised the exhibit lists under the headings "Exhibits" on page II-3 of Amendment No. 1 and "Exhibit Index" at the end of Amendment No. 1 to clarify that each Statement of Eligibility of Trustee will be separately filed in accordance with Section 305(b)(2) of the Trust Indenture Act of 1939.

Exhibit 5.1

5. *We note the limitations of counsel's opinion as expressed in the third, fourth and fifth paragraphs of section five on pages five and six. It is not clear why these limitations would not already be covered by the qualification in the second paragraph of section five, section (ii) on page five regarding general principles of equity and the availability of equitable remedies. Please remove these limitations or tell us supplementally why you believe they are necessary in view of this qualification. We may have further comments upon review of your response.*

The Company and its counsel respectfully acknowledge the Staff's comment and have revised the opinion filed as Exhibit 5.1 to the Registration Statement. Please see the revised opinion, which has been filed as Exhibit 5.1 to Amendment No. 1.

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The Company respectfully requests the Staff's assistance in completing its review of Amendment No. 1 as soon as possible. Please advise us if we can provide any further information or assistance to facilitate your review. Please direct any further comments or questions regarding Amendment No. 1 or this response letter to Teri O'Brien at (858) 458-3031.

Sincerely,

/s/ Teri O'Brien

of PAUL HASTINGS LLP